



2007

**New Faces, New Places,  
New Spaces**

PROCEEDINGS

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# PAPERS

## Accounting

ASB, 2007  
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### EXPÉRIMENTATION D'UN SYSTÈME DE CLASSIFICATION EN DÉFICIENCE VISUELLE BASÉE SUR LE PROFIL FONCTIONNEL<sup>1</sup>.

Cette étude a pour objectif de présenter un modèle de classification pour la clientèle âgée de 65 ans et plus admise dans un programme de réadaptation spécialisée et surspécialisée en déficience visuelle, basé sur les coûts complets d'exploitation. Une approche expérimentale a permis de regrouper la clientèle en 5 groupes homogènes en ce qui concerne la consommation des ressources financières à partir d'un seul et unique critère discriminant : le niveau fonctionnel de la clientèle à l'entrée dans le programme.

#### Introduction

Les établissements dans lesquels s'offrent les services de réadaptation en déficience physique évoluent de plus en plus dans un contexte de performance et d'obligation de résultats. Le rapport du comité Bédard (2002) sur la réévaluation du mode de budgétisation des centres hospitaliers de soins généraux et spécialisés du Québec, mentionnait que le ministère de la Santé et des Services sociaux devrait prendre en considération la performance financière dans l'attribution des budgets de développement, de manière à investir dans les hôpitaux qui sont susceptibles de donner de meilleurs rendements. En France, Dominique Gillot, secrétaire d'Etat à la santé, affirmait que « nous ne sommes pas dans une période de récession budgétaire, mais il faut que l'argent soit utilisé de la façon la plus rationnelle possible » (Garcia et Mandraud, 1999).

Si dans certains pays des établissements se sont dotés d'outils permettant de contrôler les coûts (par exemple : aux États-Unis avec les groupes de diagnostics homogènes et en France avec les groupes homogènes de malades), à certains égards, cela n'est pas le cas des centres de réadaptation en déficience physique (CRDP) du Québec. Ceux-ci, comme les hôpitaux, ne disposent pas d'éléments d'information sur l'utilisation des soins et services par usager hospitalisé ou en consultation externe mais plutôt par centre d'activités pour l'ensemble des usagers qui y ont utilisé des services. Il existe donc très peu d'éléments d'information sur les coûts des hospitalisations ou des services dans les rapports que les

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Les auteurs tiennent à remercier tout le personnel du programme de réadaptation en déficience visuelle pour personnes âgées de 65 ans et plus de l'Institut de réadaptation en déficience physique de Québec (IRDPO) pour leur implication dans le projet.

établissements de santé envoient au ministère de la Santé et des Services sociaux de même que dans les banques de données (Durand et al., 2001). Tout au plus, les Ministères calculent un per diem qui représente une mesure plus ou moins précise des coûts d'exploitation. De ce fait, il semble aujourd'hui difficile aux pouvoirs publics de prendre des décisions éclairées en matière d'allocation budgétaire par manque d'outils d'évaluation ou d'éléments d'information sur les coûts essentiels à la programmation et à la prise de décision (Nicklin et Zitner, 2002).

Dans une perspective de gestion budgétaire, l'élaboration d'un système de classification de type groupe fonctionnel homogène peut contribuer à une amélioration du contrôle budgétaire des programmes de santé en déficience physique. Le modèle proposé est issu d'une expérimentation avec un programme de déficience visuelle pour personnes âgées de 65 ans et plus. La suite de ce document est divisée en quatre sections. Les écrits pertinents existants seront d'abord présentés, puis le cadre opératoire, ensuite les principaux résultats de l'étude et finalement, la conclusion discutant des apports de la recherche.

### Recension des écrits

L'évaluation de l'utilisation des ressources constitue depuis longtemps la pierre angulaire du système de contrôle hospitalier (Halgand, 2000). Une avancée majeure dans ce domaine a découlé de l'utilisation des groupes de diagnostics homogènes (DRG), comme concept de produit.

C'est un groupe de chercheurs américains, dirigé par le professeur Fetter de l'Université de Yale, qui est à l'origine des DRG durant les années soixante-dix. Le système des DRG vise à regrouper les usagers et les coûts qui découlent de leur traitement en plusieurs catégories de diagnostics (au début, 492 diagnostics) selon la sévérité et la nature des maladies. Le but principal poursuivi par Fetter (1991) lors de la création de ce système de regroupement était d'aider les gestionnaires à administrer plus efficacement leur établissement en définissant un «produit» comme base de mesure et d'évaluation. En regroupant les traitements des usagers et les coûts qui en découlent en plusieurs catégories de diagnostics, cet outil de gestion vise à établir un lien entre l'utilisation des ressources et l'éventail particulier des maladies traitées, permettant, ainsi, aux gestionnaires des centres hospitaliers d'appliquer quelques-unes des techniques utilisées en gestion industrielle, telles que le budget flexible, l'analyse des écarts, les contrôles de coûts et de qualité, etc. (Fetter, 1991).

En France, ce concept, connu sous le nom de groupe homogène de malades (GHM), fut introduit en 1984-85 dans le cadre du projet qui est devenu par la suite le programme de médicalisation des systèmes d'information (PMSI) (Dubois, 1999). Le PMSI est un outil de description et de mesure de l'activité médicale hospitalière (Coca 1998, Engel et al. 2000) qui vise à produire des éléments d'information pertinents concernant les coûts par pathologie et/ou par usager, soit les groupes homogènes de malades (Nobre, 2000). Environ 600 GHM sont aujourd'hui répertoriés pour les séjours hospitaliers en médecine, chirurgie et obstétrique (Nobre et Biron, 2001). Où que se soit, les systèmes mis en œuvre reviennent finalement à déterminer des coûts standards par GHM ou DRG servant de référence aux établissements hospitaliers.

Avec les mêmes objectifs, certains chercheurs ont tenté de répliquer ce genre de regroupement en réadaptation. Toutefois, contrairement aux domaines médicaux où une classification selon les DRG semble donner des résultats satisfaisants, dans le domaine de la réadaptation, cela n'est pas le cas (Harada et al., 1993, Paolucci et al., 1998). C'est en 1993, qu'Harada et al. (1993) furent à l'origine du système de classification uniforme des données en réadaptation selon les groupes fonctionnels homogènes (FRG). Puis, en 1994, un groupe de chercheurs de l'Université de New York à Buffalo ont raffiné le modèle pour développer la première version du FIM-FRG. Le système FIM-FRG vise à regrouper les usagers et les coûts qui découlent de leur traitement en plusieurs catégories d'indépendance fonctionnelle (dans la première version, 53 groupes) selon le type d'incapacité, le score FIM moteur et cognitif à l'admission ainsi que l'âge. Cette classification divise, par exemple, les usagers ayant subi un accident vasculaire cérébral (AVC) en 9 groupes basés sur le score du niveau fonctionnel moteur et cognitif à l'admission (prises avec la mesure d'indépendance fonctionnelle [MIF ou FIM en anglais]) et sur l'âge (Stineman et al., 1998).

La plupart des modèles de classification relatifs aux usagers en consultation externe, tels que le «Ambulatory Visit

Groups», le «Ambulatory Patient Groups» et le «Ambulatory Care Groups», ont opté pour une classification à l'acte plutôt que pour le traitement complet (Eager et al., 1999). Cependant, l'AN-SNAP (la version australienne de la FIM-FRG) a également des catégories spécifiques à la consultation externe basées sur le type d'incapacité, l'indépendance fonctionnelle et le recours à une thérapie simple ou multidisciplinaire. Il y a 15 classes pour la réadaptation dont 2 pour l'évaluation et 13 pour le traitement. C'est la seule classification ambulatoire identifiée jusqu'à présent qui a été développée spécifiquement pour la réadaptation (Eager et al., 1999).

S'il apparaît que la MIF fait l'objet d'une attention particulière dans l'élaboration des FRG, par exemple, aux États-Unis, en Australie et en Ontario où on cherche actuellement à constituer les bases d'un système de FRG-FIM, il n'en reste pas moins que de l'avis des professionnels de la santé, la mesure des résultats cliniques d'un usager prise à partir de la MIF ne semble pas être en mesure de refléter les résultats cliniques des services prodigués par les CRDP. Selon Keith (1995), le test ultime des impacts de la réadaptation n'est pas la définition abstraite du niveau de fonctionnement d'une personne à partir des habiletés développées dans un contexte clinique mais celui dans son milieu de vie quotidien, à la maison, à l'épicerie ou au travail. L'expérience clinique tend à démontrer que la MIF semble être appropriée en réadaptation intensive dont les objectifs sont centrés sur les aspects plus fonctionnels (c.-à-d. moteur et cognitif) de l'usager. Par contre, cette mesure n'est toutefois pas adéquate pour mesurer les résultats cliniques des étapes successives (adaptation-réadaptation et actualisation des apprentissages et maintien des acquis) où les objectifs de réadaptation sont plus centrés sur la réadaptation de l'usager dans son milieu de vie ou au travail.

L'objectif ultime des CRDP à l'égard de sa clientèle est de favoriser la participation sociale des personnes ayant des incapacités significatives et persistantes découlant d'une déficience physique (Association des établissements de réadaptation en déficience physique du Québec, 2000). À cette fin, les services spécialisés de réadaptation visent plus particulièrement la réduction des situations de handicap par l'atteinte des objectifs suivants : développer les aptitudes de la personne essentielles à la réalisation de ses habitudes de vie; compenser les incapacités résiduelles de la personne; et réduire les obstacles physiques et sociaux susceptibles de limiter la réalisation des habitudes de vie. Ainsi, la MIF n'est absolument pas en mesure de refléter les résultats cliniques suite aux services offerts par les CRDP. Basé sur le cadre conceptuel du PPH, les travaux récents de Fougeyrollas et al. (2000, 2002) ont permis le développement d'un outil d'évaluation clinique, la grille de classement PPH, qui semble en mesure de soutenir l'évaluation des résultats cliniques à l'étape d'adaptation-réadaptation. Par conséquent, l'élaboration d'une classification construite à partir de cet instrument de mesure semble plus justifiée.

## Cadre opératoire

### Stratégie de recherche

Cette étude vise à établir un système de classification pour la clientèle en déficience visuelle des CRDP, basé sur les coûts complets d'exploitation. Pour se faire, l'étude se veut d'une part, transversale (les données cliniques recueillies concernent un instant donné : à l'entrée du programme clinique), et d'autre part, longitudinale (les données sur les coûts reflètent la consommation des ressources par un usager suivant le traitement prodigué dans le temps). Par conséquent, la stratégie de recherche adoptée est une étude de cohorte prospective. La population à l'étude est constituée de 100 usagers âgés de 65 ans et plus inscrits en adaptation/réadaptation en déficience visuelle dont la réadaptation s'est réalisée à l'IRDPO.

### Les variables de classification

Notons l'importance pour un système de classification de reposer, lors de son développement, sur une conception permettant de refléter la réalité sanitaire de la communauté étudiée. Par conséquent, dans le cas des personnes âgées avec des incapacités visuelles, cette conception doit tenir compte des situations de handicap engendrées. Ainsi, la mesure du profil fonctionnel global, calculée à partir de la grille de classement PPH, permet de déterminer l'effet de la déficience sur la réduction des situations de handicap. La mesure du profil fonctionnel global est déterminée sur la base de 24 habitudes de vie que comporte la grille de classement PPH. Chaque profil fonctionnel en relation avec une habitude de vie reçoit une cote de 0 à 25, selon des critères précis, à partir de renseignements obtenus par questionnaire et observation de l'usager. Trois autres variables sont à envisager pour la classification, et ce, en fonction des modèles existants : l'âge des usagers, l'étalement de la prestation de services (durée de l'intervention) et le genre, homme ou femme.

Le coût complet d'exploitation a été recueilli à partir d'une méthode de calcul basée sur la comptabilité par activités. Le système de comptabilité, selon les directives du manuel de gestion financière du ministère de la Santé et des Services sociaux, est organisé pour une gestion par centre d'activités. Cette méthode accumule les charges par centre d'activités et ce sont les unités de mesure des centres d'activités (nombre d'utilisateurs, nombre de lits, etc.) qui servent de base à l'allocation budgétaire des ressources financières par le ministère de la Santé et des Services sociaux. Parmi ces charges, on distingue généralement trois catégories de centres d'activités (Hébert et al., 1997) : les services de traitements (intervention directe auprès des utilisateurs : les services professionnels des éducateurs, ergothérapeutes, physiothérapeutes, orthophonistes, etc.), les services de soutien (appui aux activités de traitements : entretien ménager, buanderie, services alimentaires, etc.) et les services généraux et administratifs (tous les autres services qui soutiennent l'organisation). Le coût complet d'exploitation a été défini en considérant les charges relatives à ces trois types de catégories de centres d'activités.

**Les autres variables**

D'autres variables usuelles comme le type de diagnostic, le niveau de sévérité de la déficience selon la classification de l'Organisation mondiale de la santé ont été recueillies. Certaines d'entre elles ont fait l'objet d'une vérification sur leur possible influence quant à la consommation des ressources et ont été exclues du modèle d'analyse.

**La méthode d'analyse**

La définition des groupes s'est effectuée en deux étapes. La première étape a été d'identifier les facteurs influençant la consommation de services à l'aide d'une régression multivariée. Celle-ci avait pour objectif de décrire les relations entre une variable dépendante, le coût complet d'exploitation d'un utilisateur et plusieurs variables indépendantes, le profil fonctionnel global à l'entrée, l'âge, le genre et l'étalement de la prestation de services. Une technique de régression étape par étape a été utilisée pour identifier les variables ayant le plus grand pouvoir d'explication de la variance de la variable dépendante.

$$CCE_j = \alpha_0 + \alpha_1 PFG_{T1j} + \alpha_2 \hat{AGE}_j + \alpha_3 GENRE_j + \alpha_4 DURÉE_j + \epsilon_j$$

Dans lequel,

- $CCE_j$  = le coût complet d'exploitation d'un utilisateur j exprimé en dollars;
- $PFG_{T1j}$  = le profil fonctionnel global à l'entrée du programme de l'utilisateur j;
- $\hat{AGE}_j$  = l'âge de l'utilisateur j lors de son inscription au programme de réadaptation;
- $GENRE_j$  = le genre de l'utilisateur j (0 = femme et 1 = homme);
- $DURÉE_j$  = étalement de la prestation de services auprès de l'utilisateur j en nombre de jours;
- $\epsilon_j$  = le terme d'erreur

La seconde étape a été de définir les groupes ou un système de classification à partir des variables qui ont semblé avoir le plus d'influence sur la consommation de services. Pour la réalisation de cette classification, les arbres de décision ont été utilisés puisqu'ils sont bien adaptés au contexte de l'étude. Ils construisent les partitions de façon descendante. En partant du nœud initial constitué de tous les profils, ils procèdent par éclatements successifs des nœuds jusqu'à ce qu'un critère d'arrêt soit atteint. Les éclatements successifs, c'est-à-dire pour chaque nœud, le choix d'un prédicteur et le partitionnement du nœud selon les modalités de ce prédicteur, se font par optimisation d'un critère local, par exemple la significativité d'un Chi-2 dans «Chi-square Automatic Interaction Detection» (Kass, 1980).

**Résultats**

**a) Analyses descriptives de la cohorte**

L'âge moyen à l'inscription au programme était de 81,76 ans (é.t. = 7,18 ans; étendue entre 67 et 98 ans). Quant au sexe des participants, 24 et 76 utilisateurs étaient respectivement des hommes et des femmes. La cohorte était composée de 30 résidents de la région Chaudière-appalaches et de 70 de la région de Québec. Soulignons que chez les personnes âgées, la déficience visuelle est essentiellement acquise en raison des maladies oculaires liées à l'âge. Dans le cadre de la cohorte étudiée, 76 utilisateurs étaient atteints d'une dégénérescence maculaire, 9 de glaucome, 7 de rétinopathie diabétique, 6 d'atrophie optique, 1 de cataracte et 1 de décollement de la rétine. L'Organisation mondiale de la santé classe la déficience visuelle en deux grandes catégories de sévérité. Selon sa classification, 84 utilisateurs de la cohorte avaient une basse vision et seize utilisateurs étaient considérés comme étant aveugles. La moyenne de la durée de l'intervention qui correspond au nombre

de jours calendriers écoulés entre la première et la dernière intervention pour l'ensemble de la cohorte a été de 238 jours (é.t. = 126 jours; étendue entre 43 et 627 jours). En moyenne 6,19 habitudes de vie (é.t. = 2,94 HV; étendue entre 1 et 12 HV) ont été retenues par chacun des usagers dans son plan d'intervention individualisé. En moyenne, le score du profil fonctionnel global au temps T1 a été de 534,43 (é.t. = 33,15; étendue entre 444,61 et 586,75). À partir du coût unitaire des activités et du nombre d'heures réelles consommées par les 100 usagers de la cohorte, les coûts complets d'exploitation ont été calculés pour l'ensemble des usagers de la cohorte. Il appert que les coûts complets d'exploitation des usagers ont été en moyenne de 6 074,57 \$ (é.t. = 4 333,40 \$; étendue entre 937,09 \$ et 21 244,06 \$).

### b) Analyse des résultats

La première étape consistait à identifier les facteurs influençant la consommation de services à l'aide d'une régression multivariée. Le tableau 1 présente les résultats du modèle retenu avec un échantillon de 100 observations.

Tableau 1

Résultats de l'analyse de régression; variable dépendante : CLE (n=100)

Variables explicatives	Signe prévu	Coefficients non standardisés		Coefficients standardisés	t	p
		B	Écart-type	Beta		
PFG <sub>T1j</sub>	$\alpha_1$ (-)	-87,791	8,225	-0,691	-10,673	0,000
ÂGE <sub>j</sub>	$\alpha_2$ (?)	5,315	34,913	0,009	0,152	0,879
GENRE <sub>j</sub>	$\alpha_3$ (?)	1445,036	580,899	0,143	2,488	0,015
DURÉE <sub>j</sub>	$\alpha_4$ (+)	10,113	2,148	0,295	4,708	0,000
Constante	$\alpha_0$ (?)	49805,64	5268,526		9,453	0,000
R = 0,835; R <sup>2</sup> = 0,697; R <sup>2</sup> ajusté = 0,684 F = 54,576 et p = 0,000						

Les résultats du modèle retenu sont significatifs et démontrent un R<sup>2</sup> ajusté de 68,40 %. Les estimateurs des coefficients de trois variables sont significativement associés aux coûts complets d'exploitation. En premier lieu, l'estimateur du coefficient du profil fonctionnel global à l'entrée est négatif (-87,791) et significatif ( $p \leq 0,01$ ; test unidirectionnel lorsque le signe est prévu). Ce résultat laisse supposer que le profil fonctionnel global à l'entrée semble avoir une incidence significative sur les coûts complets d'exploitation. Il est possible de traduire ce résultat par un accroissement des coûts complets d'exploitation de 87,79 \$ par niveau de profil fonctionnel global. Autrement dit, plus le niveau fonctionnel global est affecté, plus l'utilisateur consomme de ressources. En second lieu, l'estimateur du coefficient de l'étalement des services (DURÉE<sub>j</sub>) est positif (10,113) et significatif ( $p \leq 0,01$ ; test bidirectionnel lorsque le signe n'est pas prévu). Ce résultat indique que l'étalement des services semble, lui aussi, avoir une incidence sur les coûts complets d'exploitation. Ce résultat peut être interprété comme une augmentation des coûts des ressources consommées de 10,11 \$ par jour supplémentaire d'étalement des prestations de services d'un usager. Finalement, en ce qui a trait au sexe des usagers, l'estimateur du coefficient de cette variable est positif (1445,04) et significatif ( $p \leq 0,01$ ; test bidirectionnel lorsque le signe n'est pas prévu). Ceci laisse augurer que le genre a, lui aussi, un lien significatif sur les coûts d'exploitation liés aux usagers. Ce résultat peut être interprété comme une augmentation des coûts des ressources consommées de 1445,04 \$ quand les prestations de services sont prodiguées à un homme plutôt qu'à une femme. Finalement, les résultats du modèle retenu démontrent que l'âge des usagers ne semble pas relié aux coûts complets d'exploitation. Le coefficient de l'estimateur associé à cette variable est non significatif.

La multicolinéarité entre les variables indépendantes ne semble pas problématique dans le cadre de ce modèle. En effet, pour les variables indépendantes profil fonctionnel global, âge, genre et durée, les tolérances obtenues par le diagnostic de colinéarité sont respectivement de 0,795, 0,950, 0,966 et 0,787. Toujours pour ces mêmes variables, les facteurs d'inflation de la variance sont respectivement de 1,257, 1,053, 1,036 et 1,270. Ainsi, les tolérances de même que les facteurs d'inflation de la variance sont à des seuils tout à fait acceptables. Toutes ces valeurs sont dans les limites prescrites, c'est-à-dire qu'elles sont supérieures à 0,1 pour la tolérance et inférieures à 10 pour le facteur d'inflation de la variance.

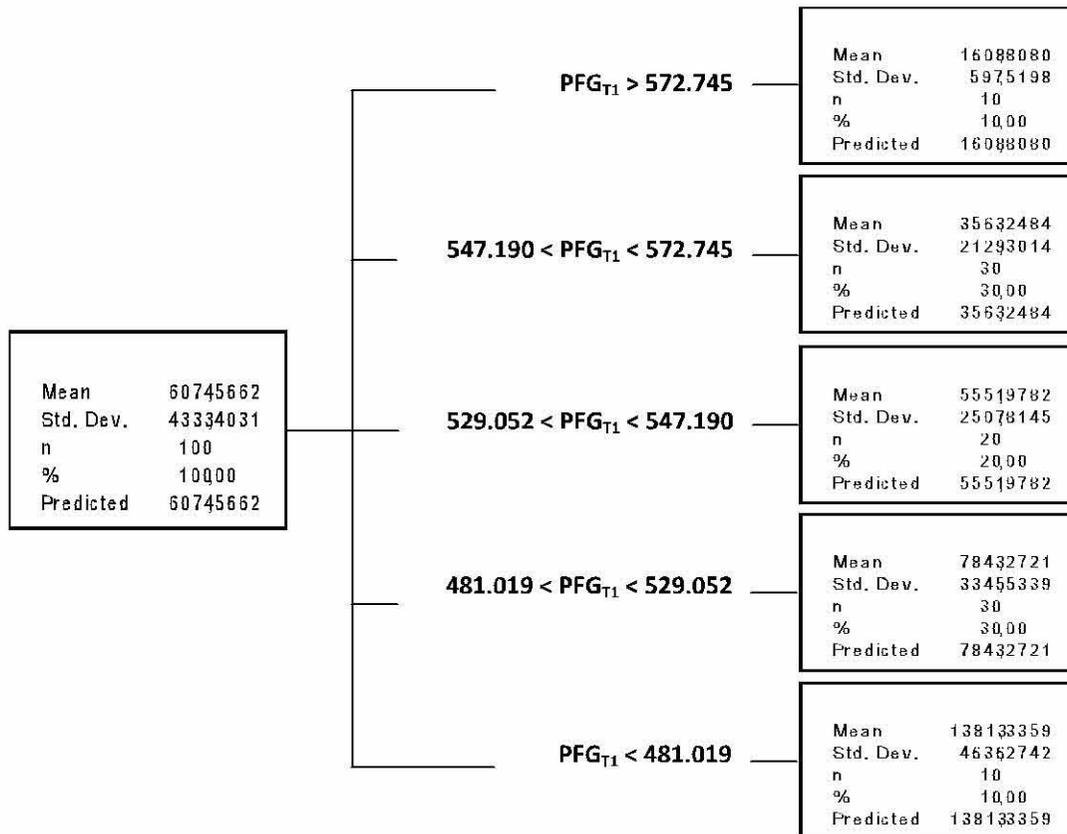
Quant à lui, le test de White (1980) n'a pas révélé la présence d'hétéroscédasticité.

La technique de régression étape par étape a été utilisée pour identifier les variables ayant le plus grand pouvoir d'explication de la variance de la variable dépendante. En introduisant les quatre variables du modèle original dans l'analyse de régression étape par étape, les résultats démontrent que seules les variables relatives au profil fonctionnel global à l'entrée, à la durée et au genre ont été retenues, et ce, dans l'ordre cité. La variable représentant l'âge des usagers n'a pas été retenue. Le retrait de cette variable ne s'est pas traduit par une baisse des performances explicatives et prédictives. Compte tenu de ces résultats, il serait logique que le profil fonctionnel global à l'entrée soit la variable la plus discriminante dans l'élaboration de la classification.

La seconde étape concernait l'élaboration d'une classification. Pour se faire, l'analyse statistique a été réalisée à l'aide du logiciel AnswerTree version 3.1. Puisque l'objectif est de produire une classification basée sur les coûts complets d'exploitation, les résultats de l'analyse de régression présentés ci-avant ont été mis à contribution pour définir les paramètres de l'arbre de décision. La répartition des usagers en groupes homogènes s'est effectuée sur la base de trois variables discriminantes ( $PFG_{T1j}$ ,  $GENRE_j$  et  $DURÉE_j$ ) en fonction des coûts complets d'exploitation. La méthode de classification retenue a été le «Chi-square Automatic Interaction Detection». La procédure consiste en une partition successive et automatique de l'échantillon en groupes hiérarchisés qui minimise la variance résiduelle pour la variable dépendante, soit les coûts des ressources consommées. La procédure de segmentation en deux se poursuit jusqu'à ce qu'il n'y ait plus de segmentations significatives à un seuil d'erreur de 5 %. La figure 1 présente l'arbre de décision en ce qui concerne la cohorte.

Figure 1

Arbre de décision



Les résultats de cette procédure ont démontré que seule la variable indépendante relative au profil fonctionnel global semble discriminante pour cette classification. À partir du niveau fonctionnel global à l'entrée, cinq catégories ont été déterminées. Les usagers dont le profil fonctionnel global était inférieur à 481 ont coûté en moyenne 13 813 \$ et ont été classés dans la première catégorie (le nœud 1). Les usagers dont le profil fonctionnel global était compris entre 481 et 529 ont coûté en moyenne 7 843 \$. Ils forment les usagers de la deuxième catégorie (le nœud 2). Les usagers dont le profil fonctionnel global était compris entre 529 et 547 ont coûté en moyenne 5 552 \$ et se sont retrouvés dans la troisième catégorie (le nœud 3). Les usagers dont le profil fonctionnel global était compris entre 547 et 573 ont coûté en moyenne 3 563 \$ et ont été regroupés dans la quatrième catégorie (le nœud 4). Finalement, les usagers dont le profil fonctionnel global était supérieur à 573 ont coûté en moyenne 1 609 \$. Ils ont été classés dans la dernière catégorie (le nœud 5).

### Conclusion

Le système de classification tel que défini dans la section des résultats apporte un angle nouveau dans le sens où ce n'est plus une incapacité physique qui définit le traitement approprié et les ressources à y investir, mais plutôt une réponse au besoin de la personne handicapée. Cette approche correspond à celle souhaitée par les CRDP. En effet, le mode de budgétisation du gouvernement est présentement basé sur des données historiques alors que les CRDP trouvent plus réaliste qu'il le soit en fonction des besoins des personnes handicapées.

Hormis le système de classification «ISO-SMAF» développé pour les personnes âgées en perte d'autonomie, il n'existe actuellement aucun système de classification de type groupe fonctionnel homogène au Québec adapté à la réadaptation en déficience physique. Dans la mesure où le système de classification développé dans le cadre de cette étude semble plutôt fiable, celle-ci pourrait servir de modèle pour une application aux autres types de déficience physique et ainsi être d'une grande utilité pour les gestionnaires des établissements de santé ainsi que pour les pouvoirs publics qui ont à définir les bases d'une allocation budgétaire juste et équitable à l'ensemble des CRDP.

Enfin, ce système de classification, basé sur l'évaluation du profil fonctionnel global, devrait permettre de satisfaire simultanément les besoins des usagers, des intervenants, des administrateurs, des fonctionnaires et des politiciens. Ainsi, au niveau clinique, l'identification des ressources nécessaires à l'amélioration du profil fonctionnel global de l'utilisateur se fait par consensus entre l'utilisateur et le ou les intervenants qui, ensemble, définissent le plan d'interventions le plus approprié pour la distribution des services répondant aux besoins spécifiques de l'utilisateur. De plus, au niveau administratif et politique, il sera possible d'agréger et d'analyser les éléments d'information issus des systèmes de classification au niveau de chaque établissement, territoire, régie régionale, de même qu'au niveau provincial, à des fins de planification en ressources humaines, matérielles et financières. Par la même occasion, ces systèmes de classification devraient faciliter le processus décisionnel et d'évaluation à tous les niveaux. Ils permettraient aux gestionnaires du ministère de la Santé et des Services sociaux de générer des rapports éventuellement plus judicieux pour le développement de politiques de santé en ce qui touche les personnes handicapées.

### Références bibliographiques

Association des établissements de réadaptation en déficience physique du Québec, *Rôles des Établissements de Réadaptation en Déficience Physique*. Document d'orientation. Montréal : Association des Établissements de Réadaptation en Déficience Physique du Québec, 2000.

Bédard, D., Bastien, R., Brown, B., Chicoine, J.P., Laroche, M., and R., Rouleau, *La Budgétisation et la Performance Financière des Centres Hospitaliers*. Rapport du comité sur la réévaluation du mode de budgétisation des centres hospitaliers de soins généraux et spécialisés. Québec : Gouvernement du Québec, MSSS, 2002.

Coca, E., *L'ISA et le PMSI*. Paris, Berger-Levrault, 1998.

Dubois, J., *Le PMSI : Principes Fondamentaux*, in *Le PMSI : Bilan, Actualité et Perspectives après 15 ans d'Évolution, Première Partie, Lettre des Systèmes d'Information Médicalisés*, Août, n° 35 – supplément, 5-9, 1999.

Durand, P.J., Lemay, A., Tourigny, A., Bonin, L., and M., Paradis, *Développement et Implantation d'un Système de*

*Prix de Revient des Soins et des Services à Domicile dans le Cadre du Projet de Démonstration d'un Réseau Intégré des Services dans les Bois-Francs avec une Coordination des Services par Gestion de Cas (Case-Management). Rapport final sur les résultats présenté au Fonds d'adaptation des services de santé et addenda sur les coûts privés à domicile, 2001.*

Eager, K., Gree, J., and R., Gordon, *A National Classification System and Payment Model for Private Rehabilitation Services*. Rapport de recherche, Wollongong: University of Wollongong, Center for Health Services Development, 1999.

Engel, F., Kletz, F., Moisdon, J.C., and D., Tonneau, *La Démarche Gestionnaire à l'Hôpital : Le PMSI*. Paris, Seli-Arslan, 2000.

Fetter, R.B., Diagnostic related groups: understanding hospital performance. *Interfaces*, 21(1), 1991, 6-26.

Fougeyrollas, P., Bergeron, H., and J.P., Robin, *Projet de Recherche sur les Mesures de Progression en Réadaptation*. Rapport de recherche, Institut de Réadaptation en Déficience physique de Québec, 2000.

Fougeyrollas, P., Bergeron, H., and J.P., Robin, *Projet de Recherche sur les Mesures de Progression en Réadaptation*. Rapport de recherche, Institut de Réadaptation en Déficience physique de Québec, 2002.

Garcia A., and I., Mandraud, Les Personnels des Hôpitaux de Paris Dénoncent la Rigueur Budgétaire – La Secrétaire d'État à la Santé Assure que “ les Moyens Existent ”, *Le Monde*, 11/12, 1999, p.10.

Halgand, N., Calcul des Coûts et Contrôle Budgétaire de l'Hôpital : Éléments d'Analyse Comparée du Nouveau Cadre Comptable. *Actes du XXIème Congrès de l'Association Francophone de Comptabilité*, 18-19 mai, 2000, Angers.

Harrada, N., Kominski, G., and S., Sofaer, Development of a Resource-Based Classification Scheme for Rehabilitation. *Inquiry*, 30, 1993, 50-63.

Hébert, R., Dubuc, N., Buteau, M., Roy, C., Desrosiers, J., Bravo, J., Trottier, L., and C., St-Hilaire, *Services Requis par les Personnes Âgées en Perte d'Autonomie*. Québec : Gouvernement du Québec, MSSS, 1997.

Kass, G. V., An Exploratory Technique for Investigating Large Quantities of Categorical Data. *Applied Statistics*, 29 (2), 1980, 119–127.

Keith, R.A., Wilson, D.B., and P., Gutierrez, Acute and Subacute Rehabilitation for Stroke: a Comparison. *Archives of Physical Medicine and Rehabilitation*, 76(6), 1995, 495-500.

Nicklin, W., and D., Zitner, Healthcare: Navigating Without a Compass. Poor Data, Poor Healthcare? Who knows? *Healthcare Management Forum*. 15(3), 2002, 42-45.

Nobre, T., **Quels Tableaux de Bord de Pilotage pour l'Hôpital ?** *Actes du XXIème Congrès de l'Association Francophone de Comptabilité*, 18-19 mai, 2000, Anger.

Nobre, T., and N., Biron, **Application de la Méthode ABC au Calcul des Coûts par Pathologie : Le Cas de la Chirurgie Infantile.** *Actes du XXIIème Congrès de l'Association Francophone de Comptabilité*, 17-19 mai, 2001, Metz.

Paolucci, S., Traballesi, M., Emberti Gialloreti, L., Pratesi, L., Lubich, S., Salvia, A., Grasso, M.G., Morelli, D., Pulcini, M., Troisi, E., Coiro, P., and C., Caltagirone, Post-Stroke Rehabilitation: an Economic or Medical Priority? Current Issues and Prospects in Light of New Legislative Regulations. *Italian Journal of Neurological Sciences*, 19(1), 1998, 25-31.

Stineman, M.G., Fieldler, R.C., Granger, C.V., and G., Maislin, Functional Task Benchmarks for Stroke Rehabilitation. *Archives of Physical Medicine and Rehabilitation*, 79, 1998, 497-504.

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## **FINANCIAL HIGHLIGHTS IN CANADIAN ANNUAL REPORTS - A PRELIMINARY STUDY**

### **Abstract**

This paper examines the information presented in the Financial Highlights section of non-cross listed Canadian public companies' Annual Reports from 2000 to 2006. The study yields the following primary findings: first, the sample Canadian companies typically report GAAP earnings, various non-GAAP or pro forma earnings, and a wide range of other financial information and non-financial information in the Financial Highlights. Furthermore, the companies are more likely to report pro forma earnings and non-financial information if their GAAP earnings are negative or decreasing. Since pro forma earnings are generally greater than GAAP earnings, this finding is consistent with the notion that the use of these non-GAAP earnings is motivated to create the impression of a positive performance and better outlook when GAAP earnings are disappointing. Finally, similar to recent US studies, we also find a slight decline in the frequency of pro forma earnings being reported by the sample Canadian companies post Bill 198. The findings should be helpful to investors and creditors who, to certain extent, rely on the corporate annual reports to make their investment decisions. The findings should be also of interest to policy makers in their effort to improve the accuracy and reliability of corporate disclosure and to rebuild investors' confidence.

### **1. Introduction**

Corporate financial reporting practices in both Canada and the US have been closely securitized and criticized in the last several years. In 2002 one of the Big Six accounting firms, Arthur Andersen LLP, voluntarily surrendered its license to practice as Certified Public Accountants in the US, pending prosecution over the firm's mishandled auditing of Enron Corp. As a result of high profile accounting scandals such as Enron and WorldCom Inc. in the US, and Livent and Nortel Networks in Canada, investors and analysts have become increasingly wary about financial reporting in all its forms.

In an effort to restore public confidence in capital markets as well as corporate financial reporting, the 2002 Sarbanes-Oxley Act (SOX) was introduced to strengthen the power of the US Securities and Exchange Commission (SEC) and the federal Department of Justice and to eliminate corporate fraud by strengthening internal control mechanisms for financial reporting. In Canada, the Ontario Securities Commission (OSC) introduced Bill 198 in 2003 to rebuild investor confidence in securities listed on the TSX and TSX Venture Exchange. Bill 198's purpose was to improve the accuracy and reliability of corporate disclosure by public companies in Ontario.

The objective of this study is to shed some light on the reporting in Financial Highlights and changes in such reporting in Canadian corporations' Annual Reports during the period from 2000 to 2006. Specifically, the types of GAAP information, non-GAAP or pro forma information, and non-financial information reported in the Financial Highlights are documented. Secondly, we test the theory that companies often use their discretion opportunistically in deciding what to disclose. Finally, we compare the effects of regulation requirements of Canada and of the US on the information reported in the Financial Highlights.

The Financial Highlights are located at the beginning of the Annual Report. Therefore, the information in the Financial Highlights tends to create an important first impression on readers of the reports. There are few rules and regulations regarding disclosure in the Financial Highlights and Financial Highlights are not audited. Thus, management

enjoys a significant level of discretion in what and how to communicate with investors, creditors and financial analysts in the Financial Highlights.

One area of financial reporting that has been securitized and debated intensively is the use of non-GAAP or pro forma earnings. Unlike net income or its companion, earnings per share, which are governed by GAAP, pro forma earnings may exclude certain transitory or non-operating related items. There is no general consensus on the definition of pro forma earnings; different companies may exclude different items and even the same company may change its own definition from time to time. Previous studies show that pro forma earnings tend to be greater than GAAP earnings. Some believe that due to this lack of consensus and transparency, pro forma earnings are often used opportunistically by management to better serve their own interests and mislead naive investors. However, others believe that since transitory items are excluded, pro forma earnings are more predictive and representative of ongoing core operations. This study examines whether there is an association between the use of pro forma earnings and GAAP earnings performance.

The relationship between SEC regulations, pro forma earnings and GAAP net income has already been well documented in US studies. Comparable Canadian legislation, in the form of Bill 198, has received minimal analysis. This study uses only non-cross listed TSX companies and focuses on the transitional period of 2000 through 2006 to assess the impact of Bill 198 on pro forma earnings reporting in Canada.

## 2. Background

The rules and guidelines for financial reporting can be found in the Generally Accepted Accounting Principles. The earnings determined by following GAAP are referred as GAAP earnings. Under GAAP, net income and earnings per share are determined through most revenues, expenses, gains and losses based on accrual accounting. Although GAAP provides transparency and consistency for the earnings numbers, its accrual basis and inclusive approach are not without limitations. For instance, accrual accounting requires estimates and projections to determine certain expenses such as depreciation and amortization; non-recurring items such as restructuring charges have the same affect on earnings as recurring expenses; and not only items related to operating activities, but also financing and investing activities, are included as part of GAAP earnings.

The limitations of GAAP earnings raise the question as to whether GAAP earnings are not always the best summary measure of the financial performance of a company for a specific period and as the basis for future projections. Many companies report modified earnings that exclude items that maybe considered unusual, non-recurring, or unrelated to ongoing operations. One of the most commonly used non-GAAP earnings is EBITDA – earnings before interest, tax, depreciation and amortization. Many believe that by excluding interest, tax, depreciation and amortization, EBITDA focuses more closely on the operating results with cash implications. EBITDA “it is often argued, can provide a pure meaningful and reliable diagnostic tool” for financial analysis (M. Lewis, 2002). Other common non-GAAP earnings include cash from operating activities, and earnings before interest and tax. Some companies report financial information other than earnings or non-financial information. For example, sales, gross margin, total assets, new stores opened, or the number of patents developed, can be used as key indicators of company performance.

There is no general consensus in what should be excluded from the determination of pro forma earnings. For instance in 2001, the popular Internet bookseller Amazon.com reported a pro forma operating loss of US\$16 million. This figure excluded interest expenses on equity investments, stock-based compensation expenses, amortization of intangible assets and write-downs of impaired assets (J. Weil, 2001). In another example, in 2001 the fibre optics manufacturer JDS Uniphase Corp. reported a pro forma profit of US\$67 million. This non-GAAP measure excluded goodwill amortization, merger-related charges, stock-option charges and investment losses. The actual GAAP net loss JDS Uniphase suffered was US\$50.6 million (M. Lewis, 2002).

The lack of consensus and transparency also raised concerns that pro forma earnings can be used opportunistically by management to create a more desirable impression of the company’s performance and thus, mislead investors. As the use of

pro forma earnings increased there was a building sense that pro forma earnings could be misleading for the nonprofessional or less sophisticated individual investor. *The Wall Street Journal* issued a cloaked warning about pro forma earnings that “encouraged by compliant Wall Street analysts, some companies – including many technology and Internet businesses – have excluded expenses ranging from interest payments, intangible asset amortization, stock compensation and occasionally even marketing costs” (J. Weil, 2001). Doyle et al. found that “higher levels of exclusions lead to predictably lower future cash flows and that investors do not fully appreciate the lower cash flow implications at the time of the [pro forma] earnings announcement” (Doyle et al., 2002).

Do companies use pro forma earnings for better communication or do they do so opportunistically to improve performance perceptions, and to meet or beat forecasts made by professional financial analysts? (Heflin and Hsu, 2006). The findings of existing studies do not provide a conclusive answer to the question. On the one hand, Lougee and Marquardt find that in a study of press releases issued between 1997 and 1999, that companies with low GAAP earnings use are more likely to disclose pro forma earnings than other firms (Lougee and Marquardt, 2004). There is a very strong bias towards the reporting of a street earnings number that exceeds the GAAP earnings number (Bradshaw and Sloan, 2002). Although “the pro forma disclosure did not cause nonprofessional investors to assess a higher earnings number for determining a stock price, but rather caused nonprofessionals to perceive the earnings announcement as more favourable, which in turn caused them to convert earnings or some other performance metric into a higher stock price” (Fredrickson and Miller, 2004).

On the other hand, studies also find evidence suggesting that pro forma earnings are more informative and thus, companies’ use of pro forma earnings could be motivated by a legitimate desire to better inform investors. In a study of press releases issued between 1998 and 2000, researchers Bhattacharya et al. found that “pro forma announcers report frequent GAAP losses and are mostly concentrated in the service and high-tech industries...our evidence suggests that market participants believe pro forma earnings are more representative of ‘core earnings’ than GAAP operating income” (Bhattacharya et al., 2003). The legendary Berkshire Hathaway Inc. investor Warren Buffet believes that GAAP numbers are only a starting point and further information is always required for the proper financial analysis of a potential investment (Davidson et al., 1999).

While the verdict is still out on the merit versus the disadvantages of pro forma earnings, it has become increasingly common for companies to use pro forma earnings instead of GAAP earnings when the GAAP earnings are not mandatory. For example, in earnings announcements, in earnings forecasts, and in the Financial Highlights of Annual Reports. In addition, “over the past 20 years there has been a dramatic increase in the frequency and magnitude of cases where GAAP and Street [pro forma] earnings differ” (Bradshaw and Sloan, 2002). Accompanying this trend is a growing concern about the lack of transparency and the effect of pro forma earnings. With the introduction of SOX in the US and Bill 198 in Canada, there has been a change in the financial reporting climate. The US companies that report pro forma earnings are now required to also report GAAP earnings at the same time, along with a detailed reconciliation between the two. Heflin and Hsu found “strong and consistent evidence suggesting a modest decline in non-GAAP earnings disclosures, beginning with the quarter the [SOX] regulations became effective” (Heflin and Hsu, 2006). If pro forma earnings are used opportunistically, increased disclosure could cause it to lose its effectiveness to mislead. Thus, Heflin and Hsu’s findings could mean that increased disclosure requirements are indeed effective.

This study will contribute to our understanding of the information in Financial Highlights by documenting the type of information reported, by testing what might motivate management to report certain information in this unregulated venue, and whether there have been changes in the reporting behaviour since financial reporting become more closely scrutinized. The next section will discuss the test hypotheses.

### 3. Test Hypotheses

Our first research question is whether management's decision on what information to report in the Financial Highlights is motivated by the need for more effective communication to the market, or by the desire to create a more pleasing impression. The information in Financial Highlights is classified into four categories: GAAP earnings, non-GAAP earnings, other financial information, and non-financial information. If management chooses the information to be reported in the Financial Highlights to maximize investors' understanding of the companies' performance, then the types of the information reported should not be impacted by the performance indicated by GAAP earnings. However, if management chooses such information to create a more positive impression, there might be an association between the GAAP earnings and the type of information reported in Financial Highlights. When GAAP earnings indicate poor performance, to avoid disappointing investors, management may omit GAAP earnings and present other information that appears to be less negative such as pro forma earnings, other financial information, and non-financial information. The first group of hypotheses is formally stated in alternative form as below:

Hypothesis 1: A company is less likely to report **GAAP earnings** in its Financial Highlights if the company's performance is unsatisfactory.

Hypothesis 2: A company is more likely to report **pro forma earnings** in the Financial Highlights if the company's performance is unsatisfactory.

Hypothesis 3: A company is more likely to report **other financial information** in its Financial Highlights if the company's performance is unsatisfactory.

Hypothesis 4: A company is more likely to report **non-financial information** in the Financial Highlights if the company's performance is unsatisfactory.

In testing the above hypotheses, we use two measures to determine whether GAAP earnings are satisfactory or not. The first one is the current period earnings level. If company GAAP earnings are negative in a particular period then its performance is considered unsatisfactory. There has been volume evidence that the market considers a company suffering a loss as bad news and reacts negatively. The second one is the change in the current period earnings in comparison to the prior period earnings. If a company's current period earnings decline from the previous period then its performance is considered bad. It is argued that if bad news is expected, then it no longer has the same negative impact on the market. If the unexpected bad news is worse than the expected news, than it affects people more negatively. In empirical accounting research, one of the proxies for earnings expectations is the previous period earnings. Thus, the change in the current period earnings indicates the unexpected news.

If management chooses the information for effective communication, then the types of information reported should not change regardless if their reporting behaviour is scrutinized more closely. However, if management chooses the information to report opportunistically, it may increase the use of GAAP earnings, which are more standardized and transparent, and decrease the use of pro forma earnings, other financial information and non-financial information. This is because such information, if chosen for the purpose of creating a better impression, may not have the same impact under closer scrutiny. Furthermore, management's opportunistic intentions may become obvious in a tighter reporting environment, sending an even worse signal to the market. If management is trying to hide bad news, then how bad is it really? This group of hypotheses is formally stated in alternative form as below:

Hypothesis 5: A company is more likely to increase reporting of **GAAP earnings** in its Financial Highlights after the introduction of Bill 198.

Hypothesis 6: A company is more likely to decrease reporting of **pro forma earnings** in its Financial Highlights after the introduction of Bill 198.

Hypothesis 7: A company is more likely to decrease reporting of **other financial information** in its Financial

Highlights after the introduction of Bill 198.

Hypothesis 8: A company is more likely to decrease reporting of **non-financial information** in its Financial Highlights after the introduction of Bill 198.

To test Hypotheses 6 through 8 we divided the sample into two periods: prior to Bill 198 period (2000-2003) and the post Bill 198 period (2004-2006). A comparison of the particular information reported between the two periods is conducted.

#### 4. Descriptive Summary of Financial Highlights

The sample companies used in this study include 14 companies that are only listed on the TSX or TSX Venture, and that are not cross-listed on other exchanges such as the NYSE or the NASDAQ. This is a systematic sample taken from an alphabetical list of TSX and TSX Venture companies from all industry codes. Companies were disqualified from the sample if they are cross-listed, no longer public, or if they did not have available financial statements during the majority of the 2000 to 2006 timeframe. We can assume that those Ontario companies cross-listed on an American exchange would already be adhering to the Sarbanes-Oxley Act (SOX). We can also assume that the market capitalization of our sample companies is average to small because companies with a significant market capitalization are more likely to be cross-listed. In general, 45 per cent of TSX-listed companies have a market capitalization of less than \$50 million (PricewaterhouseCoopers LLP, Canada, 2003). These 14 companies yield 83 Annual Reports in total.

Through reading the 83 Financial Highlights of the sample companies in the sample period, we documented the types and the frequency of the information reported in Table 1.

**Table 1 - Types and the frequency of the information reported in the Financial Highlights**

Type of Information	Frequency of reporting in Financial Highlights
Net income	77.91%
Pro forma earnings	53.44%
Other financial information	83.12%
Non-financial information	38.61%

Table 1 shows that GAAP earnings are frequently reported in Financial Highlights – 77.91 per cent of times. Pro forma earnings (non-GAAP earnings) are reported less frequently – 53.44 per cent of the time. We find this to be relevant and consistent with previous research. Other financial information that are components of GAAP, such as assets, debt, earnings per share, gross margin, operating income and revenue are also frequently reported – 83.12 per cent of times. We also noticed occasional appearances (39.61 per cent of times) of non-financial information in Financial Highlights, such as approval of human clinical trials, awards received, customer base growth, new contracts, number of employees and number of store openings. The non-financial information conveys positive accomplishments, or information so obscure in nature it is unlikely to have any real value for investors and analysts. It also tends to be industry-specific information.

As expected there is little consistency in the pro forma earnings used. Items excluded from the determination of pro forma earnings vary greatly, but can be summarized into interest related, tax related, depreciation and/or amortization, litigation related, non-recurring items, and others. The wide range of exclusions echoes the sentiment behind the alternative name for pro forma earnings – EBABS or earnings before all the bad stuff. No wonder pro forma earnings are viewed as “a corporate scheme to hoodwink unwary investors” (M. Lewis, 2002). It is worth noting that some exclusions are unusual gains the company has experienced and not just losses. For example, gains from a plant closure and the sale of a building, or gains from the release of funds held in escrow were reported. We also found the following interesting comments, disclaimers or warnings in our sample of Financial Highlights. For instance, “non-GAAP earnings measures do not have standardized

meanings prescribed by GAAP and therefore may not be comparable to similar measures presented by other publicly-traded companies” (Certicom, Annual Report 2001).

Other financial information found in the Financial Highlights includes components of the income statement and balance sheet. For instance, sales revenue, gross revenues, operates income, total assets and long-term debt. It is interesting to note that while these numbers adhere to GAAP, they often appear in the Financial Highlights section in a random and arbitrary matter. What information is featured varies from company to company, and often from year-to-year within the same company.

We also found that some companies use graphics such as column, bar, line and pie charts in the Financial Highlights. The use of charts and graphs does not always correspond with the other information presented. They are highly selective and vary greatly from company to company, sometimes even from year to year for the same company. However, the appealing visual aspects of the charts and graphs tend to create a strong impression on the reader, relating to the good or bad news they convey. We categorized the graphics into ‘goods news’ versus ‘bad news’ and compared the frequency of our sample companies’ use of ‘good news’ charts, and the frequency of the companies actually earning a profit or experiencing an earnings increase. This information is presented in Table 2. Although about half of the firm-years in the sample have positive information to share, 48.78 per cent with profits and 52.44 per cent with earnings increases, the overwhelming majority of charts and graphs used by the sample companies (82.54 per cent) convey some kind of positive information. It is apparent that these graphics serve a purpose of ‘looking good.’

**Table 2 – Defining characteristics relating to firm-years and graphs**

<b>Other observations from sample Annual Reports</b>	<b>Yes</b>	<b>No</b>
Firm-years with a profit (at least no loss)	48.78%	51.22%
Firm-years with an earnings increase (no decrease)	52.44%	47.56%
Graphs conveying positive information	82.54%	17.46%

### 5. Results of Hypotheses Testing

Now we turn to the presentation and discussion of the hypothesis tests. Table 3 presents the results of Hypotheses 1 through 4, and in Table 3 a company’s performance is considered unsatisfactory if it experienced a net loss that year.

**Table 3 – The comparison of Financial Highlights between profit and loss firm/years**

<b>Frequency of reporting in Financial Highlights</b>	<b>Net profit firm-years</b>	<b>Net loss firm-years</b>	<b>Difference</b>	<b>Predicted sign</b>
Net income	83.72%	71.79%	-11.93%	-
Pro forma earnings	44.19%	61.54%	+17.35%*	+
Other financial information	76.05%	82.05%	+6.00%	+

Non-financial information	30.23%	48.72%	+18.46%*	+
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\* Statistically significant at 10 per cent of level of confidence. Note that no change in income is grouped on the profit side.

Consistent with the prediction of Hypothesis 1, we find that the companies that suffered a net loss reported GAAP earnings in their Financial Highlights less often than the companies that enjoyed a net profit, 71.79 versus 83.72 per cent. However, an unpaired t-test indicates that these differences are not statistically significant at the conventional level of confidence.

Consistent with the predictions of Hypothesis 2, we find that the companies with net losses are more likely to report pro forma earnings in the Financial Highlights than the companies with a net profit, 61.54 versus 44.19 per cent. An unpaired t-test indicates that the differences are statistically significant at a 10 per cent level of confidence.

Consistent with the prediction of Hypothesis 3, we found that the companies with losses are slightly more likely to report other financial information than the companies with a profit, and 82.05 versus 76.05 per cent. However, an unpaired t-test indicates that these differences are not statistically significant at the conventional level of confidence.

Consistent with the prediction of Hypothesis 4, we found that the companies with losses are more likely to report non-financial information in the Financial Highlights, 48.72 versus 30.23 per cent. An unpaired t-test result shows that the differences are statistically significant at 10 per cent level of confidence.

Table 4 also shows the test results of Hypotheses 1 through 4, but in Table 4 we use whether a company is suffering an earnings decline as the proxy of unsatisfactory performance.

**Table 4 – The comparison of Financial Highlights between earnings increase and earnings decrease firm/years**

Frequency of reporting in Financial Highlights	Net income increase from previous year	Net income decrease from previous year	Difference	Predicted sign
Net income	80.00%	76.19%	-3.81%	-
Pro forma earnings	47.50%	57.14%	+9.64%	+
Other financial information	78.00%	83.33%	+5.33%	+
Non-financial information	30.00%	47.62%	+17.62%*	+

\* Statistically significant at 10 per cent of level of confidence. Note that no change in income is grouped on the increase side.

These results in Table 4 are similar to those in Table 3, except that the t-test for Hypothesis 2 is no longer statistically significant.

In summary, we find moderate evidence that companies choose the information reported in the Financial Highlights to create a more desirable impression. Specifically, when a company’s performance is unsatisfactory, it is more likely to report non-GAAP or pro forma earnings and non-financial information. These findings are in line with previous academic studies on this topic. Researchers Bradshaw and Sloan found that “management has taken a proactive role in defining and emphasizing the Street [pro forma] number when communicating to analysts and investors” (Bradshaw and Sloan, 2002). We can assume management is using non-financial information and pro forma earnings to present an optimal portrait of the company to investors and analysts. Researchers Bhattacharya et al. “observe that the frequency of pro forma announcements appears to have exploded precisely when earnings and prices of these firms started to decline...our data provides evidence consistent with the criticism that pro forma announcements may often be motivated by managers’ desires to meet or beat analysts’ expectations or to avoid earnings decreases” (Bhattacharya et al., 2004).

Table 5 presents the results of Hypotheses 5 through 8. We used an unpaired t-test to determine whether there were significant changes in the time of information reported by the sample companies in the pre and post Bill 198 periods.

**Table 5 – The comparison of Financial Highlights between pre and post Bill 198 periods**

Frequency of reporting in Financial Highlights	Pre Bill 198 period	Post Bill 198 period	Difference	Predicted sign
Net income	71.8%	80.0%	9.82%	+
Pro forma earnings	61.5%	43.3%	-18.2%*	-
Other financial information	82.1%	83.3%	1.2%	-
Non-financial information	41.0%	36.7%	-4.3%	-

\* Statistically significant at 10 per cent of level of confidence.

Consistent with the prediction of Hypothesis 5, we find that there was a slight increase in the frequency at which the GAAP earnings were reported in the Financial Highlights. However, this increase is not statistically significant. Also, consistent with the prediction of Hypothesis 6 we find a statistically significant decrease in the frequency at which the pro forma earnings were reported in the Financial Highlights. Contrary to the predictions of Hypotheses 7 and 8, we find no significant changes in the frequencies at which the sample companies reported other financial information and non-financial information in the Financial Highlights.

**The above findings provide some evidence that Bill 198 appeared to have impacted the Canadian companies’ reporting behaviour with regards to the Financial Highlights in Annual Reports. Companies now are more likely to use the GAAP earnings and less likely to resort to more ambiguous pro forma earnings. If we accept the notion that the use of pro forma earnings is motivated somewhat by the desire to create a more desirable impression than can be communicated by using GAAP earnings, then the changes documented in this study should indicate that Bill 198 has resulted in improving the quality of the discretionary information reported by Canadian companies.**

## 6. Discussion and Conclusion

This study focuses on information reported in the Financial Highlights section of the Annual Reports of non-cross listed Canadian companies. We find some evidence that a company’s reporting in its un-audited Financial Highlights is related to its performance as measured by GAAP net earnings. Specifically, when a company’s performance is unsatisfactory management is more likely to report pro forma earnings and non-financial information. These findings are consistent with the popular notion that pro forma earnings are used opportunistically by management to “manipulate investors’ perceptions of the firm” (Doyle, Lundholm and Soliman, 2002). This sentiment is eloquently summed up by Stewart in the following statement. “There are persistent structural reasons why it is easy for executives, boards and investors to believe in things that are unlikely and improbable, but pleasant. So when it seems too good to be true, it usually is” (D. Stewart, 2007).

This study also finds that following the introduction of Bill 198 by the Ontario Securities Commission in 2003, there has been a significant decline in the frequency at which pro forma earnings are reported in Financial Highlights. The findings suggest that Bill 198 may have been effective in improving the quality of this aspect of corporate reporting.

This study is a preliminary one in our investigation. It has a number of limitations and there are areas that need further analysis to provide a more complete understanding of the reporting behaviour related to Financial Highlights. Limitations of the study include the small sample size (14 companies for a total of 83 Annual Reports). The small sample

prevented us from conducting a more refined analysis and controlling for other confounding factors. For instance, we were unable to separate the impact of Bill 198 on companies with satisfactory performance (the ones that should have no incentive to manipulate investors' perceptions) versus companies with unsatisfactory performance (the ones that should have an incentive to manipulate investors' perceptions). Also, we were unable to control for factors that may influence the reporting behaviour of companies, such as industry, size, and business cycle.

Despite widely held skepticism by the financial press and accounting regulators about companies' motives for reporting non-GAAP earnings, pro forma earnings are not without proponents. Companies generally defend their use of pro forma earnings as providing better measures of their future prospects (Doyle, Lundholm and Soliman, 2002). An investigation into the information value of pro forma earnings would be necessary for us to better understand companies' reporting behaviour and the full implications of Bill 198.

Pro forma earnings have been a topic that has attracted intensive debate in recent years, mostly in the US. The debate surrounding pro forma earnings, however, is only a part of some much larger questions. Why do companies choose to report certain information? Does management choose non-GAAP information to report opportunistically, or do they do so to better communicate their insiders' insights that would be lost under the restriction of GAAP? Should corporate reporting be more tightly regulated or should it be given more discretion? We hope that this study of the use of pro forma earnings in Canadian Annual Reports, and its findings have contributed to a better understanding of the issue.

### Reference

AlarmForce Industries Inc., *Annual Reports* 2000 through 2006.

Arbor Memorial Services Inc., *Annual Reports* 2000 through 2006.

Badger Income Fund (formerly Badger Day lighting Inc.), *Annual Reports* 2000 through 2005.

Bhattacharya et al., Assessing the Relative Informativeness and Permanence of Pro Forma Earnings and GAAP Operating Earnings, *Journal of Accounting & Economics*, December 2003.

Boston Pizza Royalties Income Fund (formerly Boston Pizza International Inc.), *Annual Reports* 2000 through 2005.

Bradshaw, Mark and Sloan, Richard. GAAP versus the Street: An Empirical Assessment of Two Alternative Definitions of Earnings, *Journal of Accounting Research*, March 2002.

Certicom Corporation, *Annual Reports* 2000 through 2006.

COM DEV International Ltd., *Annual Reports* 2000 through 2006.

CSI Wireless Inc., *Annual Reports* 2000 through 2005.

Davidson, Scott A., Stack, Alexander and Cole, Stephen. Reasonable royalty rates. *CA Magazine*, May 1999.

Dominion Citrus Income Fund (formerly Dominion Citrus Ltd.), *Annual Reports* 2000 through 2005.

Doyle, J.T., Lundholm, R.J. and Soliman M.T. The Predictive Value of Expenses Excluded from 'Pro Forma' Earnings, University of Michigan Business School, October 2002.

Easyhome Ltd. (formerly RTO Enterprises), *Annual Reports* 2000 through 2005.

Extreme CCTV Inc., *Annual Reports* 2000 through 2006.

Frederickson, James and Miller, Jeffrey, The Effects of Pro Forma Earnings Disclosures on Analysts' and Nonprofessional Investors' Equity Valuation Judgments, *Accounting Review*, July 2004.

Genum Corporation, *Annual Reports* 2000 through 2005.

Heflin, Frank and Hsu, Charles. The Impact of the SEC's Regulation of Non-GAAP Disclosures, Florida State University, September 2006.

High Liner Foods Inc., *Annual Reports* 2000 through 2005.

Isotechnika Inc., *Annual Reports* 2000 through 2005.

Labopharm Inc., *Annual Reports* 2000 through 2005.

Lewis, Michael. Pro forma lingo. *CA Magazine*, March 2002.

Lougee, B.A. and Marquardt, C.A. Earnings Quality and Strategic Disclosure: An Empirical Examination of 'Pro Forma' Earnings, University of California, Irvine, August 2002 draft.

OSC Notice of Amendments to the Securities Act and Commodity Futures Act. <http://www.osc.gov.on.ca> Retrieved October 20, 2006.

PricewaterhouseCoopers LLP, Canada. *Status of Changes to Canadian Corporate Governance*, Newsletter #2003-016.

Stewart, Duncan. Accounting tricks are difficult for anyone to spot. *Financial Post*, March 14, 2007.

Weil, Jonathan. Hazy Releases for Earnings Prompt Move for Standards. *The Wall Street Journal*, March 23, 2001.

# ASB History

ASB 2007  
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## **THE ATLANTIC SCHOOLS OF BUSINESS (ASB): THE SEARCH FOR LEGITIMACY WITHIN BUSINESS EDUCATION AND RESEARCH IN CANADA**

After 35 years of promoting business research in the Atlantic Provinces through the annual creation of the Atlantic Schools of Business (ASB) conference, in 2005, the decision was made to establish a formal structure for the organization. This paper will examine this decision by integrating the concepts of legitimacy, standardization and institutional isomorphism.

### **Introduction**

#### **What is the ASB?**

The first conference of the Atlantic Schools of Business (ASB) took place in 1970 and as such, is one of the longest running conferences of business scholars in Canada (Mills, 2005). For the first 34 years, the conference was hosted by various universities in Atlantic Canada without the structure of an organizing committee. The year 2005 was the first time that an executive committee was formed in order to organize the event. Now, as the 37<sup>th</sup> annual conference is in its planning stages, there is a quest to formulate the history of the conference.

#### **The purpose**

The purpose of this study is to write the story of the Atlantic Schools of Business as it fits within the field of business education and research in Canada. As one of the longest running conferences of business scholars in Canada, there is a significant history that is waiting to be revealed since there has been little research conducted on the organization itself. Through the assimilation of information from a variety of different sources including selected past conference proceedings, various articles and advertisements found on the internet, and a partially complete database of historical reference material collected on the conference, the history will be examined and the story of the conference created to determine the elements of the environment surrounding the Atlantic Schools of Business (ASB) Conference that led to the implementation of a formal organizational structure in 2005. The concept of institutional isomorphism (DiMaggio & Powell, 1983) will be used to demonstrate the impact of the field of business education and research on the structure of the ASB and the decisions made to foster legitimacy for the conference.

The first part of this paper will discuss institutional isomorphism and its connection with the legitimacy of organizations. The second part will demonstrate the impact of the desire to achieve legitimacy on structures and forms of organizations in the field of management education and research. The final part of this paper will fit the ASB Conference into this context of management education and research in Canada particularly noting the significant structural change that

took place in 2005.

### **The need for a history**

What the historian brings... is, first of all, consciousness of its temporal dimension. Business takes place in time. And that is crucial: The hopes and expectations that shape individuals' appraisals of organizations depend as much, if not far more, on past experiences as on abstract models... The long-term perspective enriches the debate on what makes organizations succeed or fail. Equally important is the historian's ability to establish relationships inside and outside the corporation (Dellheim, 1986, p. 11).

Dellheim (1986) points out that both internal and external relationships are important in the development of an organization's history and that this is important in understanding why some organizations succeed where others are prematurely extinguished. The creation of an historical account of the ASB can be used to is important for the longevity of the organization in that it can highlight the processes, procedures and influences that have shaped the organization.

### **The limitations**

Each writer of history will assimilate the data of the organization from the author's own perspective. The interpretation of historical artifacts by one individual may not correspond with another's. As the author of this history, it is important to recognize that the assumptions that I have made regarding the ASB originate from the perspective of an individual who has spent the majority of their academic career within the Ontario post-secondary system, and particularly from smaller northern institutions that struggled to gain legitimacy within an environment dominated by the universities of southern Ontario. It is likely that this personal history has shaped the way in which situations, events and artifacts have been assimilated and interpreted. What is selected to be included and that which is left out is indicative of the frame of reference and the theory upon which this paper has been developed and the limitation of incomplete archival records. It is recognized fully that subsequent histories of the ASB could expand upon or refute the analysis provided here.

### **Institutional isomorphism and legitimacy**

Institutional isomorphism, as described by DiMaggio and Powell (1983), is the tendency for groups of organizations within an institutional field to move towards homogeneity. An institutional field is a collection of inter-related firms such as competitors, suppliers, customers and other organizations that are linked together and "constitute a recognized area of institutional life" (DiMaggio & Powell, 1983, p 148). DiMaggio and Powell (1983) describe three processes of isomorphic change for organizations: coercive isomorphism, which will put pressure upon a dependent organization to take on a similar structure to a dominant organization; mimetic isomorphism, which will drive organizations in an environment of uncertainty towards homogeneity with an organization that is deemed successful, and; normative isomorphism, which will push organizations towards similarity in order to facilitate legitimacy. Both the mimetic and normative elements of this theory will be utilized in the analysis of the ASB; however, it is the concept of legitimacy which is most relevant to the implementation of a formal structure within the ASB.

Meyer and Rowan (1977) present the notion that legitimacy is sought through rationalized formal structures and that the "elements of formal structure are manifestations of powerful institutional rules which function as highly rationalized myths that are binding on particular organizations" (Meyer & Rowan, 1977, p 343). These myths are shared beliefs within an organization that specify what is appropriate or legitimate (Prasad & Prasad, 1994) and include ideologies such as professionalism (Prasad & Prasad, 1994) and standardization (Olshan, 1993). Therefore, in order for an organization to gain legitimacy, it must adapt to the commonly accepted ideals.

### **Credibility and legitimacy in business education and research in Canada**

Management transpires within a linear time frame as organizations evolve in response to internal and external forces. As a linear, and, thus, historical concept, the management of organizations can be studied using evidence of past events and decisions (Goodman & Kruger, 1988).

The history of management education and research has developed alongside the need for management skills within business. As society moved into the age of industrialization, the growth of the hierarchical organization led to an increased need for skills within employees of organizations to manage the complex flow of goods and resources which has, in turn, led to an increasing importance in education for managers (Boothman, 2000). The development of management education was not an easy process and resistance was felt by the professionalization efforts of Canadian management faculties from the science and liberal arts focused universities (Austin, 2000). The struggle to receive recognition of legitimacy as a profession became even more prominent as the demand for management education experienced significant growth after the Second World War (Austin, 2000). The evolution of management education in Canada can be seen as a reflection of the development process of management education in the United States of America (Boothman, 2000). Commercial colleges, offering programs in clerical training, were the forerunners of the current management education programs in universities developed in the US in the 1830s and in Canada in the 1860s, with initiatives in the Maritimes not developing until the early to mid 1900s. Law, medicine and engineering were developed as professions as early as the late nineteenth century, but management education, lacking the standardization effects of an external regulatory body struggled with legitimacy as a profession (Austin, 2000).

Management research associations have followed a similar path as management education institutions. The Academy of Management was formed in the United States of America in 1936 and is currently the oldest and largest scholarly management association in the world (Academy of Management, 2007). The limited supply of qualified faculty members in Canada meant that Canadian universities looked to the US to hire faculty. These American scholars tended to maintain their ties to American Associations and their research was predominantly produced about American institutions for American publications (Boothman, 2000). The Canadian universities and researchers were in need of a Canadian alternative to the Academy of Management, and in 1957, the Administrative Sciences Association of Canada (ASAC) was developed to fill this need. ASAC was deliberately modeled after the Academy of Management in order to provide a sense of legitimacy for drawing Canadian research to the association, its conferences and publications (Austin, 1998).

#### **Legitimacy through standardization**

Legitimacy has been defined as:

a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions... Legitimacy is socially constructed in that it reflects a congruence between the behaviours of the legitimated entity and the shared (or the assumedly shared) beliefs of some social group (Suchman, 1995, p. 574).

Organizations can develop legitimacy through copying the best practices of other organizations, particularly within their own institutional field. As practices by one organization or a group of organizations become benchmarked as a standard for operating, they form the basis for normative isomorphism. Paine et. al. (2005) documented this as corporations sought legitimacy through the standardizing of codes of conduct.

The growth of standard setting bodies or accrediting institutions which certify membership within an institutional field

can be seen in a wide variety of industries including the International Accounting Standards Board for accounting practices, the ISO group of certifications for safety and environmental considerations, and the Association for the Advancement of Collegiate Business Schools (AACSB) for management education. These are only three of the more than one thousand standards development organizations in the world (Bredillet, 2003).

As management education developed in the early 1900s, supporters of management education sought to have it recognized as a profession alongside engineering, medicine and law. Resistance, however, was significant and attributed to the lack of a regulatory body that would instill regulations and standards to guide the programs.

A pattern emerged in the development of management education and research. Institutions in America developed vocational business programs in the 1800s which evolved into business degree programs in the late 1800s to early 1900s. With a lag of approximately twenty years, the same progression took place in Canada beginning in Ontario, Quebec and the Western provinces. The universities of the Eastern provinces, although initiating programs early on, were not able to sustain a viable business degree program until the mid 1900s (Boothman, 2000). In the United States of America, the Academy of Management developed in 1936 as a filter for measuring research that fit the common standard. The Administrative Sciences Association of Canada (ASAC) replicated the model of the Academy of Management and was formed in 1957, again with a lag of approximately twenty years, to foster research in Canada that would adhere to commonly accepted standards and provide legitimacy for research in Canada. Following the lead of America and central and western Canada, in 1970 the Atlantic universities developed the Atlantic Schools of Business conference for promoting business research in the Maritimes.

The trend of replication is a significant example of mimetic isomorphism with one institution modeling itself after another that is deemed to be successful within the industry. The interesting story that is highlighted with an examination of the ASB conference, however, is that it was developed and maintained for 35 years without a formal structure, without adhering to the mimetic pressures that led to ASAC replicating the Academy of Management in form and function. The remaining portion of this paper will examine why, after 35 years of withstanding the mimetic pressures, the ASB decide to formalize its structure.

### **The ASB Conference**

This following section of the paper will argue that the ASB implemented a formal structure in 2005 in order to gain legitimacy in the field which would foster long-term survival.

#### **The first 25 years (1970 to 2005)**

Dellheim (1986) states that history demonstrates the internal and external environments that shape an organization. For the ASB, the internal environment was one of uncertainty with the process of re-creating the conference each year left open to the institution that would volunteer to host the conference. Interest in the conference was decreasing (Mills, 2005) and the longevity of the conference was in question. At the same time, increasing adherence to standards and accreditation dominated management education and research in Canada.

The conference began in 1970 without the formality of an organizational structure, but strong ties developed between the ASB conference and ASAC. This is evidenced by the articles regarding the ASB being printed in the ASAC E-Bulletin (for example, May 2002 and Spring 2006). Archival documents for the conference are limited to conference proceedings, a partially complete database of locations, dates, streams and presenters, and two boxes which contained the documents related to the organizing and hosting of the conference in 1996. Although limited to documents from 1996, this archival evidence provided insight into the intentional modeling of the ASAC conference for the creation of the ASB conference. Copies of the ASAC brochures and conference proceedings with notes regarding the utilization of these items for developing the artifacts of the ASB conference clearly demonstrated the effects of mimetic isomorphism.

External to the ASB, the growth of accreditation of business schools was occurring on a global scale. Although the members of the Association for the Advancement of Collegiate Schools of Business (AACSB) were dominated by American universities, the association was gaining members from around the world, with Canadian universities growing in numbers rapidly. In 1994, only two Canadian universities (Alberta and Calgary) were members of the AACSB, and a study was conducted that showed most Canadian universities were opposed to the concept of the AACSB as well as the cost of membership (Austin, 2000). However, by 1999, seven Canadian Universities were members of the AACSB (Alberta, Calgary, Concordia, Laval, Manitoba, Queen's and Toronto), and by 2007, this number has increased to seventeen<sup>1</sup>. The three Atlantic province members were some of the most recent to join with Memorial University gaining accreditation in 2002 and both Dalhousie and Saint Mary's posting their accreditation notifications in 2004.

The growing acceptance of AACSB as a standard for management education has resulted in a more formalized environment within which the ASB recruits researchers and practitioners for its conferences. This more formalized environment produced significant isomorphic pressure to adhere to the commonly accepted standards, particularly with the focus of several Atlantic Provinces on their recent accreditation with AACSB.

### **A time for change**

...most important and unprecedented, the ASB has held an annual conference each of the past 34 years without a standing organization or structured association. ASAC, AoM, and associated organizations all boast a well structured organization, complete with memberships, divisions, and executive committees – the AoM even has an office and a paid staff. However, ASB has survived without a standing committee, paid staff, or even a membership... Sadly, in recent years this informal rotation has begun to break down and interest has waned. This breakdown has led to the establishment of the first ever standing committee of the ASB... (Mills, 2005).

Organizations seek legitimacy within a field as the perception of legitimacy has been shown to have a direct effect on the survivability of an organization (Rao, 1994). "The mere existence of certain institutional structures can increase the legitimacy of compliant firms" (Standifird & Weinstein, 2002). With the future of the ASB in jeopardy, it is not surprising that change was implemented and replication of successful structures of organizations within the institutional field adopted. In an attempt to reverse the trend of decreasing interest in the conference, the ASB conference sought to portray an image of legitimacy and long-term viability. The writing of the article in Saint Mary's University's Workplace Review follows the concept espoused by Milne and Patten (2002) that organizations are able to foster legitimacy through the communication of institutionalized structures and processes that correspond with an industry's socially accepted norms to external constituents. The norm accepted by the management education and research industry is one of formalized structure. By adopting this norm, the ASB has succumbed to the normative isomorphic pressures.

### **Conclusions**

The evolution of organizational theory reveals a history not of progress toward greater elucidation and clarity or toward more humane forms of organization, but of continuing extension and integration of techniques of control (Ferguson, pp. 62-63).

The struggle for the ASB can be seen as a series of legitimization efforts beginning with management education and

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<sup>1</sup> Alberta, British Columbia, Brock, Calgary, Concordia, Dalhousie, HEC, Laval, Manitoba, McMaster, Memorial, Ottawa, Queen's, Saint Mary's, Simon Fraser, Toronto, Wilfred Laurier.

moving on to management research. Management education was initially focused in Ontario in the late 1800s (Boothman, 2000), followed by the replication of management education programs in the Maritimes between the First and Second World War (Boothman, 2000). This progression is mirrored in the development of the Administrative Sciences Association of Canada (ASAC) in 1957 and its pursuit of legitimacy (Austin, 2000), followed by the emergence of the ASB conference in 1970 and its subsequent legitimacy issues.

While first pressured by mimetic tendencies, it was the normative pressures of accreditation, standardization, and formalization that eventually caused the ASB to abandon its unique non-structure within the field of management research for a formalized structure that might enable the conference to continue offering a venue for research in the Atlantic Provinces.

A complete empirical history of the ASB Conference based on archival data is not possible at this point due to the significant gaps in documentation regarding the conference. Connections with early collaborators and the retrieval of archival documents, particularly from the first ten years of the conference would enable a more empirical history of the conference to be written.

### References

- Academy of Management. (2007). About Us: What is the Academy of Management. Retrieved June 16, 2007 from: [http://www.aomonline.org/aom.asp?page\\_ID=36](http://www.aomonline.org/aom.asp?page_ID=36).
- Austin, B. (1998). The Role of The Administrative Sciences Association of Canada in Institutionalizing Management Education in Canada. *Revue Canadienne des Sciences de l'Administration*, 15(3): 255-266.
- Austin, B. (2000). The Administrative Sciences Association of Canada, 1957 – 1999. In B. Austin (Ed.), *Capitalizing Knowledge: Essays on the History of Business Education in Canada*: 266-294. Toronto, University of Toronto Press.
- Boothman, Barry E. C. (2000). Culture of Utility: The development of business education in Canada. In B. Austin (Ed.), *Capitalizing Knowledge: Essays on the History of Business Education in Canada*: 11-86. University of Toronto Press, Toronto.
- Bredillet, Christophe N. (2003). Genesis and Role of Standards: theoretical foundations and socio-economical model for the construction and use of standards, *International Journal of Project Management*, 21: 463-470.
- Dellheim, C. (1986). Business in Time: The Historian and Corporate Culture. *The Public Historian*, 8 (2), 9-22.
- DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48: 147-160.
- Ferguson, Kathy E. (1984). *The Feminist Case Against Bureaucracy*. Temple University Press, Philadelphia.
- Goodman, R., Kruger, E. (1988). Data Dredging or Legitimate Research Method? Historiography and Its Potential for Management Research. *Academy of Management Review*, 13 (2), 315-325.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, 83: 340-363.
- Mills, A. (2005). Restructuring the Atlantic Schools of Business (ASB) Forum. *The Workplace Review*, April 2005.
- Milne, Markus, J., Patten, Dennis, M. (2002). Securing Organizational Legitimacy: an experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing & Accountability Journal*, 15(3): 372-405.
- Olshan, M. A. (1993). Standards-making organizations and the rationalization of American life. *The Sociological Quarterly*, 34: 319-335.
- Paine, L., Deshpande, R., Margolis, J. D., Bettcher, K. E. (2005). Up To Code: Does your Company's Conduct Meet World-Class Standards? *Harvard Business Review*, Dec 2005: 122-133.
- Prasad, P., & Prasad, A. (1994). The ideology of professionalism and work computerization: An institutionalist study of technological change. *Human Relations*, 47(12).
- Rao, H. (1994). The Social Construction of Reputation: Certification contests, legitimation, and the survival of organizations in the American Automobile Industry: 1895-1912, *Strategic Management Journal*, 15: 29-44.
- Standifird, Stephen S., Weinstein, Marc. (2002). Establishing Legitimacy in Emerging Markets: an empirical

comparison of the Warsaw, Budapest, and Prague Stock Exchanges. *Journal of Comparative Policy Analysis*, 4(2): 143-163.

Suchman, M. (1995). Managing Legitimacy: strategic and institutional approaches. *Academy of Management Review*, 20(3): 571-610.

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## **IF A TREE FALLS IN THE FOREST... REPRODUCING ORGANIZATION THROUGH TEXT – A HERMENEUTIC ANALYSIS OF CURRICULA VITAE AND THE ATLANTIC SCHOOLS OF BUSINESS CONFERENCE.**

This study analyzed the curricula vitae of scholars who presented papers at the Atlantic Schools of Business conference and whose papers appeared in the conference proceedings. The curriculum vitae can be viewed as a personal story (Miller & Morgan 1993) and is also an academic life history of the scholar's career. The document serves many purposes (Dietz & Bozeman 2005; Metcalfe 1992), however, the goal of this research is to illustrate the relationship between this personal device and the conference as a socially reproduced organization. The research examines the CV as a potentially powerful tool for recreating the conference and the reproductive power of the public presentation of CVs on the World Wide Web.

### **Introduction**

The Atlantic Schools of Business conference (hereafter ASB) has been in existence for over 35 years as an annual academic conference and in 2004 it adopted a formal structure as an organization with a standing committee and executive. This action was in response to waning interest in the conference (Mills 2005). Concurrently, a history project was undertaken to further define the organization (ASB 2007). These steps may be seen as the use of structure to define the organization. Another approach to understanding the organization is to examine the ongoing recreation of the conference by the participants themselves (Giddens 1979). Conference attendees come together and generate a common understanding of ASB, putting it in a certain position (as a peer reviewed conference, for example) and at a certain point in their careers.

One way individual participants recreate ASB is by writing and updating a curriculum vitae to reflect conference participation. This study will examine the CVs of conference participants to explore the relationship between the curriculum vitae and conference participation and to illustrate how the conference is reproduced after the physical meeting. The study will approach this analysis from the point of view of the conference as an element of the professional project (Witz 1992) of the scholar. The texts examined are selected from the context of the academy, and its legitimating processes.

This study poses the question how do curricula vitae “contribute to the maintenance or evolution” (Phillips & Brown 1993) of ASB. ASB presents a unique opportunity for study of the way its members participate and then perpetuate the conference in between the annual meetings because no structure or history of the organization existed between sessions until 2004. The organization's history up to this point had been dependant on the treatment and interpretation of its dominant artifact: the conference papers gathered in conference proceedings. These texts present an object for this study, as we seek evidence of the organization's recreation through its texts and the texts of its participants. The way in which the activities of the conference are reproduced in the curricula vitae can offer insight into the conference as an organization, and offer an alternative perspective of the organization's history in the form of the collection of personal histories of participants.

### **Social Reproduction Through Text**

Social reproduction of an organization is accomplished by the individuals involved in and around that organization; the texts relating to those organizations have the potential to record as well as to constitute the organization (Putnam & Cooren

2004). This activity is social in that it requires interaction, and it is continual because each action contains latent potential to redefine or to reinforce existing norms and definitions of the organization (Prasad 2005).

### **Textual Agency**

Texts are used within organizations to direct action and to recreate the organization (Cooren 2004) and also they perform on their own (Putnam & Cooren 2004). In this sense the CV is a text with the potential to recreate and locate the conference organization in time and space. The histories of the individual participants, portrayed in their CVs, collectively reflect the history of an organization as an alternative to a separate organization history.

The reproduction of the organization is possible through its rules and procedures in document form (Putnam & Cooren 2004). However, such documents are not available in the case of ASB. The conference site does not come up in a general internet search. Indeed the search facility specific to the Acadia University website, which host the ASB site, does not bring up the conference information. This is not a critique of the management of the site, but illustrates the textual resources available for reproducing the organization. There are no formal written rules and procedures available to those who wish to join the organization, nor to guide those who are already participants. The calls for papers are broadcast more widely, but reside in the much less stable environment of email, subject to deletion with greater ease than a web page.

Access to the proceedings of ASB is also limited. The Novanet library system which links collections for across all ten Nova Scotia Universities, for example, houses copies of less than half (16) of all proceedings, and these reaching back only 26 of the conference's 37 year existence. The proceedings exist electronically on the web only for the 2006 conference. Proceedings for earlier years are in the hands of individual participants, and in the recent research efforts surrounding the ASB history project (McMurray 2006) demonstrated that proceedings are not necessarily durable when in written form either. In this context, the CVs take on the major role of reproducing the organization.

### **Context for ASB**

Renewal of the ASB forum is based upon four goals, the first of which is to promote "a venue that encourages and facilitates the development and presentation of research papers by junior faculty, PhD students, and those new to conference presentations" (Mills 2005 p. 39). The second goal refers to established scholars and targets "business professors at all stages of their career to exchange ideas and gain insights into leading edge research in the region and showcasing leading edge research" (Mills 2005 p. 39). The academy, as a profession, uses conference presentations as a means to develop the body of expert knowledge of the profession (Freidson 1986). The principal texts of this aspect of the professional project consist of presentations made at the conference and the academic papers on which they are based. The fact of participating in the conference is recorded as an accomplishment on its own in the CV of the participant. This is the record of the credential so important to the profession, and is the record demonstrating accomplishment of the two goals mentioned above.

### **Curriculum Vitae as Text**

The CV has been shown to be of value in examining the creation of scholar identity (Reybold 2003) and career progress (Dietz & Bozeman 2005; Schroeder et al. 2004). The CV establishes credibility for a scholar and her university through a record of activities that support the three pillars of the professoriate: research, teaching and service. The CV complements a statement of research interests by demonstrating the acceptance by peers of credible work. The publication record is the most prevalent form used to demonstrate this legitimacy of research activities.

The CV is a chronology of positions held and knowledge contributions, making it a historical rendering of an academic career. It structures activities post-hoc and its structure reveals publications and directs action in research for those looking for similar topics or collaborators. The CV provides a basis for collaboration (Henry 2002). It is not purely formulaic, though advice and guidelines exist in abundance, as a review of faculty professional development web sites and the popular press attest (Metcalf 1992). The CV thus forms a very personal, yet standardized history.

Inclusion in a profession is dependant on the individual's ability to replicate the behaviour of the profession and the CV reflects the power of norming within the professoriate (Metcalf 1992; Miller & Morgan 1993). The CV is a record of the individual's ability to accomplish professionalism. Phillips and Brown (1993) state that discourse as a set of statements constitutes the organization. The statements/texts bring social objects into being. The discourse of scholar has grown over the past century to stress research (Hinings 2006; Weatherbee et al. 2003). The CV is an important artifact of that discourse, and brings the career of the scholar into being. It also brings the scholar into the realm of validated contributor in a way that lists of citations do (Erkut 2002). As an autobiographical tool (Miller & Morgan 1993) the CV both reveals and conceals the scholar's work. The ritual of the creation of the CV and its promulgation on websites reproduces the conference, validates it, and brings the organization into being between the instances of the conference event.

The CV legitimates the individual and helps him/her to conform to the requirements of the profession (Parkin 1979). The CV is particularly important for junior scholars seeking tenure and promotion, and this group is specifically targeted through the ASB goals. The CV takes on a symbolic role within the profession and the ASB can be seen as an extension of the profession and an instrument of action for the profession to recreate itself. It is a rich source of analysis for a hermeneutic study.

Hermeneutics is a suitable analytical approach as it "approaches instances of organizational communication as symbolic phenomena, as texts that require interpretation. By combining a hermeneutic perspective with a critical interest, the method provides a structured approach to the analysis of the role of meaning in the ongoing recreation of organizations and their environments" (Phillips & Brown 1993 p1547). The idea of the hermeneutic circle (Prasad 2002) leads to an examination of the CV in the context in which it is produced; not just the occurrence of the ASB Forum, but the environment of the university of the scholar and the technology infrastructure enabling broad communication of the scholar's presence in the academy.

## Internet

The internet is a source of data for this study as well as a key element of the context informing the study. For a text to have effect in the social production of the organization, it must achieve some form of interaction beyond the author. A CV left in a drawer achieves a purpose for the author alone. The CV is commonly shared in the confidential context of the job application or tenure and promotion review process, with a limited audience. However, scholars are increasingly turning to the internet in an academic capacity (Henry 2002). They are making their research histories and their complete CVs, as well as academic publications, available online (Bohm 2007; Pritchard 2007). In addition to individual work on personal web sites, the online scholarly community is also growing (ephemera 2007; Max-Planck-Society 2002). The internet is growing in activity and credibility as a venue for scholarly exchange and as a means to share and build collaboration in the academy.

The internet is also one of the university's principle means of communication with its stakeholders. Students turn first to their school's website for information and services on every aspect of their academic life. Faculty and funding services are also increasingly administered online, including databases of research projects and lists of working papers. One need only visits any university or government website to see evidence of this. Thus the internet is a relevant and credible source for data on the academy for a number of stakeholders.

The personal histories of scholars are important to recreating or perpetuating the organization through time, sustaining it from one event to the next. The personal history of participants, as created in the CVs is a way to re/create the self as a scholar and position oneself in a particular context (Miller & Morgan 1993) – in this case the academy and within ASB. At the same time, this action recreates and sustains the academy and the ASB conference. The web sites for institutions are dependably available, and the CV is a text to which we usually add information and not one that is completely rewritten each time it is updated. It is thus available electronically for research and is also a constant source of information, available through time though it reflects changes and can be said to be an active or living document.

## Hermeneutic Approach

Hermeneutics reveals the hidden (or authentic) meaning of the symbolic object or process (Palmer 1969) because it probes beneath the appearance of the text, and examines its context as well. Texts, and the CV as a particular form of text, can be described as both an object and a process. The CV is a career record and is an instrument for career and credibility building (Miller & Morgan 1993) and as such it requires interpretation (Phillips & Brown 1993).

Hermeneutics uses three levels of analysis (Prasad 2002; Prasad 2005) in the examination of texts. Level one examines what is said in the text. Level two examines what is missing from the text. Level three examines the context for the written text, closing the hermeneutic circle. The context is not neutral nor objectively given, but is defined by the researcher (Prasad 2002). In this study the context is the career of the scholar, as reflected by the scholar's position within their home university and the broader academy, and the length of the scholar's career. The context is also the relative emphasis on research for the institution as reflected in the additional web pages sponsored by the home university. The history of the conference itself is important to developing an understanding of the role of the CV in constituting the organization (Prasad 2002). Finally, the analysis recognizes the subtext of power structures within the context to bring a critical perspective to this study.

The CVs in this study are read in the present, and in the knowledge that an organization structure now exists because the conference was at risk. A structure was created in an attempt to save what is perceived to be a valuable conference (Long 2006; Mills 2005). The CVs are a product of past actions, and were created in the past, with additions and revisions implemented through time. It is unlikely that any of the CVs came into existence at the moment when the ASB presentation was made, and so most CVs examined in this study were created in the absence of a formal structure for the conference. As a result, the impact of the participant actions and the conference position in the Canadian and regional academy can be considered to have sustained the organization over time; its existence is not solely a direct result of the action in 2004 to create a standing committee of ASB.

Finally, critical hermeneutics (Prasad 2002) examines ideology and power implications of the text in social reproduction. The variety of scholars and institutions participating in ASB provides an opportunity to explore deeply the embedded notions of power in the reproduction of the conference through the norms surfaced in the production of CVs.

## Reflexivity

Among the interpretive traditions, hermeneutics calls upon the researcher to declare biases and assumptions about data and subject as part of the research analysis (Palmer 1969). I am currently in the socio-cultural milieu of the recent texts, as an Atlantic based researcher, a PhD student, and part time faculty member of two Atlantic Canadian universities. Although I have yet to publish an academic CV beyond the limited realm of funding applications and student colloquia, I am not able to distance myself in time and space from the creation of the CVs I studied. I approach this particular project to learn about the potential to sustain organization in my own milieu through the recreation of personal history as well as to learn what constitutes a successful academic CV. I expected a regionality to pervade the personal histories of the conference participants, and through the study hope to discover how that might be manifest.

ASB has been presented to me in the context of my own work as a viable and valuable venue for my research efforts and this influences my approach as I seek validation/refutation of those claims. I approached this research with a curiosity as well – if this is a suitable forum for me, whom else does it draw? These preconceptions are highlighted here not because they drove the research in this project, but because they served as points of departure for the initial reading of the texts. In the Habermasian tradition, not all prejudices are legitimate (Prasad 2002). Some of these notions bore further examination while new and unanticipated themes emerged as well.

## Data Collection

The Proceedings of the ASB conference provide a series of texts that describe the event, and can be considered to form part of a history of the event. These are organized into streams, and over the past thirty five years the Finance and Management Education streams are among those that appear most consistently as distinct streams. In addition, the methodologies in Finance are largely quantitative and in Management Education they are qualitative, which provided a contrast within the data with the potential for comparisons. Contributors were selected from these streams in the years 2003, 2005 and 2006 (ASB 2003, 2005, 2006) because these represent the shoulder years before and after the establishment of a formal organization for ASB. They are also recent years, with greater likelihood of complete data availability, and possibly greater participant access to electronic means for CV publication.

It is possible that over time the CV of a business school academic succumbs to the pressures of the business world CV, and the most important, most prestigious events are retained while lesser ones are eliminated or summarized in a way that hides the specifics of the event. To examine the impact of time, proceedings for 1996 (ASB 1996) were also examined. The same two academic streams were selected and CVs of contributing scholars examined to determine if there was a difference in the way in which the CV is used to narrate the scholar's career and the ASB conference over time. Finally, CVs of stream conveners in the years examined in the first phase were examined for reference to ASB service.

CVs were collected through the World Wide Web, by visiting the university site for the scholar in question and searching their faculty page for personal and research information. When it was not possible to locate a scholar this way, perhaps because they have changed universities, a broad search of the Web was completed, and in most cases this produced the required information.

A content analysis of CVs generated some preliminary quantitative data and set the framework for a more detailed reading of the texts and the surrounding context of the electronic histories of the individual scholars.

### Preliminary results

In the first phase study of current, or more recent, conferences, 25 papers were examined, by 35 authors at 19 schools. Eight (8) of those were schools in Atlantic Canada, 3 were in Quebec, 2 in Ontario 5 in the US and 1 in Asia Pacific. On the face of it this would suggest that ASB is not purely a regional conference. However, the evidence indicates that all authors from outside the Atlantic region were joint authors of a paper with an Atlantic Canadian scholar, with the exception of just one paper across the three years of data. The scholars ranged from PhD students to tenured professors with thirty-plus year careers. Four authors had no electronic presence on the web. The sample is not statistically random or representative, and is not comparable to the standard for quantitatively derived generalizable conclusions. However, in the qualitative traditions sufficiency is the applicable benchmark (Prasad 2005), and the sample here is deemed to be sufficient to provide data suitable for the hermeneutic analysis proposed. The data also provides adequate coverage of relevant features of the field (Long 2006).

In most cases the department or faculty presented a template for individual scholar's pages. These included an option for core narrative information about the instructor, photographs, logistics information that might be of use to students seeking appointments of making academic decisions about courses and programs of study, as well as a link to either a personal web site, including a CV, or a research-specific page. In some cases all three formats were available and used by scholars.

There does not appear to be any pattern to the use of web pages by stream or by length of career, although if a scholar included research related information on the university standard page, there also tended to be a link to a personal web site for that scholar. There were never more than two instances per stream per year of a scholar citing the sought after ASB presentation on either the university template, a research section, or a personal web page. However, there is a pattern of current and recent presenters who mention previous years' presentations at ASB. A total of nine instances of earlier ASB

presentations were noted compared with seven citations for the target years.

The 1996 analysis included 13 papers from 24 authors, 4 of whom were among the first group of authors analyzed. The same pattern of joint or sole Atlantic authorship pertains to the 1996 data, however this is qualified by the absence of information on two papers, and three authors.

## **Analysis**

### **Level one analysis**

In addition to the low frequency of ASB citations in the CVs examined, another theme of note is that the proceedings show all authors are affiliated with an academic institution. Though the goals of ASB (Mills 2005) indicate the conference is a forum for the practitioner as well as the scholar, the control over knowledge creation is restricted to the academy (Child & Fulk 1982). This is one way the ASB conference aligns itself to the broader academy and legitimizes its activities within the academy (Austin 1998). The creation and publication of CVs is both a product of and perpetuates this process.

The phrase “peer reviewed” appears consistently in CVs, particularly among those scholars whose careers debuted in the past ten years. Peer review is used to describe articles as well as conference presentations, and conference presentations are distinguished from conference proceedings in many CVs as well. This highlights the perceived value of the proceedings as a document that persists through time, and indicates the relative ranking of activities by scholars, between presentation and presentation accompanied by publication in proceedings. When ASB 2006 proceedings are mentioned in a CV, however, there is no website address provided to access the proceedings directly through the conference web site. ASB appears to be isolated to some extent from the electronic scholarly community.

The ASB conference is represented in the CVs of current junior scholars, and is a past artifact for senior scholars, but diminishes in prominence with the length of a scholar’s career and distance from Atlantic Canada. The conference appears to hold value for the scholar’s career as there is evidence that the papers presented go on to be published, judging by the appearance of the titles in publication lists. However, the conference exists most vividly among junior scholars and fades as they truncate their CVs or go on to larger, international conferences. Scholars tended to omit the ASB presentation if a paper, in revised formats, was presented at numerous conferences, even if the paper wins an award at ASB.

**University web sites.** Universities are encouraging the use of technology, as evident in desktop computer renewal programs, templates for websites and standards for representation of the university on web sites. One university examined has a section dedicated to recent research which includes detailed citations, sources of funding, and chronological information about scholars, quite independent of the detail available in CVs. The university takes pride and ownership of the research through its presentation and management of this database. Other schools have smaller versions of this electronic repository in the form of web page dedicated to working papers by current faculty. Still other universities provide a template site for faculty, with research and CV links, however these are not consistently populated with information.

Scholars varied in their presentation of personal web pages. There is variety in the tone used on such sites, ranging from very formal language and strict formatting to very casual language, innovative formats and unorthodox graphics. This variety presents the unique personal history reflected in the CVs, but does not appear to have any relationship to whether or not ASB is cited in the CV.

### **Level two analysis**

**CVs** The absence of the formal structure of ASB as an organization is reflected in the CVs of participants: the CVs studied do not mention any administrative support for ASB. Only two authors across all of those examined mention acting as a review for ASB. Shegalia and Mills (2006) found more consistent mention of administrative support when a longer time frame is analyzed.

Most of the scholars captured in this study do not cite ASB presentations on their CVs. In only a limited number of cases this is a result of the scholar not having an CV on the internet. Among the junior scholars, there is evidence that ASB papers that are taken to international conferences are mentioned only in the context of the international conference, or if published, only the publication is noted on the CV. The ASB presentation then serves as a place marker for the body of work, and is replaced or edited out. This is the case even for an award-winning paper at ASB.

**University web sites.** One university notably has no faculty web pages at all and no public information available on research activities. This university does, however, have the most consistent presentation of information on academic programs of any of the sites visited in this study. The site is notable in the way it appears to be controlled by a set of rules on presentation of information, and in its complete absence of any human component in the delivery of the academic programs. It appears that the courses and programs listed are not delivered by faculty. The researcher and presumably current and potential students can only get a listing of faculty members and phone numbers, with no link to courses taught, no photographs or other personal data. This is a powerful context for the scholar, and general web searches did not produce web sites for the scholars in this institution, indicting the institutional norm impacts on the behaviour of the scholar to a wide extent, perhaps influencing their skill set (ability to create own web page) access to resource (where to host such a site) and beliefs in the value of this form of text and personal history.

Despite the organization of people and structure recently implemented, the ASB conference may not be sustainable because people do not reproduce it in their own histories. Despite the efforts to record and create a history of ASB through the renewal project, this may not be a sustaining initiative for the organization if ASB reproduces itself by re-enacting the conference but not the works and the life of the works presented at the conference.

### Level three analysis

**ASB within the academy.** Like ASAC (Austin 2000), ASB's position in the academy is linked to its faculty participation. ASB is a venue most often attracting junior faculty and students – it is unusual in its welcome of undergraduate papers for example. The omission of ASB from a list of presentations that includes subspecialty conferences for the same paper highlights an additional theme. ASB is generic enough to attract papers from all disciplines and stages of career, yet not distinctive enough to provide credibility within one's discipline that is so important as a junior faculty member. Scholars may abandon the local in favour of the international or the niche. So without structure and social reproduction of the organization the local may be at risk. In addition to the structure, however, the organization needs to be continually reproduced and transmitted to potential participants.

The academy in Atlantic Canada faces declining student enrollment, an aging population, and challenging fiscal demands (Long 2006). In this restrictive environment, conferences continue to occupy an important place in the credentialization of the profession, and international conferences particularly so (Austin 1998). Service and teaching may be evaluated in the internal promotion and tenure decision process, however research continues to stand at the forefront of legitimate activities in the academic career (Hinings 2006). The regional universities may feel these pressures quite keenly.

The CV is an important early step in the career of a junior scholar, for whom ASB is appealing as an accessible venue (Long 2006). But junior scholars often had only limited access to travel and research funding, especially in the smaller regional universities. As a result they may come to depend on the regional conference. At the same time, they have not built commitment to their institution or to the region necessarily, and so may not get as involved in supporting the organization beyond presenting a paper; possibly because they lack confidence and knowledge but possibly in order to marshal the scarce resource of time towards achieving the benchmark publications for tenure.

**Institutional context.** Universities are making it easier to post CVs online with how-to guides and templates, though they are also developing and promulgating policies to control and conform these processes. These CVs form an integral component of the academy and of ASB's history.

“CVs are produced and read in particular contexts and with reference to specific others and these processes of reading and writing cannot be understood outside these contexts. Put another way, the CV like any other administrative document, is never complete: it is always open-ended. Others are encouraged to read the gaps or to listen to the silences.” (Miller & Morgan 1993 p135)

Scholars from universities whose web sites had more sophisticated research databases did not tend to cite ASB in their template-based CVs, indicating a relationship between the tone of research and the presentation of the scholar in their school milieu. In some instances these scholars wrote CVs with significant publications or participation in international conferences. In other instances scholars wrote CVs with an emphasis on a subspecialty of their field, and noted regional conferences with a specific focus on this niche in their discipline. ASB does not meet either criteria, and its absence is noted as a result.

### **Critical analysis**

The power of the scholar’s home university influences the creation of CVs in two distinct ways as surfaced in this analysis. The overt support for web publication provided by web site templates, instruction, and server space is underpinned by a tacit control and norming inherent in rules, policies and practices that can in fact act to limit the accessibility to much less than the actual capacity of the technology. In addition, what the scholar chooses to present in her CV is influenced by her need for tenure. With tenure comes a certain freedom from striving to “publish or perish” and a corresponding freedom from the norms that govern compliance to the research standard of the university. It may be, however, that those fully indoctrinated in the profession continue to perpetuate these norms in their CVs, and also in their relationships with junior scholars, through the professional power they hold (Klegon 1978). This power can also be felt through their influence as reviewers of tenure applications. The senior scholar then plays a role in positioning ASB as valid, and at the same time as rooting it firmly in the domain of the junior scholar by mentioning in their own CVs their participation in the past, but not the current time.

This study shows the ASB presentation to be rooted at a point in time in a career chronology, and also reinforces the relationship between junior and senior scholars in the reproduction of knowledge and its promulgation in specific, sanctioned forums. Participants make a choice in self portrayal within the region and discipline and this impacts on the reproduction of ASB.

### **Summary**

ASB is recreated through CVs and the conference is clearly anchored regionally with a focus on junior scholars establishing their practice and academic record. Current junior scholars cite ASB, however not consistently. It is common for faculty well past the tenure mark to continue to present papers at ASB, and yet to make no mention of the conference at all in their CVs. These included quite lengthy CVs as well as the more truncated, department-template versions. On the other hand, some quite senior scholars with considerable research history as well as service records do cite their participation in ASB in recent years in addition to other works. This gave rise to the theme of individuation and the absence of a regional standard, a career standard, and even a stream standard in the creation of CVs and in versions of personal histories of ASB.

There is more than one way to write the organization’s history, as the renewal and history projects of ASB have shown (ASB 2007). The fact that a general internet search on ASB turns up individual accounts of participation on the conference, and not the organization of the conference itself nor its official website, underscores the importance of the individual history in the form of CV in the recreation of an academic conference. The presence or absence of the organization in the CV means that it does not exist outside of the Atlantic Canadian CVs where it is reproduced. This does not limit the conference to a region because the web is global, but it firmly locates it in Atlantic Canada, and shows participants are Atlantic Canadian scholars. With ASB thus rooted in the personal histories of participants, the conference may risk extinction because it is not recreated by a broad enough audience of recognized faculty beyond the region. The regional aspect of ASB does not necessarily limit the life span of the conference, but the reliance on junior, and transient faculty may. Though service is

acknowledged in the CVs as a important portion of the trinity of academic life (Hinings 2006), ASB service is mentioned in only one of the CVs examined in this project.

The universities play a passive, though not unimportant role in recreating and sustaining ASB, including the institution hosting the ASB site. The university library collective does not maintain a complete archive of proceedings, nor other materials related to the conference. Individuals do not cite their support of the review process nor their role as conveners in their CVs. Where publications dominate over conferences ASB tends not to be mentioned and sub-discipline conferences tend to appear most often.

The social construction of an organization after the fact of its occurrence is dependant upon people creating texts in various forms that reproduce the organization (Child & Fulk 1982). If only some members do so, this recreates the organization in a particular way. If none do so, it can be argued the organization is not recreated at all, and is at risk of ceasing to exist. This is particularly important for an organization that has little formal structure, such as ASB. What can we learn from the history of the organization, as recreated in the texts of participants, that sheds light on the nature and function of the ASB as an organization with a role in the academy? The uncertain status of the junior scholar has been balanced by her need to publish and present and to date this has been sufficient to sustain ASB. This analysis of CVs shows papers presented at ASB went on to be published, but also shows the ASB presentations not noted on the CV. The conference exists only minimally beyond the annual event itself. Proceedings in drawers, like CVs in drawers, are inert and the memory trace (Putnam & Cooren 2004) lies only within the individual; without interaction or the possibility for interaction there is no organization beyond the individual. The CV itself does not seem powerful enough to sustain the conference. It must rely upon some other means.

### Conclusion

Long (2006) identifies ASB as being unique due to its geographic location, and the location of scholars in the recent proceedings bears this out. The Atlantic Canadian setting is thus an important consideration in the context aspect of the hermeneutic analysis. So too is the individual scholar's position within their career. The tenure status of conference participants is an important consideration in analysis of the CV as a text describing the personal history of the scholar and as a tool of legitimation within the academy. However the analysis presented here does not capture elements of the conference that exist beyond the legitimation of career. There is no means of recording the social value of the conference in CVs, and this aspect may be worthy of further investigation.

Austin's history of business schools in Canada (Austin 1998) traces a line from the practitioner focus to a growing scholarly legitimacy, with a corresponding move to the type of research record found in other more established academic disciplines. This is accompanied by a rise of the conference and in turn its legitimation (Austin 2000). It may be possible that some of the norms of business CVs have persisted into the business schools themselves, particularly where the audience of undergraduate and master's students will rise to positions of leadership eventually themselves, and in turn influence the direction of business schools through funding and board direction. It may be desirable in this context to maintain concise, globally focused CVs to both set examples and to serve as exemplars to this business audience.

The CV as an artifact created for one purpose – self portrayal of career success and positioning within the academy, serves another purpose in the recreation of the event it records; it gives a form of history to ASB with which the CVs share a context. The actions of the authors in creating their CVs and choosing to represent ASB as a component of their research work contributes to the history of the ASB by reproducing the conference as an accomplishment of the participants (Cassell 1993). Understanding the construction of the conference in terms of how it is reflected in CVs may reveal ways in which the conference as an organization supports the broader context of the professoriate. The analysis may also contribute to an understanding of how the conference relates to the creation and perpetuation of individual scholars within the profession.

This study contributes to the understanding the ASB in a time of transition from an ad hoc to a structured organization. It investigates the relationship of ASB with its membership in order to identify broader themes of relevance to the ongoing recreation of recurring events and the ways in which these are perpetuated, which might in turn be of assistance to other

organizations undergoing change. “Any activity or object that affects the network of symbols through which a group or individual understands an organization and its place in the world is of interest from a critical hermeneutic perspective” (Phillips & Brown 1993).

## References

- Ephemera: theory and politics in organization <http://www.ephemeraweb.org/journal/index.htm> [Accessed July 31, 2007]
- ASB. “Micro-entrepreneurship: Self-reliance, innovation & growth” Proceedings of the 26th Annual Atlantic Schools of Business Conference, ed.^eds. G. Wybouw, & P. Berry
- . “Navigating the global tides of change: Global business in the new century” Proceedings of the Proceedings of the 33rd Annual Atlantic Schools of Business Conference, ed.^eds.
- . “Shifting Business Practices and Paradigms” Proceedings of the Proceedings of the 35th Annual Atlantic Schools of Business Conference, ed.^eds. B. Sharma
- . “Partnerships and Collaborations: Opportunities in Academia” Proceedings of the Conference Proceedings: Atlantic Schools of Business Conference, ed.^eds. P. D. Sianchuk
- . ASB Renewal <http://asb.acadiau.ca/renewal.htm> [Accessed July 31,2007]
- Austin, B.,”The role of the Administrative Sciences Association of Canada in institutionalizing management education in Canada”, *Canadian Journal of Administrative Sciences*, 15(3),(1998) 255-266
- .”The Administrative Sciences Association of Canada, 1957-1999” in *Capitalizing Knowledge. Essays on the history of business education in Canada*, ed. B. Austin Toronto: University of Toronto Press, 2000
- Bohm, S. Department of Management Website, University of Essex <http://privatewww.essex.ac.uk/%7Esteffen/> [Accessed July 31, 2007]
- Cassell, P., *The Giddens Reader*, London: MacMillan 1993
- Child, J., & Fulk, J.,”Maintenance of Occupational Control: The Case of Professions”, *Work and Occupations*, 9(2),(1982) 155-192
- Cooren, F.,”Textual Agency: How texts do things in organizational settings”, *Organization*, 11(3),(2004) 373-393
- Dietz, J. S., & Bozeman, B.,”Academic career, patents, and productivity: Industry experience as scientific and technical human capital”, *Research Policy*, 34((2005) 349-367
- Erkut, E.,”Measuring Canadian Business School Research: Output and Impact”, *Canadian Journal of Administrative Sciences*, 19(2),(2002) 97-123
- Freidson, E., *Professional Powers. A Study of the Institutionalization of Formal Knowledge*, Chicago: University of Chicago Press 1986
- Giddens, A., *Central Problems in Social Theory: Action, structure and contradiction in social analysis*, Berkeley: University of California Press 1979
- Henry, P. D.,”Scholarly use of the internet by faculty members: Factors and outcomes of change”, *Journal of Research on Technology in Education*, 35(1),(2002) 49-57
- Hinings, C. R.,”Keynote address as presented by C.R. Hinings at the 2006 ASA conference in Banff, Alberta, Canada - Reaching new heights”, *Canadian Journal of Administrative Sciences*, 23(3),(2006) 175-182
- Klegon, D.,”The Sociology of Professions”, *Sociology of Work and Occupations*, 5(3),(1978) 259-283
- Long, B. *The Mission: uncovering a sense of ASB through a critical hermeneutic analysis of individual mission statements*
- Max-Planck-Society. *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*
- McMurray, A. “The ASB database: presentations and challenges” Proceedings of the Presentation at the 36th Atlantic Schools of Business Conference 2006, ed.^eds. P. D. Sianchuk
- Metcalfe, A. W.,”The curriculum vitae: confessions of a wage-labourer”, *Work, Employment & Society*, 6(4),(1992) 619-641
- Miller, N., & Morgan, D.,”Called to account: The CV as an autobiographical practice”, *Sociology*, 27(1),(1993) 133-143

- Mills, A., "Restructuring the Atlantic Schools of Business (ASB) Forum", *The Workplace Review*, 2(1),(2005) 38-39
- Palmer, R. E., *Hermeneutics: Interpretation theory in Schleiermacher, Dilthy, Heidegger, and Gadamer*, Evanston: Northwestern University Press 1969
- Parkin, F., *Marxism and Class Theory: A Bourgeois Critique*, New York: Columbia University Press 1979
- Phillips, N., & Brown, J. L., "Analyzing communications in and around organizations: A critical hermeneutic approach", *Academy of Management Journal*, 36(6),(1993) 1547-1576
- Prasad, A., "The contest over meaning: Hermeneutics as an interpretive methodology for understanding texts", *Organizational Research Methods*, 5(1),(2002) 12-33
- Prasad, P., *Crafting qualitative research. Working in the postpositivist traditions*, Armonk, New York: M.E. Sharpe 2005
- Pritchard, C. Massey University Digital Commons website [http://digitalcommons.massey.ac.nz/craig\\_prichard/](http://digitalcommons.massey.ac.nz/craig_prichard/) [Accessed July 31, 2007]
- Putnam, L. L., & Cooren, F., "Alternative perspectives in the role of text and agency in constituting organizations", *Organization*, 11(3),(2004) 323-333
- Reybold, L. E., "Pathways to the Professorate: The development of faculty identity in education", *Innovative Higher Education*, 27(4),(2003) 235-252
- Schroeder, L., O'Leary, R., Jones, D., & Poocharoen, O.-o., "Routes to scholarly success in public administration: Is there a right path?" *Public Administration Review*, 64(1),(2004) 92-105
- Shengalia, K., & Mills, A. J. *History on the Web? Constructing a sense of ASB from internet fragments - challenges and limitation*
- Weatherbee, T., Dye, K., MacMillan, S., & Vladi, N. "The state of Canadian management research: A question of measurement" *Proceedings of the Proceedings of the 35th Atlantic Schools of Business Conference 2003*, ed.^eds.
- Witz, A., *Professions and Patriarchy*, London: Routledge 1992

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## **“I’D LIKE TO THANK THE ACADEMY”: AN ANALYSIS OF THE AWARDS DISCOURSE AT THE ATLANTIC SCHOOLS OF BUSINESS CONFERENCE**

The awarding of prizes has become embedded in all aspects of our society, including academic conferences. This paper views the awards discourse at the Atlantic Schools of Business Conference through a poststructural lens with an eye to understanding how the presentation of awards at the conference can aid in, or possibly detract from, the continued success of this long-lasting, unique, and much-loved academic event.

### **We Are Proud to Present...**

From glittering stars walking the red carpet to children graduating from elementary school to workplace incentive programs, awards and award ceremonies have become an inescapable aspect of North American life. Not even more stereotypically sober institutions, such as the academy and the government, are immune to the lure of the prestige associated with presenting and receiving awards (Frey, 2007). Awards are commonly believed to be presented to individuals or groups who have exceeded expectations or outperformed their peers for both purposes of formal recognition and incentive. But what do these awards and their associated presentations actually mean to the presenters, the recipients, the competitors, and the spectators? Are award-winning outcomes accepted as exemplars of exceptional work and used as templates for future endeavours, or does the impact of the award itself end with the formal presentation?

It is the goal of this paper to explore the discourse surrounding the presentation of awards within the academy with a specific focus on how the language used within the discourse potentially disguises the actual motives behind, and the resulting impact of, presenting awards. Analysis will be restricted to one academic conference, the annual Atlantic Schools of Business (ASB) conference, for the dual purposes of providing a specific context within which to examine the discourse and contributing to the ASB History Project. A discourse analysis will be conducted based on empirical data gathered through a series of interviews and a review of archival data. The decision to confine the analysis to one particular instance of an academic award situation provides greater potential for a detailed and nuanced analysis of the local discourse, or meso-discourse, while simultaneously restricting our ability to analyze in terms of a Grand Discourse (Alvesson & Karreman, 2000). Ideas and insights arising from this paper, however, lay the groundwork for further analysis of academic award situations and studying within a larger context from which a Grand Discourse may be visible.

### **The Multi-Talented...**

A single, standard definition of the term discourse as used in qualitative organizational analysis does not seem to exist. Alvesson and Karreman (2000) discuss two major approaches to the research into organizational discourse, those being the study of the social text, and “the study of social reality as discursively constructed and maintained” (p. 1126). Within this study, we chose to focus on the latter approach in an attempt to identify one of the social realities created within the ASB conference through the awarding of prizes for paper quality and quantity. When taking the study of discourse beyond the study of the individual social text, but continuing to focus on a sole discourse, we are taking a meso-discourse approach, as is done in this study.

No discourse, however, exists independently of the multiple discourses that shape our existence (Grant, Hardy, Oswick & Putnam, 2004). Going beyond a single discourse in analysis and looking at discourses as dynamic and interrelated would take us into Grand Discourse and Mega-Discourse approaches. These approaches provide us with a “picture of

organizing life as a richly textured tapestry” (Broadfoot, Deetz & Anderson, 2004, p195). In an effort to avoid either an excessively deterministic or excessively autonomous view of discourse, it is recommended that discourse analysts move from level to level with corresponding shifts in perspective (Alvesson & Karreman, 2000; Conrad, 2004).

By considering discourse as constructing and maintaining social reality we are acknowledging its influence on our thoughts, words, and actions, which thereby results in physical effects in the form of our practices and interactions (Hardy & Phillips, 2004). Within this perspective we include the notion of intertextuality, in which any given discourse has an existence beyond that text from which it may have been constituted (Grant, Hardy, Oswick & Putnam, 2004). Indeed, in order to reach a state of coherence and influence, a discourse must become dispersed through institutions, practices, and subjects, and grounded in everyday interaction (Broadfoot, Deetz & Anderson, 2004). We tend to live embedded within dominant discourses, such as masculinity, the war on terror, and institutionalized education; embedded to such an extent that they are often invisible to us (Mumby, 2004). Discourses are often adopted without thinking about, reflecting upon, or questioning their range of meanings. Analysis of a discourse then must include the text itself along with the context of the text’s production and consumption and the implications it holds for society (Broadfoot, Deetz & Anderson, 2004).

The study of discourse often involves the study of power and resistance. Inherent within a discourse is the determination of who holds power. Discourses evolve as certain actors are privileged and thereby enabled to construct and disseminate new texts. Constructing and disseminating texts provides individuals with the power to define the discourse, and hence the social reality of other individuals (Hardy & Phillips, 2004). Maintaining a stable discourse requires privileging certain expressions and legitimating certain expertise while denying others. Privileged interpretations and meanings close off other understandings through the suppression and elimination of alternatives (Broadfoot, Deetz & Anderson, 2004). Resistance to dominant discourses can come about in the creation of alternate discourses, or dissent within the dominant discourse (Hardy, 2004). Fissures and nodes of resistance will also be found at the seams of discourses where alternative interpretations lie latent (Broadfoot, Deetz & Anderson, 2004).

On a more specific note, and in line with this particular study, is the idea of rituals within discourse. Rituals can be seen as the material instantiation of discourse, and at the same time can be made sense of discursively. Previous discursive research into rituals has shown how they function as forms of social control and provide possibilities for the strengthening of both dominant corporate values and forms of resistance. Indeed, when studied from the dialectical viewpoint of power and resistance, organizational rituals become a “rich site of interpretive struggle” (Mumby, 2004 p247). In many organizations the awarding of prizes constitutes a ritual.

Discourse analysis can be undertaken from a variety of theoretical perspectives, including social constructionism, critical discourse analysis, and poststructuralism. Regardless of the differing levels of analysis or theoretical perspectives available when exploring discourses, the key element under analysis is language. It is language that, when put together as discourses, informs social practices (Alvesson & Karreman, 2000).

### **The Much Talked About...**

The theoretical perspective from which the awards discourse at ASB will be analyzed is that of poststructuralism. While poststructuralism does not have one fixed meaning, the central focus of all poststructuralism is language (Clegg, 1989; Weedon, 1997). Poststructuralists believe that language constitutes social reality, rather than reflecting it (Broadfoot, Deetz & Anderson, 2004). In contrast to the structural theorists, such as Saussure, who regard language as constituting social reality but see the relationship between signifier and signified as fixed, poststructuralists view language as existing within historically specific discourses. Amongst, and indeed even within, these discourses the relationship between signifier and signified are temporary with signifiers having a plurality of meanings depending on their context (Weedon, 1997). An employee of the month award in an organization with a discourse of merit may signify recognition of hard work and stellar success. The same named award in an organization with a discourse of patriarchy may signify recognition of extreme similarity to the individuals in upper management positions. Meanings of signifiers are constantly being reassessed and

redefined as discursive context shifts.

It is this plurality of meanings resulting from differing discourses that imbues language with the ability to define “the possibilities of meaningful existence at the same time as it limits them” (Clegg, 1989, p151). If our language in use constitutes our social reality, then the meanings we ascribe to various words play an important role in both defining and constraining our existence. Identity is no longer something intrinsic, but is defined in relation to some other thing, and that definition depends on the surrounding discourse and meanings assigned. Employees who assign a meaning of recognition of merit to their organization’s employee of the month award may work towards achieving high quality and their knowledge and abilities may play a large role in defining their work identity. Employees who, on the other hand, assign a meaning of conformity to their organization’s employee of the month award may work towards becoming as much like their bosses as possible, and their physical appearance and lifestyle may play a large role in defining their work identity.

Individually we have the power to assign our own meanings to words, and indeed change those meanings assigned by a particular discourse (Davies & Harre, 2001), yet we are often deeply embedded within the dominant discourses of our particular social and political context and therefore subject to the meanings as imposed by those discourses. Particularly as our understanding of discourse moves beyond the text and includes practice, knowledge can be seen as reproduced through practices that were implemented through the discursive assumptions in the first place (Clegg, 1989). The organization selecting their employees of the month based on their similarity to upper level management does not advertise the award as such, and indeed at times the person winning the award will be deserving on a merit basis as well. However, over time an image of the award-winner will emerge and employees may start to associate awards with conformity and unconsciously pattern themselves after this image.

Discourses themselves can compete for dominance, and through that competition language, and the different ways it gives meaning to the world, becomes an important site of political struggle (Weedon, 1997). Power and resistance come into play here, with those in power working towards maintaining the unquestioned acceptance of current meanings or the subtle shift towards desired ones, while those in resistance attempt to raise awareness of and challenge existing meanings and put forth alternatives. Here we might see a disgruntled and non-conforming employee question the merits of previous employee of the month winners to his colleagues, and upper management retaliate by emphasizing meritorious activities on award announcements while not fundamentally changing their methods for choosing award winners.

### **And the Award Goes To...**

According to the Oxford English Dictionary, the definition of the word ‘award’ that originated as early as 1393 remains relevant today: “to examine a matter and adjudicate upon its merits; to decide, determine, after consideration or deliberation” (Oxford English Dictionary (Online), 2006). More recently (circa 1859) award has been defined as “something conferred as a reward for merit; a prize, regard, honour.” Although our poststructuralist perspective arises from the belief that meanings are never fixed, and thereby potentially casts aspersion on such things as concretized dictionary definitions, they still play an important role in our analysis of specific discourses. The dictionary’s definition of a word may differ significantly from its meaning within a certain discourse, however the reputation of the volume provides its stated definition with legitimacy. The power-holders within a discourse can then hold up the definition as their intended use of the word, and assume its unquestioned acceptance. The meaning that is actually assigned to the word through the discourse can be hidden behind the commonly held definition.

Awards have been presented for centuries in the form of knighthoods, medals of bravery, and religious orders. The proliferation of cultural awards, which includes the movie industry’s Academy Awards, the music industry’s Grammy awards, the theatre industry’s Tony awards, the writing community’s Pulitzer Prize, and the scientific community’s Nobel Prize, began at the end of the 19<sup>th</sup> century and early years of the 20<sup>th</sup> century (English, 2005). Awards are also presented for athletic success, workplace performance, and academic achievements. Based on the definitions of award from the Oxford English Dictionary we would presume that these awards are being presented in order to recognize the merit of particular

individuals who have in some way shown themselves to be better than others. The belief that individuals have an innate desire to distinguish themselves from others (Frey, 2007) but at the same time to be similar enough to be measured along the same dimensions (Czarniawska, 2007) could lead to an extension of our original presumption that singling out individuals to receive honour would inspire others to mimic or exceed the meritorious deed. The question remains, however, does our definition of the word capture the full significance of why awards are presented? Existing research on the ritual of awards extends our understanding on why they have achieved such importance.

### **The Winners**

Some theorists argue that awards, and the competition and tension thus generated, is critical to productive activity in a creative field (Caves, 2000). The tension between the established and the emerging actors in a field is a source of variety as competition for recognition is undertaken (Anand & Watson, 2004). Awards also act towards fulfilling desires to be either, or both, good at what one does or better than others (Czarniawska, 2007). Winning an award improves the prestige of recipients, and in the particular case of the Grammy awards also improves record sales (Anand & Watson, 2004), although some recipients will under-perform after receiving an award due to distraction (Frey, 2007). In the academy, awards are good predictors of career success (Foss, 2007).

The value of an award to its winners, and prospective winners, depends on its credibility, its legitimacy, its scarcity, the award giving body, and whether it affords a social distinction not achievable by other means (Anand & Watson, 2004; Frey, 2007). Receiving, or being in contention for, an award with high legitimacy and credibility within an individual's field indicates their own legitimacy and worth (Anand & Watson, 2004). Awards given by institutions with bad reputations can end up being a cost to the recipient and may be rejected (Frey, 2007).

### **The Bestowers**

In order for an award to bestow prestige on an individual, the award itself must be prestigious. An award's prestige is largely a function of the award giver, or bestower. The credibility of the organization bestowing the award, along with the perceived rigour with which the award recipient is selected, factor importantly into the legitimacy and prestige associated with an award. At the same time, however, a highly valued award can also increase the prestige of the award giving body (Frey, 2007). Indeed, it may be that "awards are an area where it may often be better to give than to receive" (Duguid, 2007 p17), with the glory of the award reflecting more on the bestower than the receiver.

The recipients selected for an award can be used to indicate to the field what the award-giving body values. When awarded by a strong enough organization the choice of winners can be used to legitimize particular actions or beliefs. Awards can also be used to establish a tacit contract between bestower and recipient, with the recipient expected to feel loyalty towards, and thus act in the interests of, the bestower. If the recipient denigrates the award, or the award-giving body, he or she devalues the award and the prestige associated with it. It is thus in the recipient's best interest to speak highly of the bestower (Frey, 2007).

### **The Field**

The greatest impact of awards may be on the field within which the awards are given. Awards send important messages to the field, being used to express that which is valued at a given point in time (Czarniawska, 2007), and often do so with ceremony and pageant in order to attract the attention of the field (Anand & Watson, 2004). Through the awarding of prizes for specific accomplishments changes within a field can be acknowledged and affirmed, such as when rock music finally achieved acknowledgement at the Grammys in 1979, years after the genre had achieved immense popularity (Anand & Watson, 2004). Judges carefully make their selections of award winners based not on the recipient but on the message that will be sent to the field, and their decisions are often taken as a reflection on society. The awarding of a prize does not so much recognize success as define for the field what success might be. In this way awards play a normative role, speaking not to the recipients but to those who have not won yet aspire to, or hold the award in high esteem. Awards become a way

of encouraging the others (Duguid, 2007). That being said, it is also possible for awards to have a negative effect on the field, particularly in a situation where multiple individuals disagree with the results either because they expected to win themselves, or they felt a different candidate was more deserving (Frey, 2007).

Awards can also shape the evolution of a field. They can act towards surfacing and resolving conflicts surrounding the legitimacy of activities within a field (Anand & Watson, 2004). Once an activity has been legitimized through its recognition with an award the members of a field will then be more inclined to appropriate that activity as both legitimate and a potential way towards winning an award themselves.

### **Our Gracious Hosts: The Atlantic Schools of Business**

If we are approaching our analysis from the perspective that the language we use both determines, and is determined by, our context, it is important that we thoroughly explore the context in which the discourse exists. For the past 36 years, the Atlantic Schools of Business conference has been held as a forum for discussing new research, trends, and challenges in business (Mills, 2005). While the majority of these conferences were held without the existence of a formal infrastructure, a decline in interest in recent years led to the establishment in 2004 of an ASB executive that was charged with supporting future conferences. The Atlantic Schools of Business include those university business schools within the four Atlantic Canadian provinces, but participation in the conference is open to anyone with an interest in the field. As part of this restructuring and renewal of the ASB conference, the Atlantic Schools of Business History Project has been developed. This study will add to the history of the ASB being created.

The ASB conference is a small conference with anywhere from 90 to 100 delegates. The number of interest groups held within the conference has grown to 24, with some groups receiving only two or three paper submissions. Due to the fact that each annual conference was run solely by the hosting university, independent of previous years or an ASB executive, the awarding of prizes at the conference over the years has been inconsistent. Best Paper awards were generally presented, although the awards alternated between Best Paper for the conference, or Best Paper in each interest group. At times when a Best Paper award was awarded for each interest group prizes were sometimes limited to those groups that had more than three papers. No award was presented if the group organizer felt that none of the conference papers were of high enough quality. Recent conferences have also seen the addition of a Best Graduate Student Paper award, a Best Undergraduate Student Paper award, and a University Research award for the university with the most research papers accepted at the conference.

The conference runs for one and a half days with a reception on the evening before the conference starts and a banquet on the evening of the full day. The awards ceremony was originally held at the evening banquet, but has recently moved to the awards luncheon, held on the full day of the conference.

### **Selection was a Painstaking Process...**

Empirical data for the study was gathered through semi-structured interviews and a review of textual archives from previous conferences. Eight interviews were conducted with individuals at a variety of member universities of the ASB and at a variety of career stages, including graduate students and junior and senior faculty members. Some of the participants had won awards at ASB in the past. One of the participants had never attended an ASB conference.

No formal methodology for analyzing the awards discourse was followed. As is often the case in qualitative research using written texts as their empirical materials (Perakyla, 2005), the interview transcripts were read several times. While reading I was looking for inconsistencies in peoples' statements in regards to other statements within the interview, statements made in other interviews, and in the existing awards literature. It was through these inconsistencies in how people talked about the awards, and the meanings they ascribed to the presentation of awards, that I developed a picture of

the discourse within which the awards exist.

There can be no definitive reading of a discourse. Even of what is visible we are only able to partially observe what is going on, and our chosen theoretical perspective determines the boundaries on what that will be. What we do observe, and how we make sense of it, is subject to the discourses within which we exist (Grant, Hardy, Oswick & Putnam, 2004). I have not attended an ASB conference, and therefore I began the study with no prior immersion in the conference's awards discourse. I have, however, attended other academic conferences where awards were presented and was the recipient of an award myself. These personal experiences with the more general business academic awards discourse will have influenced the meanings that I ascribe to the presentation of awards.

### **I'd Like to Thank...**

Attendees of the ASB conference appear to be caught between conflicting discourses – the discourse within which the award givers are embedded and the discourse within which the winners and the field are embedded. The ASB conference is a unique situation in that, due to its small size and the fact that it existed for so many years without a formal executive, many of the attendees of the conference feel a strong sense of ownership. As part of this ownership they have become embedded in the discourse of presenting awards and all that it means to the conference. At the same time the conference attendees are also potential and past winners of awards and members of the greater academic field. As academics they are strongly embedded in the discourse of competing for awards and its impact on the field.

Generally the expressed feelings about the ASB conference are positive. People enjoy the small size and friendliness, and feel that it is a developmental type of conference, a safe place for new and junior researchers to present their work. Attendees feel comfortable bringing new ideas that may not be fully formulated because there is a lack of the adversity that can sometimes be found at other academic conferences. In the words of one long-time attendee, "So it's like old home week. It's reunion time...And just, yeah, it's very, very friendly. We eat a lot. There's food all the time. But it's very friendly."

Value is attributed to the awarding of prizes. The awards play a role in fostering the sense of community that attendees feel defines the conference: "I think awards are a way of recognizing excellence within that community. So I think that it helps create and perpetuate a sense of community, I guess. So yeah, I think it's important." They are presented in the hopes of acting as an incentive in attracting quality work to the conference through the potential of recognition, and engendering a sense of loyalty to, and continued attendance at, the conference amongst the award winners. Both the presentation of the awards, and the potentially higher quality of work that offering the awards attracts, has the potential to increase the legitimacy of the conference (Frey, 2007), thereby increasing its value to its attendees.

We were trying to step it up a bit so that, because we did publish the proceedings and thought it was a publication, a valid one, that people could use for their process going through the university review, for promotion and appointment of tenure, and we also felt that if someone had a good experience they were best paper award, they would come back year after year.

The awards are ostensibly presented based on quality of work as judged by the paper reviewers and the interest group organizers. An interest group organizer emails the conference chair, stating: "NO best paper award. The best of these five is not very good." The group organizer even goes on to recommend that none of the papers submitted to that interest group be included in the proceedings due to poor quality. A previous conference chair says: "So there didn't have to be a best paper, if they didn't feel that it was worthy of being recognized in that way they just said none of these are really stellar quality." In selecting the award winners the conference organizers are attempting to ensure that only high quality papers are chosen, even if that means not presenting an award at all, in order to avoid the risk of having a negative impact on the credibility of the conference.

At the same time, however, when discussing their thoughts regarding winning an award themselves comments are made that seem to question both the legitimacy of the awards and the legitimacy of the conference itself.

I think the relevance of the award, or the importance of the award, correlates with the rigour of the conference. So if I won an award at the Academy [of Management], certain divisions of the academy in particular, like the OB division, which is huge and has an incredible number of papers submitted, then I'd feel pretty good about it. To win an award at a smaller, less rigorous conference that you're pretty much assured acceptance in is kind of nice, but, you know, doesn't really, it doesn't really mean a lot.

Well, it's nice to win an award but it's, like, if I won an award, ... if I won an ASB award it really wouldn't mean much to me because, you know, I mean the quality of papers generally at ASB is not terribly high.

While the rigour of the conference is explicitly called into question a couple of times, there is also a more subtle questioning of the conference at play. Few participants were aware of the specific awards that are presented, and most could name only a couple of previous award winners. The winners they could name were from the same university as the participant. Even those speaking highly of the ASB conference became much more excited at the thought of winning an award at other conferences, such as the Academy of Management.

Well, it still would be an honour, um, if I were perfectly honest...I probably would say, "oh, I should've sent that one somewhere else."

But, to tell you the truth, probably for the first five years of my time here at [this university] I might have thought, oh wouldn't it be nice to get an award-winning paper... (*a senior faculty member*)

If someone says name your top five goals, uh, winning a best paper award at ASB isn't one of them . . . Oh yeah, if I'm drunk or imagining things I can well imagine winning a fantastic award at the Academy of Management or what have you.

Well, I imagine if I won a best paper award at the Academy of Management I'd be pretty freakin' happy, um, just because of the recognition that you would get from other academics and stuff so they would, like you would, in your mind as being a good researcher, so that would probably mean a lot to me.

The process of selecting award winners is also called into question, with a recent two-time interest group organizer stating:

Hell, I'm not even convinced I understand how best papers are actually voted on, if that's how it happens. I actually don't know what that looks like. I've certainly never been part of it, and I'm a conference stream organizer, so I have no idea how that happens. Maybe...maybe they just pull names out of a hat. No, I don't think that's the case.

While his comment about pulling names out of a hat is intended as a joke it is followed later by the statement: "I think it becomes kind of, dare I say, incestuous potentially at some point."

As interviewees shift their perspective from that of award giver to award recipient the value placed on the awards changes. The discourse shifts from a focus on what the awards do for the conference to what the awards do for the individual. Since it is the organization behind the award that gives the award its credibility and prestige (Anand & Watson, 2004; Frey, 2007) the interviewees step outside of their assumed role as an integral part of the conference and take on the role of academic and all that that discourse implies. The quality of the work accepted and presented at the ASB conference is questioned. Little personal value is placed on winning an award from the conference, particularly relative to bigger, more credible conferences.

It has been seen in some awards situations that the selection of award winners signals to the field what is currently being valued, how the field is changing, and the tensions that exist (Anand & Watson, 2004). In looking specifically at academic conferences, we might then expect award-winning papers to indicate valued areas of research, methodologies, and writing styles. Indeed some interviewees indicate these as reasons for the awarding of prizes. Yet most do not read the award-winning papers. In the cases where award-winning papers have been read it was because either the individual had reviewed the paper for acceptance into the conference or the topic was of interest. In only two situations had someone read an award-winning paper because it had won with an eye towards learning and developing:

But I also read it because it had won an award and I wanted to see what an award-winning paper looked like or read like and see if it had any particular format or style that was replicating something of a tradition or if they were looking for something new.

Once again with the discussion of reading award-winning papers the credibility of the ASB conference came into question with the comment: “I think that people do tend to read [award-winning] papers more, not for ASB, but for other conferences I do.” While vocally espousing the importance of the awards at the ASB conference, the attendees fail to actively legitimize the awards by not recognizing the papers as worthy to be read. Unless conference attendees read the award-winning papers the act of presenting awards cannot aid the conference in contributing to the evolution of the field.

ASB conference attendees enjoy and see value in their conference, and they want it to continue. In order to attract attendees their conference needs to be accepted as a legitimate academic conference and one of their methods for achieving this is by offering best paper awards as other academic conferences do. At the same time, however, they seem to personally grant little academic legitimacy to the conference and therefore to the awards presented by the conference. When viewing awards from within the award giving discourse, attendees attach to them a meaning that revolves around sustaining and developing their conference. When viewing awards from within the discourse of winning awards and their impact on the field we see a shift in assigned meanings. An award then becomes a mechanism for achieving individual recognition, legitimacy, and prestige, and the award-giver plays an integral role. As much as the ASB conference attendees may value their conference they do not accord it the credibility and legitimacy required for its awards to be valuable.

### **And Finally, Thanks to my Parents**

The astoundingly long duration of the Atlantic Schools of Business conference, both with an executive and without, is a testament to the importance and value it holds for the region and regular attendees. The annual conference is a guaranteed way to maintain relationships and connections between colleagues when the busyness of everyday academic life gets in the way of regular socializing and collaborating. Understandably, the attendees want to see the conference continue and prosper, and they feel that building its legitimacy and credibility is an important aspect of achieving success. Academic conferences held within the discipline of business present best paper awards, therefore the ASB conference will then present best paper awards. Few seem to contest the value of doing so.

Yet those same attendees ascribe little value to winning those awards, either for themselves or for others. An award’s value and prestige comes from the prestige of the award-giver, and the ASB conference has not reached a level of prestige even within its own region. By failing to proclaim the value of, and their pride in, their award, and by failing to legitimize the award-winners by reading their papers and including them in the evolution of the field, conference attendees are undermining their own purported meaning of the award within the discourse of award givers.

No discourse is ever wholly visible, and those undertaking the analysis bring their own embedded meanings into play (Grant, Hardy, Oswick & Putnam, 2004). Eight interviews with eight different participants, or even a different interviewer and the same participants, would probably draw for us a completely different picture. Yet the image drawn from this analysis holds value both in and of itself, and as part of a future greater image of a Grand or Mega-Discourse of awards.

In relation to the ASB conference itself this analysis provides some important insights. The presentation of awards may, in fact, be having a negative impact on the legitimacy of the conference as it was not until interviewees were questioned directly about their thoughts and feelings on winning, or potentially winning, an award that the quality and credibility of the papers presented at the conference were brought into question. Attendees seem to feel very strongly about the value of the conference as an aid in development and relationship building, but not as a source of external validation and recognition for their work. This may be a useful perspective from which a continued and successful future for the conference can be found.

On a level beyond that of the conference itself this analysis shows support for existing award theory in our finding

of both the award givers and the recipients seeking legitimacy through the awards, and in recipients basing the value of an award on the organization behind it. Support for theories behind the evolution of the field through the presentation of awards was not found directly, possibly due to the lack of legitimacy that the ASB conference holds in the eyes of its attendees. Field evolution through awards is a potential area of future research. It would be interesting to analyze whether academics are more inclined to read award-winning papers when the awards were presented by a prestigious conference.

It is the ASB conference's unique situation of having so many of the attendees embedded in both discourses that allows us to see clearly the shifting meanings applied to the presentation of an award. Far from having a fixed meaning of awards creating legitimacy we can see within individual interviews how awards are taken to create legitimacy for the conference, but how the same awards are viewed as valueless for the recipient. It is this shifting meaning that highlights the multiple discourses at play and the power of context to determine the meanings that are assigned to words.

### References

- Alvesson, M. & Kärreman, D., "Varieties of Discourse: On the Study of Organizations through Discourse Analysis," *Human Relations*, 53(9), (2000), 1125-1149.
- Anand, N. & Watson, M. R., "Tournament Rituals in the Evolution of Fields: The Case of the Grammy Awards," *Academy of Management Journal*, 47(1), (2004), 59-80.
- Broadfoot, K., Deetz, S. & Anderson, D. Multi-Levelled, Multi-Method Approaches in Organizational Discourse. In: D. Grant, C. Hardy, *et al* (Ed.). The Sage Handbook of Organizational Discourse. London: Sage Publications Ltd, 2004. Multi-Levelled, Multi-Method Approaches in Organizational Discourse
- Caves, R., E., *Creative Industries: Contracts between Art and Commerce*, Cambridge, MA: Harvard University Press, 2000.
- Clegg, S. R., *Frameworks of Power*, London: Sage Publications Ltd, 1989.
- Conrad, C., "Organizational Discourse Analysis: Avoiding the Determinism-Voluntarism Trap," *Organization*, 11(3), (2004), 427-439.
- Czarniawska, B., "Comment: Awards as Compensation?" *European Management Review*, 4, (2007), 19-20.
- Davies, B. & Harre, R. Positioning: The Discursive Production of Selves. In: M. Wetherell, S. Taylor, *et al* (Ed.). Discourse Theory and Practice: A Reader. London: Sage Publications Ltd, 2001. Positioning: The Discursive Production of Selves
- Duguid, P., "Comment: Awards as Norms," *European Management Review*, 4, (2007), 15-18.
- English, J., *The Economy of Prestige: Prizes, Awards, and the Circulation of Cultural Value*, Cambridge, MA: Harvard University Press, 2005.
- Foss, N., "Comment: Awards as Compensation," *European Management Review*, 4, (2007), 21-23.
- Frey, B. S., "Awards as Compensation," *European Management Review*, 4, (2007), 6-14.
- Grant, D., Hardy, C., Osrick, C. & Putnam, L., *The Sage Handbook of Organizational Discourse*, London: Sage Publications Ltd, 2004.
- Hardy, C., "Scaling up and Bearing Down in Discourse Analysis: Questions Regarding Textual Agencies and Their Context," *Organization*, 11(3), (2004), 415-425.
- Hardy, C. & Phillips, N. Discourse and Power. In: D. Grant, C. Hardy, *et al* (Ed.). The Sage Handbook of Organizational Discourse. London: Sage Publications Ltd, 2004. Discourse and Power
- Mills, A. J., "Restructuring the Atlantic Schools of Business (Asb) Forum," *The Workplace Review*, 2(1), (2005), 38-39.
- Mumby, D. K. Discourse, Power and Ideology: Unpacking the Critical Approach. In: D. Grant, C. Hardy, *et al* (Ed.). The Sage Handbook of Organizational Discourse. London: Sage Publications Ltd, 2004. Discourse, Power and Ideology: Unpacking the Critical Approach
- Oxford English Dictionary (Online). Oxford University Press 2006.
- Perakyla, A. Analyzing Talk and Text. In: N. K. Denzin e Y. S. Lincoln (Ed.). The Sage Handbook of Qualitative Research. Thousand Oaks, CA: Sage Publications Ltd., 2005. Analyzing Talk and Text
- Weedon, C., *Feminist Practice & Poststructuralist Theory*, Oxford: Blackwell Publishers Ltd, 1997.

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### **ENTERING THE PROFESSORATE: WHEN INDIVIDUAL IDENTITY CONSTRUCTION MEETS INSTITUTIONAL HABITUATION**

Doctoral students seek to discover their identity within academia through professional interactions. Involvement in professional conferences affords opportunities for interaction that are used in the process of socially negotiating the construction of reality and as the cornerstone of identity creation. Based on Weick's belief in understanding through storytelling, this study will examine the experiences of junior researchers at the Atlantic Schools of Business, exploring their process of identity creation when interacting with academic professionals who are embedded within the habituated practices of the institutionalized professorate.

Those who choose to work within the field of academics progress through a series of learning checkpoints. Graduate school, research, conference presentation, teaching, and publication are all markers along this professional development. These cues highlight the transitional process to both the specific actor and their socially negotiated environment. Cues exist not only to help build skills and abilities of one who has become an "academic", but also signal a change in professional identity to others. If this sounds like joining a member-only club, the parallel is very accurate. Becoming an academic is to join an elite organization, and those who already possess membership control entrance. Thus, it becomes a *mélange* of objective measures, including scholarship and publishing, as well as a significant subjective evaluation in which potential candidates are judged on personal fit by members already in place. Those within academia assess candidates on their adoption of particular actions, artefacts and language usage (Beech, 2006), reinforcing the constructed reality of their everyday world as one negotiated between individuals (Berger & Luckmann, 1966). The life of the professorate thus is a socially structured institution created through the intersubjectivity of academic professionals (Berger & Luckmann, 1966). Through the experiences encountered during the doctoral process, students make adjustments to behaviours and learn to function within the realm of academia (Mitchell *et al.*, 2001).

This paper focuses on the reflexive experiences of junior academics in their construction of a professional identity. Drawing on their experiences at the Atlantic Schools of Business (ASB) conference, experiences that are representative of similarly reproduced professional interactions at other academic conferences, junior academics work within the conferences institutional framework and the interactions with other actors to help make sense of their new negotiated reality. With a 36 year history, the ASB conference is one of Canada's longest running business conferences, uniquely maintaining a multi-disciplinary business school focus in the Atlantic region (Mills, 2005). The ASB conference has replicated itself throughout the majority of its history without the traditional infrastructures that drive similar academic gatherings. The majority of its reproduction stems from accepted habits of the informal institution. Lacking the trapping of a formal structure for the majority of its existence, one can surmise that this conference maintains a value within the community of practitioners in the Atlantic Canadian region of post secondary educators. For the individuals participating, these routines embody the valued characteristics of the collective and become activities that formulate its history (Berger & Luckmann, 1966).

#### **"I DIDN'T REALIZE IT WAS JUST REGULAR PEOPLE THAT SHARED IDEAS"**

Shared cultural phenomena, as maintained in the epistemological perspective of interpretivism, are external displays of experiences based on internal understandings (Burrell & Morgan, 1979) that have subjective meanings attached to them within a specific social context (Weber, 1947). Berger and Luckmann clearly state that because institutions are socially constructed and exist as an external reality, the individual cannot gain understanding through outside observation alone (Berger & Luckmann, 1966); they must move within the institutional structures to truly learn them. Weick refers to this process of interaction as the constituting element of identity creation (1995). Individuals working towards acceptance into

the world of the professorate, those who are completing their graduate studies and working toward tenure, seek to make the transition into this different reality, or new community of discourse (Blenkinsopp & Stalker, 2004). This transition begins early in the doctoral studies (Reybold, 2003), as the inner workings and novel responsibilities of the professorate are discovered. Beech stated that even the act of becoming a student constituted a shift in personal identity (2006), beginning the process of transformation. Moving through the unique system of graduate studies into the realm of academia represents a fundamental shift of interactions. Changes with the people involved in the interactions, as well as the corresponding discourse, create a shift in how a person constitutes their identity (Weick, 1995). Acknowledging this transformative journey, junior academics seek to both learn and demonstrate the appropriate cues of the professorate. This progression understandably alters the identity of those involved and how students begin to define themselves as professionals. Due to the large influence of intersubjectivity involved in both a socially constructed reality and identity development, definitions of self become negotiated artefacts within the larger social construct of academia.

In his study of academic culture, Reybold found (2003) that it is the cultural construct that provides the definition of expected professional realities for all individuals embedded within that particular culture. These defined realities provides various lenses which present members of that community with the means to understand and place value on the events of the world around them (Bergquist, 1992). Identities, or one's sense of self, are considered by many as fluid and changeable, with new identities forming with the progression of our lives and experiences (Blenkinsopp & Stalker, 2004; Reybold, 2003). As individuals make the choices of both professional direction and the lenses of interpretation through which that profession assigns value, they also shape their identities within that social context (Blenkinsopp & Stalker, 2004; Giddens, 1991). Leavitt (1991) acknowledges the familial conditioning that occurs with doctoral students as they are brought into the folds of the professorate, normally under the parental figure of an academic mentor. This immersion into the academic culture helps to prepare students to assume the roles of conduct of institutionalized environments (Berger & Luckmann, 1966) and become aware of the appropriate scripts for behaviour in the professorate (Reybold, 2003). Within these scripts, students become introduced to and are influenced by areas of knowledge and ways of being, both at the cognitive and affective levels (Berger & Luckmann, 1966) that are appropriate to their changing roles.

The participation in academic conferences provides an opportunity for the behaviours of senior academics to be observed, as well as an environment in which junior academics can begin to practice their roles, actualizing it upon the presentation stage (Berger & Luckmann, 1966) and observing the consequences of those presentations (Weick, 1995). Actions and interactions provide a frame of reference for less experienced participants, allowing them to make greater sense of appropriate displays within this constructed environment. A large component of work completed by academics takes place in relative isolation, yet from the interpretivist perspective, identity can only occur through the negotiation among participating actors within a social network. In the case of the educational community, greater influence in this ongoing negotiation is privileged to those already rooted within the environment. This privileged voice of embedded actors produces actions of habituation (Berger & Luckmann, 1966), typifying the actions into a form of institutionalization. These habits of action help to guide the entrance of newer actors through a socialization process not only of technical knowledge but also the exposure of "appropriate attitudes and self-conceptions" (Weiss, 1981), preparing them for academic role enactment.

For the junior academic, the challenging progression through graduate studies includes understanding and adopting the professional characteristics that exist within academia. These attributes of academia help the doctoral student negotiate meaning within the educational environment and add to their comprehension of the epistemology of the professorate (Reybold, 2003). As such, participation in social functions with other academics provides the opportunity for meaning negotiation; this type of association with peers and colleagues therefore serves a valuable role in professional development (Merton, Reader, & Kendall, 1957). Yet the construct of academia has existed for centuries, possesses a history predating any one academic and lasting well beyond their years. As such, the duration of academic existence and its history often allows this negotiated social construct to be experienced as an objective reality (Berger & Luckmann, 1966). Through involvement with institutional activities, such as conference participation, existing patterns of predefined behaviour can serve to guide and focus junior academic development and limit the multitude of available alternatives (Berger & Luckmann, 1966). By observing the actions and behaviours of those embedded within the specific community, junior academics begin to understand their roles and expectations in the academic labour process. These incorporate the production of academic

artefacts, including conference participation and publications (Blenkinsopp & Stalker, 2004), all of which impact their developing professional identities as faculty (Reybold, 2003). Paradoxically, the observation of established behaviours and mimetic reproduction in the process of identity construction can both enable and constrain future directions and choices of junior academics (Blenkinsopp & Stalker, 2004; Giddens, 1991).

For this study, a series of five interviews was conducted over a two week period with PhD candidates pursuing their degree at an Atlantic Canadian university. All candidates have presented original research at the Atlantic Schools of Business conference within the past two years; their reflexive experiences were collected in an effort to reveal stories of professional identity construction as influenced by conference participation. Names were selected from published documents of past ASB proceedings. Interviews were conducted at the school of each participant; names of all participants have been altered for anonymity. Each individual contributed their personal experiences or “stories” as they remembered them; this reflection is both a common method used to share ideas (Feldman *et al.*, 2004) and is a critical aspect of meaning-making within a phenomenological perspective (Burrell & Morgan, 1979). The process of sharing stories also serves as a method to clarify and recompose particular understandings of past interactions (Feldman *et al.*, 2004). As the events of the past were loosely reconstructed with the inclusion of experiences and action, they formed into a cohesive collection containing both plot and direction creating a personal narrative of past experiences (Franzosi, 1998) for each participant.

The interview, as a qualitative method, was chosen to probe in greater depth the experiences of junior researchers in academic conferences. According to McCracken, the interview method “can take us into the mental world of the individual” (1988). By questioning each participant on past experiences, an opportunity was provided to uncover intricate details that are extremely difficult to expose with quantitative methodology (Strauss & Corbin, 1990; Trocchia & Berkowitz, 1999). As these doctoral candidates look back upon past actions, they work through an understanding of past experiences by reflexively analyzing key elements in the sensemaking process (Weick, 1995). With interviewing, the value of exploring past activities with a broad scope provides greater value than mining any one particular experience (McCracken, 1988).

#### “I WAS CONSTANTLY CONFUSED AND TERRIFIED”

During the interview process, the conceptualization of the academic identity was probed in an effort to situate experiences within a time frame, creating a temporal flow from ‘then’ until a closer ‘now’. This created the framework for sequencing the narrative format (Franzosi, 1998). Graduate students have been involved in the university system for many years up to the point of entering a PhD program; associating with professors is a common experience. Yet, if indeed a true understanding of both the construction of reality and the corresponding institutions is developed through negotiation among participants, junior academics may not have a clear vision of academia prior to entrance. Not only has exposure to the academic world been limited in scope in the years before doctoral studies, entrants into the academic world have not been embedded within the construct of the academic. This absence of embedded involvement becomes a barrier to meaning-making (Berger & Luckmann, 1966; Reybold, 2003).

“Well, I guess I would characterize it as two, two main areas...one would be teaching. I thought of academia as being about teaching, first and foremost... That was what I understood it was to be an academic and why I would pursue a PhD I guess. The other aspect I was aware of was this research notion, but quite frankly at the time...just prior to going to ASB and then around that time, my concept of what research was is pretty narrow.” – (Jacob, PhD Candidate)

The concept that academics actually produce knowledge was missing in the initial understanding of professional identity. Those entering this new world saw the transmission of information and skills training as holding the seminal position of the professorate. The role of the researcher within the academic construct lacked a level of tangibility up to this point.

“I defined the role much more as a teacher, as an educator, than I did necessarily as a researcher. And I don’t think at the early stage in my, at the beginning of my career...that I appreciated the role of the research component and the construction and recreation of knowledge, and all that kind of stuff. I just thought of myself as sort of an educator,

a conduit of someone else's knowledge to students" – (Cynthia, PhD Candidate)

The metaphor of the conduit removed the pressures of knowledge creation as a variable in the forward movement into a new identity, minimizing the number of unknown characteristics of expected behaviours to be adopted. When reflecting back to their entrance into graduate studies and the activities involved in that endeavor, it seemed to be easier to compartmentalize the identity characteristics of the senior academic as 'teacher' or 'conduit'. Preconceptions of the world of the professorate were described and then quickly challenged as surprising discoveries were made. These surprising discoveries forced doctoral students into the negotiation process with their new realities.

"I think I thought it was much more pontificating and people selling of ideas. I thought this guru would stand up there and everybody would bow down to them and think, "Oh, the god of...some new invention or some new wonderful theory." I didn't realize it was just regular people that shared ideas." – (Tom, PhD Candidate)

"HOW DID I FEEL THAT I FIT? UMM...I DIDN'T FIT"

The unexpected discovery of professional characteristics and roles created tensions as the realization of entry into something unknown had begun. Movement into the doctoral world requires socialization into a set of practices and perspectives already entrenched by existing members (Reybold, 2003). Through the involvement in conference activity, the junior academics are invited to participate in the creation of their new professional identities. Yet the beginning of this process does not come without certain trepidations.

"The first one, I don't even know that I really remember a lot about it, I just didn't understand. I was constantly confused and terrified, and I wasn't even certain I was going to become an academic." - (Jacob, PhD Candidate)

"That's developed over time. First one real scared; second one, I felt a little better. I think I look forward to going to the next one even more." – (Tom, PhD Candidate)

Others saw this period as a true moment of discovery, seeing for the first time the depths of a professional world they had been surrounded by for years, yet not actually ever seeing in full detail. Entrance into the doctoral environment and participation in the events of that process revealed greater detail and depth in academic activities, and provided access to a world held in privilege.

"How did I feel that I fit? Umm. I didn't fit. I didn't really see myself as part of that world. I wasn't part of it... I just saw a completely different world, the world that I, to me until that time, had been submersed, hidden almost you know. " – (Brian, PhD Candidate)

Once gaining access to the academic world, a metaphorical seat at the table in the negotiated reality of this construct, identifying markers were sought by doctoral students to facilitate their understanding of new 'reality'. How does an academic professional behave? What are the tangible pieces of legitimate evidence in their trade? The novelty of this environment was different than past industry experiences, yet the progression of socialization in the eyes of the junior academics appeared to follow a familiar course of action.

"I had to certainly relearn new ropes and understand new processes and meet new people and recognize that there are...very unique networks and histories and all that kind of stuff that I needed to become personally more aware of. I think that's an ongoing process. I still...it's a...learning a bit more about academic life certainly and the politics of it, the bureaucracies of it, the sort of 'rights of passage' and all of that are still somewhat, you know...I'm learning as I go." – (Cynthia, PhD Candidate)

Identifying the rights of passage established a linear progression in understanding and involvement, moving from the point of confusion at first entry into the replication of traditional actions and habits, ending in acceptance within a community of professionals. The interaction at the ASB revealed particular ways that actors display themselves after

working through the intersubjectivity of peer interaction.

“I think it’s common practice...when you’re put into a group of people who have common experiences and a common interest and they work together and they share, they collaborate, they talk...they develop their own jargon, they develop their own jokes maybe. I really think that that community, through time, develops a sense of being... which contributes to this whole notion of a belonging to that particular community...in the sense that whether you accept that way of being or that group.” – (Brian, PhD Candidate)

Merton (1957) stresses the interaction among peers at the graduate level as one of the most critical factors in committing to the academic world. The ASB has provided junior academics with the opportunity to share experiences. During these exchanges, distinctions became apparent between subgroups and an intra-cultural constructed hierarchy was revealed. Junior academics, based on low positional power and a need to display credible actions (Beech, 2006), created distinctions with those embedded in the academic environment.

“When you’re working towards your PhD, and there’s other people who have what you so greatly desire to possess, if you wish, calling them peers is somewhat problematic. They have something you don’t have.” - (Jacob, PhD Candidate)

“IF YOU LOOK LIKE A DUCK...”

For some junior academics during their identity construction, the balance of competing roles between peers and established academics created a conscious divide between socially-defined status levels within the academic network. Established members of academia play a large role in the subjective evaluation of doctoral students as they move to join the professorate. However, peer relationships compose the professional support network for doctoral students; they assist the students when navigating the cognitive and affective issues of graduate school. As such, negotiation of identity may also embody an intentionality within specific interactions, based on the social level of the participants in each specific social exchange.

“Your peers, it’s really cool. You really talk about what’s going on, what’s going down. You ask, “What does that big word you just used mean?” and you can talk and you can understand, and you get to understand what they’re really talking about. Whereas, people who are well published, or better published than I’ll ever be, there’s a lot of reverence. There’s still a lot of stroking, ego stroking. You know, kind of, potential for joint papers some day or...it’s politicking. It’s politicking.” – (Tom, PhD Candidate)

Recognizing multiple role levels and patterns of behaviour reaffirmed the acknowledgement of existing bureaucratic structures within the conference history and it’s institutionalized products (Berger & Luckmann, 1966). Although the interaction with conference participants was hailed in all interviews as supportive and safe, the awareness of role levels was tangible. Those at higher status levels provided training in methodology to doctoral students; these new researcher skills were used on occasion to specifically examine the question of professional identity. At times the behaviours and interaction at the ASB conferences themselves became the focal point of research, facilitating intentional understanding of the academic community through participation and selected isomorphic replication.

“I took it as an ethnography. I specifically sat down and said “If I am to understand what academics do, I need to try and become a participant observer in the academic life.” Thus, I went to ASB; I determined that I should present there...also determined that I should get involved in the...professional services aspect of things...So, I went with the express concept that I would begin to learn what it was to be an academic by using, at least partially, this ASB experience to, sort of, observe what academics did and then try to mimic it in such a way as I could learn what it was to be a real PhD student-type.” - (Jacob, PhD Candidate)

By actively implementing this style of engagement, the involvement in the conference events and creation of key artefacts, including conference presentations and research papers, junior researchers began to create a history and structure

suitable to facilitate the sense-making process (Weick, 1995). Participation within the structure of the ASB conference assisted construction of professional identity (Berger & Luckmann, 1966) and a greater understanding of faculty responsibilities (Merton et al., 1957). However, hesitation in commitment to a particular course of involvement may remove the junior academic from an entrenched position, exposing the hegemonic tendencies of institutional habituation.

“I have a belief that has been strengthened by the ASB experience that he who allows, or she, who allows themselves to be cloned in the usual ways will get farther. This is the way we’ve always done it; this is the way it’s supposed to be done. If you look like a duck and walk like a duck, we’re going to call you a duck, and give you a job as being a duck. So I know that, and I’ve seen it. And if you act too much like a swan, or an ugly duck, well, you’re not going to get anywhere; you’re not going to make any changes.” – (Tom, PhD Candidate)

Thus, participation in conferences such as the ASB provides many differing cues for understanding a multi-layered profession. Not surprisingly, the cues found upon reflection often contradict each other, or are open to paradoxical interpretations. The mimetic reproduction of artefacts and practices was mentioned by those questioned as a vital tool in understanding academic life, yet at what point does this replication transition from an educational tool of meaning to a loss of individual voice and style? I cannot claim to have discovered an answer to this issue during my investigation of the identity process, knowing only that it remains a process of discovery. Within the Atlantic Canadian academic community, exploration is embraced through events including the ASB conference.

“Everyone seems to be genuinely interested in who you are...you know we’re all members of business schools, so what area do you instruct in, what are some of your research interests and areas. There seems to be a genuine sense, regardless of seniority, of community building within the Atlantic Provinces.” – (Cynthia, PhD Candidate)

Involvement within a community of practitioners can provide cohesion during the moments when junior academics feel a disjointed sense of identity and belonging. Institutional support, in the form of encouraging conference participation at the ASB, creates an environment of safety where the symbolic productions of the professorate are both attempted and evaluated.

“It’s the place where I got to do a lot of stuff without fear and rejection, and not being ‘rigorous enough’ and those things, so it’s been as important to me in terms of my development as an academic as the Academy or ASAC, or a couple of other places.” – (Genevieve, PhD Candidate)

“As doctoral students...it contributes towards the legitimation of us as members of an academic community...it’s a good place to go to get experience, to get a little bit of practice, to get some comfort with that type of presentation and defense of an idea or a paper...the utility from an academic perspective is probably the greatest for doctoral students” – (Cynthia, PhD Candidate)

#### “THIS WILL BECOME MY WORLD”

Ultimately, doctorate students and junior academics negotiate a unique professional identity in this new frontier. Reflections on first-time participation in academic gatherings brought to the forefront feelings of novelty and confusion. Basic questions of action, speech and dress from past conferences highlighted the quest for understanding, or personal fit as a professional, within the academic community. Roles and responsibilities, including “becoming” a researcher, signaled a change in how junior academics recreated themselves in both their own eyes and in the view of peers. Learning the politics of academia revealed pressures towards behavioural adjustments, stemming from intersubjective identity negotiation (Berger & Luckmann, 1966), into what was uniquely described by one subject as “duck-like behaviours”.

Through conferences such as the ASB, junior academics will find opportunities to rehearse the scripts of their profession in a relatively safe environment under the guidance of those in positions of mentorship. With experiences to reflect upon and stories to tell, reflexive data is now available to satisfy Weick’s sensemaking process (1995) and help create

their identity within the professorate.

“That was the first time I felt like I belonged to the community, and to be honest, I really think that going to a conference, to ASB specifically, made me feel like, you know, I’m participating in this world. This is become...this will become my world.” – (Brian, PhD Candidate)

### References

- Beech, N. (2006). Intense, Vigorous, Soft and Fun: Identity Work and the International MBA. *Critical Perspectives on International Business*, 2(1), 41-57.
- Berger, P., & Luckmann, T. (1966). *The Social Construction of Reality*. Great Britain: Penguin Books.
- Bergquist, W. H. (1992). *The Four Cultures of the Academy*. San Francisco: Jossey-Bass.
- Blenkinsopp, J., & Stalker, B. (2004). Identity Work in the Transition from Manager to Management Academic. *Management Decision*, 42(3/4), 418-429.
- Burrell, G., & Morgan, G. (1979). *Sociological Paradigms and Organisational Analysis*: Ashgate Publishing.
- Feldman, M. S., Skoldberg, K., Brown, R. N., & Horner, D. (2004). Making Sense of Stories: A Rhetorical Approach to Narrative Analysis. *Journal of Public Administration Research and Theory*, 14(2), 147-170.
- Franzosi, R. (1998). Narrative Analysis - or Why (and How) Sociologists Should Be Interested in Narrative. *Annual Review of Sociology*, 24, 517-554.
- Giddens, A. (1991). *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Cambridge: Polity Press.
- Leavitt, H. J. (1991). Socializing Our MBAs: Total Immersion? Managed Cultures? Brainwashing? *California Management Review*, 33(4), 127.
- McCracken, G. (1988). *The Long Interview*. USA: Sage.
- Merton, R., Reader, G. G., & Kendall, P. L. (1957). *The Student Physical*. Cambridge: The Commonwealth Fund.
- Mills, A. (2005). Restructuring the Atlantic Schools of Business (ASB) Forum. *Workplace Review*, 2(1), 38-39.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., & Graske, T. (2001). How to Keep Your Best Employees: Developing an Effective Retention Policy / Executive Commentary. *The Academy of Management Executive*, 15(4), 96.
- Reybold, L. E. (2003). Pathways to the Professorate: The Development of Faculty Identity in Education. *Innovative Higher Education*, 27(4), 235-252.
- Strauss, A. L., & Corbin, J. M. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park: SAGE Publications.
- Trocchia, P. J., & Berkowitz, D. (1999). Getting Doctorated: A Proposed Model of Marketing Doctoral Student Socialization. *European Journal of Marketing*, 33(7/8), 746.
- Weber, M. (1947). *The Theory of Social and Economic Organization*. New York: Oxford University.
- Weick, K. E. (1995). *Sensemaking in Organizations*. London: Sage.
- Weiss, C. S. (1981). The Development of Professional Role Commitment among Graduate Students. *Human Relations*, 34(1), 13-31.

# Entrepreneurship

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## **UNDERLYING ISSUES IN PERCEPTIONS OF INNOVATIVENESS IN SMES: CANADA - POLAND COMPARISONS<sup>1</sup>.**

Results of a study on the perceptions of benefits of innovations and these pertaining to business success by owners (or their representatives) of SMEs in Canada and in Poland have been described. These results are from a random sample questionnaire-style study. Assessments of advantages of innovations, their imperatives, and reasons for being innovative, are explored. Several generalizations, regarding perceptions, in the above specified areas, have been presented.

### **Introduction**

Issues related to activities of small and medium-size enterprises (SME) are not a new topic of interest for businesspeople, scientists, or agencies that support economic development. SME provide employment, increase GDP, and are a form of business inspiration. One of the crucial elements for SME development is innovation. However, innovation may be interpreted in different ways. This creates a constraint when conducting a study of innovation, formulating plans oriented to stimulation of innovativeness and enhances entrepreneurship.

The objectives of this study are to identify if there are differences in perceptions regarding sources of business success and benefits of innovative activities in SME. A study on these aspects has been undertaken in two different countries / regions in an attempt to find some, very basic, underlying commonalities. Interpretations of innovation, invention, and creativity are explored. This discussion creates a platform to formulate questions for a questionnaire type study. Then, the results of empirical study are presented and discussed.

### **Innovativeness vs Inventiveness vs Creativity**

Problems related to research on innovativeness of SMEs originate from the inability to establish a precise definition for such terms as invention, innovation and creativity. Inventions frequently originate because of systematically undertaken Research and Development (R&D) activities. According to the definition by the United Nations, also accepted by OECD in Frascati Manual (paragraph 59): "R&D is a creative work undertaken on a systematic basis in order to increase the

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stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications. ... The basic criterion for distinguishing R&D from the rest of Science and Technology (S&T) is that there is an ‘appreciable element of novelty’”. It may be thus accepted that innovation is an initial practical (commercial) application of an invention.

If such an interpretation is accepted, then the majority of SMEs do not qualify for being innovative: these types of enterprises mainly imitate. Frequently, SMEs do not protect their ideas because patenting is too costly, time consuming, and at times, patents do not provide adequate protection for inventions. Patents reveal the novelty, thus solution is more prone for copying or reengineering (redesign).

R&D activity is only one of the elements of the innovation process. An innovation process can be described in many different ways [see for example Kleine & Rosenberg (1986, p.289), Betz (1987, Chapter 1-2), Nasierowski (1997, p.46)]. The concept of absolute novelty in global terms is not emphasized in these models, and hence a weakened interpretation of novelty and innovation can be adopted. Innovations in an enterprise can be defined as an economic decision made in order to carry out tasks related to taking advantage of emerging market opportunities, or preventing threats to materialize. Such decisions are often strategic in nature. They may have consequences for the competitive position of the company and to all aspects of its functioning. Similar interpretation is advocated by Oslo Manual, where a minimum requirement of innovation is for a product or a process to be new (or substantially) improved for the specific company (Oslo Manual, 1999, paragraph 131). Following Schumpeter (1949) innovation is an economic phenomenon, a process that takes an invention and develops it all the way to a marketable product or service that changes the economy. Innovation should be related to opportunities, focused, and breathtakingly simple (Drucker, 1985). It is accepted in this paper that innovativeness deals with implementation of new solutions in the place, or for the purpose, for which these have not been used earlier.

Another troubling issue in the study of technological change is that of differentiating innovation from creativity. Innovation can be defined as an output (product, device, theory, etc.) that is somewhat new to the “place”, time, or the purpose of its application: creativity is a process which may not lead to implementation (Amabile et.al., 1996). In short: it is accepted that creativity is a manifestation of a drive to shape an opportunity, whereas innovation is an attempt to practically use this opportunity.

Beyond differences in opinions, on what innovation or success is, there are several other items that will impact results of the study in innovations results. These include, for example (Nasierowski 2006):

- Economic sector of operations that have different requirements and possibilities to innovate, that have different characteristics related to performance, competitive pressures, and operational practices that tend to bring success.
  - Size of the company – different needs and chances for innovation in micro-enterprises in convenience stores sector, than in a company manufacturing hi-tech equipment;
  - Characteristics of location of the company that may determine levels of competition.

Even though diverse interpretations of creativity, innovativeness and entrepreneurship may enliven possible discourses about their nature imperatives and effectiveness, it does not help find a reasonable way to measure them. For example studies that make the tall claim of measuring innovation (or productivity of innovation generating units) by recording number of patents, publications, etc seem hollow and incomplete because they completely ignore the meaty qualitative dimensions of innovation, while excessively fixating on the quantitative dimensions. This leads one to advocate an indirect means for measuring innovation. We can measure innovation by evaluating factors such as productivity, employment, revenue or profit increase, improvement of competitive position, creating distinctive competencies, or quality(if such indicators can indeed be measured). However these indicators depend upon a variety of factors such as the specific context of operations, market forces, actions undertaken by competition, economic and political influences shaping the particular region, company’s reputation, and customers loyalty, all of which may significantly impact results of innovation measurements. It is quite a task to measure the impact of innovation upon business performances given the insidious presence of market forces. Also quantification of these processes is virtually impossible taking into account diversity and numerous possible contextual factors. It is highly unlikely that companies will disclose information regarding their innovation related procedures, nor

would they allow outsiders to observe their processes. Thus the intimates of the relationship between these factors will not be documented. Moreover, measurement of innovation processes may fail to provide evidence regarding casual relationship, which additionally may be of a non-linear character. Thus under the specific constraints, intuitive understanding of these concepts is understandably necessitated, though it may affect the precision of this discussion. This situation is quite similar to psychological studies, where the vacuum of a sharp definition for intelligence is pragmatically filled by equating intelligence with IQ tests results.

Innovation by SMEs is undertaken in cooperation with other agents acting on the market, who may operate in different countries and in different economic sectors. As well, innovations depend upon several situational conditions, such as the economic sector of the activity, the environment where the company operates, and the internal enterprise pressures and objectives (Salavou & Lioukas, 2003). Yet, it is interesting to know what the key reasons behind the drive to innovate are and if activities oriented to innovations bring expected results<sup>2</sup>. Results of examinations of these aspects may assist in identification of factors that impact and foster innovative activities. Is it a desire to improve competitive position? Are innovations stimulated by knowledge, intuition, business (common) sense, courage, business experience, or an attitude? Overall, it is necessary to find out the common perceptions regarding the contribution of innovation to business success and to identify the items that stimulate innovativeness.

### **Methodology and constraints of carrying studies**

A questionnaire was developed using standard practices in this area (Walonick 2006, Kaplowitz & Hadlock 2004, Edwards et.al. 2002). For financial, technical, and administrative reasons several classical recommendations for a questionnaire study had not been followed (for example no tokens of appreciation were used). Instead, a standard graphical format determined by web-creation software at UNB was used. Questions for the survey had been developed based on an in-depth literature review (e.g., Nasierowski, 2003, 2006); publications of agencies supporting entrepreneurship (e.g., ACOA - Fast forward ...p.19); and interviews with business owners and key employees of private enterprises.

Two groups of respondents were selected for the study. The following outline the key characteristics of location of companies included in the study:

Group 1 - Poland – companies located in the vicinity of Warsaw, which is a vibrant and diversified area. Economically, this is the most dynamically developing region in Poland;

Group 2 - Canada – companies mainly from Fredericton area, a region with high unemployment, a very limited number of medium size companies, and located away from vibrant economic centers.

This sample certainly does raise some controversies. There is no exact scientific justification for selecting companies from these two countries, and the choice of a comparison between companies of vibrant and non-vibrant regions may give some pause. Certainly it would be more helpful to compare perceptions in a more similar context. However, the significant constraints faced in organizing this study necessitated this particular approach.

Five methods were used to approach respondents: mailing the questionnaire; e-mailing the questionnaire in Microsoft Excel format; providing the web address of where the questionnaire could be located; canvassing by student assistants, and by phoning. In the first three instances, mailing lists were used.

The response rate was below 10%, which was not surprising, yet was much lower than expected. In Poland collection of data was even more complicated because of the confidentiality of “address lists”, outdated lists, and legislation about protection of personal data. This legislation does not prevent the use of address lists for research purposes, however owners of lists are unwilling to share them, even if the study is within mandate of their operations. Neither in Poland or in Canada, do such lists provide information about the economic sector or the size of the company.

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2 There are two underlying aspects within the evaluation of innovations that are often described in the literature without making a clear distinction between them --- the concepts of efficiency (output), and effectiveness (outcome, productivity) of innovation processes. (Nasierowski, 2003).

The response rate was further decreased due to incorrect answers. Some of the returned questionnaires were disregarded because of failed tests responses of a control questions. When using address lists it was impossible to identify in advance the size of a company and it turned out that may addressees could not be classified as SME.

Following such control measures, 36 questionnaires were accepted for Group 1, and 52 for Group 2. Even though the sample is small from a statistical standpoint, and companies are from a very diverse range of sectors, a decision was made to report some essential observations regarding perceptions of innovativeness.

### Results

Respondents were asked the following questions (mean values and p-value in anova test have been reported):

	<b>Group 1</b>	<b>Group 2</b>	
Answers were in a 1 to 5 scale, where 1 was ‘definitely no’, and 5 – ‘definitely yes’.			
Have innovations contributed to the increase of profitability of your company?	2.4	4.3	p=.000
My company is innovative mainly in order to keep/improve competitive position	3.0	4.5	p=.000
My company is more innovative than other companies of the type, in my region of operations	3.1	4.0	p=.003
I think that my company has achieved market success	2.9	3.8	p=.000
I consider my firm to be very competitive	3.0	4.3	p=.000

Characteristically, group 2 respondents (Canadian) are more optimistic regarding the impact of innovations upon business performance, and are more confident about success / position of their firms than their group 1 (Polish) counterparts. This observation may lead to the statement that Canadian respondents are more confident and believe that “if I want to succeed, I will, and innovations may help”.

Next, respondents were asked: What is needed in order to succeed in business (*please rank in the 1 to 6 scale: - 1 being the MOST important, - 6 being the LEAST important*) (mean values and p value from anova test have been reported)

	<b>Group 1</b>	<b>Group 2</b>	
* access to capital	2.26	2.12	p=.888
* good employees	1.92	2.72	p=.097
* access to distribution network	2.93	3.52	p=.007
* good accountant	3.68	3.97	p=.738
* good lawyer	4.18	4.23	p=.943
* ability to change own ideas or solutions from other firms into a commercial success	3.00	4.58	p=.000

Generally, respondents have similar opinions regarding elements “needed for success”. Access to capital and good employees are most important, and good lawyer/accountant are of lesser importance. However, respondents do differ in assessment of access to markets as a factor of success. Indeed, group 2 of respondents operate in an area where access to a broad distribution network may be a problem, whereas respondents from group 1 operate in a vibrant, growing area. Thus,

companies from the group 2 of respondents may be forced to concentrate on local markets.

Management (leaders, owner) of the companies that are successful can be characterized by such attributes as (*marking a maximum of four that are the MOST important*) (mean values have been recorded):

	<b>Group 1</b>	<b>Group 2</b>
* intuition	64%	38%
* “common sense”	35%	67%
* flexibility	49%	52%
* network of friends and contacts	27%	38%
* ability to recognize market opportunities	89%	73%
* being uncompromising	16%	15%
* good education	30%	33%
* drive for success	54%	69%
* business experience	54%	38%
* imagination	73%	52%
* ability to generate/find and implement good solutions	78%	69%

Questions in this section are not clear. The context of situation or perception / interpretation by respondents is likely to strongly impact results (for example, the difference between common sense and intuition). It is not possible to statistically examine similarity of responses between two groups. However, respondents from both groups most frequently indicate ability to generate/find and implement good solutions, drive for success, and intuition/common sense as characteristics of management that likely bring success. Respondents do not mention good education and being uncompromising frequently as underlying sources of business success.

When reasons for being innovative are examined, respondents provided the following responses: We innovate in order to (*marking a maximum of three that are the MOST important*) (mean values have been recorded):

	<b>Group 1</b>	<b>Group 2</b>
* improve competitive position	86%	92%
* improve productivity	69%	69%
* better satisfy market/customer needs	81%	81%
* satisfy employee desires	11%	13%
* reduce costs	69%	44%
* reduce risk of operations	42%	17%
* satisfy desires of management (supervisor, owner)	14%	11%

Characteristically, group one is attracted to innovation as a means to reduce costs and risks, whereas there are no substantial differences with respect to other factors identified as reasons for innovations. Both groups indicate improvement of competitive position, improvement of productivity, and the ability to better satisfy market/customer needs as prime reasons for innovations.

With respect to items that may stimulate innovations respondents were asked: We will innovate more if we have easier access to (*ranking in the 1 to 5 scale: 1 being the MOST important, - 5 being the LEAST important*) (mean values and p value from anova test have been reported)

	Group 1	Group 2	
* funding for innovation (e.g., tax holidays for research expenses)	2.2	2.5	p=.752
* distribution network: that may result in being exposed to more intense competition and other market demands	3.1	3.4	p=.563
* technical expertise	3.3	2.9	p=.016
* information/education/training	2.4	2.7	p=.464
* Governmental assistance for innovation	3.4	3.5	p=.685

In the area of support for innovativeness, there is no statistically significant difference between groups of respondents in perception of stimuli for innovations. Funds for innovation and information / education seem to be most important. Characteristically, group 2 of respondents, consider access to technical expertise as more important than respondents from group 1. This may reflect the differences in the characteristics between group 1 and group 2 because of location. Governmental assistance is ranked lowest in the list of possible stimuli of innovativeness. Such opinion is indirectly confirmed by response to the next question from the survey, i.e.: Which forms of support to innovativeness have you found useful (1 – denotes definitely NO, 5 – denotes definitely YES) (mean values have been recorded):

	Group 1	Group 2
1. Grants	3.529	3.579
2. Loans	3.429	3.762
<b>3. Professional expertise/advice</b>	<b>3.864</b>	<b>4.478</b>
4. <i>Seminars/discussions/lunches</i>	2.929	3.250
5. Brochures/other printed materials	3.023	3.130
<b>6. Meetings with customers/suppliers</b>	<b>4.023</b>	<b>4.385</b>
7. Formal educational programs	2.950	3.261
8. Other	2.95	3.38

With the exception of question 3, there is no statistical (p values in anova analysis) difference in perceptions of respondents. In terms of support for innovations, respondents seem to count on themselves and their contacts or contracted expertise. Money (governmental grants, loans) are of lesser importance.

### Summary

Current research results indicate that there are no substantial differences in perceptions regarding items that are important for business success in SMEs and underlying requirements that stimulate innovativeness between randomly selected respondents from two countries. The observed differences can be explained by the impact of company’s location. There may be a tendency, especially in small size enterprises, to rely on “business, intuitive judgment”, without paying attention to systematic methods. Complexity of the process, a lack of well established methods, the need to take into consideration a complex web of personal preferences, and business contacts, add to the difficulty and strengthen temptation for bias and subjectivity.

Even though the sample used cannot be regarded as representative, the results presented indicate that with respect to basic conditions perceptions of entrepreneurs are largely similar irrespective of the context of operations. This observation, if confirmed by further studies, may suggest that programs oriented on fostering entrepreneurship and stimulation of innovativeness can be transferred across national, technological, and cultural borders.

The process of carrying the study has confirmed several typical problems associated with this format of research. Diversity of SMEs (e.g., by sector of operations, location and size), low response rate to questionnaire type study, availability of address lists, terms of interpretation of key terms, lack of time series analyses, are among strongest constraints. These constraints result in barriers in formulating decisive conclusions and forming advice for agencies interested in

aspects of enhancing economic performance of SME. These observations also indicate that unless there is a strong institutional support for the study in order to increase the response rate, any attempt to get a representative sample will be plagued by a host of difficulties. However, results from such a prospective study may assist agencies sponsoring innovativeness in tailoring their efforts.

## References:

- Amabile T., Conti R., Coon H. 1996, "Assessing the work environment for creativity", *Academy of Management Review*, Vol 39, No 5, pp.1154-1184.
- Betz, F. 1987, *Managing Technology: Competing through new ventures, innovation, and corporate research*, Prentice -Hall, Englewood Cliffs.
- Drucker P., 1985, *Innovation and entrepreneurship: practice and principles*, Harper & Row, New York.
- Edwards, P., Roberts, I., Clarke, M., DiGuseppi, C., Pratap, S., Wentz, R., Kwan, I. 2002, "Increasing response rates to postal questionnaires: Systematic Review", *BMJ*, s.1183-1185 --- [bmjournals.com/cgi/content/abridged/324/7347/1183](http://bmjournals.com/cgi/content/abridged/324/7347/1183).
- Fast Forward: An innovation guide for small and medium enterprises, ACOA, Fredericton.
- Frascati Manual 1981 (and its supplement from 1989) *The measurement of scientific and technical activities: Proposed standard practice for surveys of Research and Experimental Development*, OECD, Paris.
- Kaplowitz, M.D., Hadlock, T.D. 2004, "A comparison of web and mail survey response rates", *Public Opinion Quarterly*, 68 (1) pp. 94-101.
- Kline, S.J. & Rosenberg, N. 1986, *An overview of Innovation*, National Academy Press, Washington DC.
- McAdam, R. & Keogh, W. 2004, "Transitioning towards creativity and innovation measurement in SMEs," *Creativity and Innovation Measurement*, Vol 13(2), 126-140.
- Nasierowski, W. 2006, "Criteria for assessment – selection of innovative projects", *Portland International Center for Management and Engineering and Technology, PICMET'06 Conference, Istanbul (CDRom version) (July)*.
- Nasierowski, W. 2005, "Researching SME: Dilemmas of studies on innovations and international comparisons", *ASB Conference in Halifax* (CDrom version) (October).
- Nasierowski, W. 2004, „Mierzenie innowacyjności MSP: dylematy badań i porównań międzynarodowych” pp. 175-183, *Zarządzanie Organizacjami Gospodarczymi w Zmieniającym się Otoczeniu*, Editor: J.Lewandowski, Wydawnictwo Politechniki Łódzkiej.
- Nasierowski, W. 2003, "The evaluation of technology change projects: Literature overview and suggestions for further inquiry," *Journal of Engineering Manufacture*, Vol 217(B8) 1145-1156.
- Nasierowski, W. 1997, *Zarządzanie rozwojem techniki*, Euro-Management, Poltext, Warszawa.
- Oslo Manual 1992, *OECD Proposed guidelines for collecting and interpreting technological innovation data*, OECD, Paris.
- Salavou, H. & Lioukas, S. 2003, "Radical product innovations in SMEs: The dominance of entrepreneurial orientation", *Creativity and Innovation Management*, Vol 12 (2), (2003), 94-109.
- Schumpeter J.A., 1949, *Economic theory and entrepreneurial history*: in A.H.Cole (ed), *Change and Entrepreneur: Postulates and patterns for entrepreneurial history*, Cambridge, MA, Harvard University Press, pp.63-84.
- Ustawa z dnia 19.11.1999, *Prawo działalności gospodarczej*, Dz.U., Warsaw, Poland (1999) 101.1178.
- Walonick, D.S., "Everything you wanted to know about questionnaires but were afraid to ask", [www.statpac.com/research-papers/questionnaires.htm](http://www.statpac.com/research-papers/questionnaires.htm)
- World Competitiveness Yearbook 2006, IMD, Lausanne, Switzerland, 2004 .

# Gender Diversity

ASB 2007  
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## INTERACTIONS BETWEEN FEMALE LAWYERS AND CLIENTS IN A RURAL SETTING

The purpose of this study was to discover the perceptions of individual female rural lawyers in regards to their interactions with clients. The results show that female rural lawyers have unique experiences in terms of: quality of life, expectations and client relationships, homophily, and expectations of duty.

### Introduction

The purpose of this study was to discover how female lawyers perceive the effect of their sex on interactions with clients, specifically focusing on the context of legal services in a rural setting. While previous research has stated that “the problems of female practitioners in small country practice were not seen as an urgent priority” (Economides, p.117), the rise in the number of female lawyers (Kay, 2004) indicates that perhaps there should be increased emphasis on the importance of understanding female lawyers within this geographic setting.

This research is based on the unique aspects of practicing law in rural settings. A rural area provides an environment in which the pressure associated with social norms and expectations are dissimilar to those in an urban context (Landon, 1985). Dissimilarities mainly occur as a result of the increased visibility in rural settings. As a consequence, there is often increased observation and scrutiny by certain members of the community (Landon, 1982). Many of the positive and negative attributes of this surrounding have been studied in reference to male lawyers. It would be naive to simply assume that the experiences of female lawyers within this context would be ‘the same’ or ‘similar’ and do not require further study.

The need for this study has arisen primarily based on two gaps within previous research: the perspective of the female lawyer, and female lawyers practicing in the rural setting. The perspective of the female lawyer is often ignored in studies (Economides, 1992). Through techniques such as verbal recognition, studies have shown that the relationship between female lawyers and their clients are more likely to be ones of confrontation (Bogoch, 1997). While client meetings with female lawyers have been analyzed, these studies have not examined the perspective of the female lawyer in these interactions. Further, the studies that do involve female lawyers either have not defined the setting being studied or were concentrated in urban settings. For example, Nelson’s study of partnerships in law firms was based in Chicago (Nelson, 1988). Furthermore, influences of a rural setting have been studied (Economides, 1992; Landon, 1982), but have not focused on the specifics of female lawyers.

### Method

The discovery portion of this research began with interviews. Interviews were chosen over questionnaires as questionnaire must follow a rigid framework and are more useful in quantifiable research (Miller, 1974) On the contrary, interviews allowed a method of data collection that captured the full depth of the lawyers’ experiences. The interviewees chosen were seven female lawyers that practice within a rural setting. Through these seven interviews, “theoretical saturation”(Strauss, 1967) did occur. The sample offered a “glimpse [into] the complicated character, organization, and logic of culture” (McCracken, 1998, p.17). It allowed the researcher “to discover how the respondent sees the world” (McCracken, 1998, p. 17).

The lawyers were chosen based on their involvement in Civil Litigation, Real Estate Law, Corporate and Commercial Law, and General practice (Kay, 2004). These fields were selected as they are the foremost male dominated fields (Kay, 2004). All seven women interviewed were currently in practice within a rural setting in Canada.

Using McCracken's guidelines for qualitative, interview-based research, a research guide was formulated. This approach "gives us the opportunity to step into the mind of another person, to see and experience the world as they do themselves" (McCracken, 1988, p.9). Using a guide rather than a questionnaire provided the lawyers the opportunity to tell 'their story' on the topic.

The interviews were performed face-to-face to ensure that potential subtle actions were noticed so that the questions could potentially be altered as necessary. Additionally, all interviews were administered in the law offices of the interviewee. Each interview was digitally recorded using a handheld recording device. The device enabled each interview to be entered into the computer for transcribing at a later date.

The lawyers were selected using a snowball sampling approach. This approach "relies on the chain reaction built up from a few contacts which facilitates the interviewing of their friends, relations or colleagues" (Miller, 1974, p.37). Initial contact was provided through a law professor known to the principle investigator. Following a few initial contacts, individual lawyers provided additional contacts. Most of these additional contacts were colleagues. Although, this may lead to studies of 'similar' experiences (some might anticipate a bias) the intent of this story is not to generalize to a larger population.

The lawyers selected have been divided into age groups to secure their identity. The groups are the ages of 27-33, 34-40, 41-47, and 48 and above. Pseudonyms are used for the purposes of discussion. Additionally, the names of the communities where the lawyers were interviewed and practiced have been altered to maintain confidentiality. For the purposes of simplicity, all the communities will be called Riverside.

The analysis of the data began with a basic content analysis of what each lawyer spoke about during the interviews. Additionally, individual themes were extrapolated from the data using Glaser and Strauss' constant comparative method (Strauss, 1967) whereby each individual interview is analyzed and compared to the previous one to find any similarities or discrepancies (Strauss, 1967). In essence, this allows the research to derive hypotheses from one part of the data and compare it across other sources of data, hence 'constant' comparison" (Lewis, 2003).

### **Findings and Analysis**

Each interview was designed to discover the perceptions that the female lawyers had in regards to their interactions with clients in their respective rural settings. Throughout the interview process, the lawyers were questioned both directly and indirectly. When asked in a direct manner, the majority of the lawyers expressed that they did not think that there was a difference between their client interactions and those of an urban lawyer. To illustrate, when asked directly, Carrie expressed that "I would say there is absolutely no difference in how clients treat me and how clients perceive me being in the rural area as opposed to being in the city" (Carrie). Similarly, Clara answered that "I don't think that rural-urban makes a difference" (Clara).

While the lawyers explained that the location of their practice does not overtly affect their interactions with clients, they believe that their sex does. Clara demonstrated this when she stated "I think being a female lawyer impacts the type of clientele that you get; I don't think it matters where you're practicing" (Clara). This illustrates what appeared to be a consensus between many of the lawyers, one that indicate that other factors affect their interactions but not their locality.

The lawyers interviewed did not openly express a belief that the rural settings affected their interactions, but when asked in an indirect manner an alternative perspective arose. Jeanne believed that "if you're going to practice law within a rural community, it would be very important to be a member of a rural community" (Jeanne). Additionally, Agnes expressed Riverside is "a closely knit community, it's hard to get clients" and that "it's more relaxed in a rural setting than the city"

(Agnes). Bertha expressed that “you have to be careful...the people that you are dealing with...you see them in other settings, even to acknowledge people may give away the fact that they’ve been to see you” (Bertha). These three examples briefly illustrate the alternative interactions that these rural female lawyers experience in their respective communities.

Overall, the four main themes that emerged are: Quality of life, Expectations and Client Relationships, Homophily, and Female Lawyers Going Beyond Duty. Throughout the remainder of this paper, these alternate themes within the rural setting will be explored.

### ***Quality of Life and Level of Discreteness***

The rural setting provides a unique backdrop for the practice of law. Upon completion of the interviews, it became apparent that a higher quality of life was a common theme for many of the female lawyers within this setting. The female lawyers interviewed believed that by practicing within a rural community they enjoyed a higher quality of life.

The constant comparative method used to analyze the interviews exposed the flexibility of professional work within the rural setting. The flexibility associated with the rural setting directly contributed to their idea of a higher quality of life. This flexibility is associated with the lawyers maintaining non-rigid hours as well as being permitted time-off. The rural lawyers felt that they can maintain their position in the law firm while ensuring a flexible schedule, thus resulting in a higher quality of life. Clara, aware of the differences, stated “there’s a certain level of flexibility that exists in practicing in a small town that doesn’t exist in a more urban setting” (Clara). Additionally, Emily stated that,

One of the reasons that I moved to the Riverside was that because I feel that there is a little more appreciation for a work-life balance. You’re not expected to work until midnight every night and it seems that people understand if you need to go and take an afternoon off to do something or be with your kids (Emily).

Essentially, Emily explained the attractiveness of a rural law firm as a result of its flexibility. Emily is able to maintain a balanced life where she can enjoy herself and is not expected to work extensive hours.

In particular, the alternative quality of life within a rural setting allowed these women to spend quality time with their children. Unlike their urban counterparts, these lawyers were able to maintain positions within their firms and not feel a work to non-work conflict. Bertha expressed this position stating,

You have a better standard of living in a rural area, it’s easier to get childcare, I think it’s an easier place to bring up children, the valley in particular you tend to have family nearby or friends you can rely on... you tend to work a little less, I don’t think we work here as much as they work in Halifax, I think we’re a little more laid back and we’re a little more accommodating of family (Bertha).

Additionally, Clara maintained a similar position when she expressed “if you want to have any quality of life with your kids, which is important to me... I’m a very active parent with both [my kids], a rural setting allows me to be that active parent” (Clara). Clara continued to elaborate and stated that were she practicing in an urban community she, “would not be able to get to all my kids hockey games, I would not be able to sit on the PTA’s that I choose to, I would not be able to take my daughter to CANskate. Overall the decision for me to practice in a rural community, in a more rural setting has worked to my advantage because I’ve had the opportunity to be an active parent in my kids lives” (Clara).

The lawyers also maintained an awareness that this quality of life is beyond the norm. Specifically, they perceived that a rural setting is something that should be appreciated. Kim revealed, that “we are in this rural area, very much a backwater and an exception to the majority of Canada, and indeed the majority of the world. One of these days we are going to be discovered and to some extent that has happened and some people are coming back to a nicer way of life” (Kim).

### ***Expectations & Client Relationships***

The women interviewed were consistent in their perception that, as lawyers within a rural setting, they were subject

to a higher level of expectation. Whether this was based on their sex, the setting in which they practiced, or a combination of the two, they felt that the expectations placed upon them were dissimilar to those of their male counterparts.

In general, the interviewed lawyers articulated that, in one form or another within their professional career, they encountered situations whereby they were subject to higher standards. These expectations came from both their clients and their own desires to represent the profession of law well. Jeanne explained that

Being a lawyer, a big challenge is abiding by the high expectations set out in the code. But basically the high expectations of everyone... your clients have high expectations, they're paying for a specialized expertise that you offer and they expect in every regard for you to apply that expertise in their case and act professionally (Jeanne).

This illustrated a repeated theme whereby these professionals attempt to meet the high expectations of people with whom they interact.

Also, issues of managing expectations arose. Throughout the interviews, the lawyers discussed various methods of ensuring that the clients' expectations were met. Carrie's method was to quickly address the basic pertinent questions, then to have the client bring up topics that were foremost on their mind, and, finally, to offer advice. Through this method, Carrie indicated that "by the time they leave here...they've got advice from me...they're happy, they may not be happy with the advice but they're happy they got answers" (Carrie). Jeanne also conveyed an awareness of the necessity of managing expectations. Jeanne revealed that,

A challenge is to manage client's expectations, to be able to say in my initial meeting with them 'ok here's what I'm meant to do for you, here's the retainer agreement', this sets out the terms of their expectations of me (Jeanne).

Thus, Jeanne displays an honest and direct attitude towards her clients. Through disclosing what she is capable of accomplishing for her clients, Jeanne is able to avoid disappointment.

The female lawyers also perceived that they experienced alternative expectations because of their sex. Most notably, this issue arose in terms of the areas of law in which women were expected to participate. Fields that are more male dominated are perceived to have barriers preventing women from succeeding. For example, Kim felt that

There was a much more subtle... identifiable trend and that was that I was a woman and it did not fit the stereotype of the lawyers within the firm for me to be doing commercial work for business people (Kim).

In this situation, Kim, who was hired by the senior lawyers to perform commercial work, was phased out, as the lawyers felt that it was not appropriate for a woman to be performing commercial duties.

Correspondingly, the rural setting provided a framework whereby there were increased expectations, most notably in regards to relationships. The interviews demonstrated that these increased expectations were the result of several factors, foremost, increased visibility. Clara explained the increased visibility of the rural setting, "I walk down the street, everybody knows who I am, not everybody, I'm exaggerating a bit but, people know who I am because of what I do for a living" (Clara). Clara continued by stating

You lose your anonymity here, there's advantages to practicing in a rural area but you lose your anonymity you really do... I don't take files that originate from families that are in my children's school, I can't because I can't go to the Christmas concert with a paper bag over my head (Clara).

This illustrated the lack of social privacy within a rural setting. As one of a few lawyers within a small community, many members of the community are aware of her profession. Clara elaborated and said that "because it's a small community,

the expectations, the clients expectations, can be somewhat higher” (Clara). In essence, Clara highlighted that the smaller communities pose difficulties and increased expectations because of the increased visibility.

In essence, these lawyers expressed both the negative and positive results of practicing within smaller communities. There appeared to be a consensus that the increased visibility causes the lawyers to be cautious of their actions to avoid any negative publicity in the towns. Additionally, it appears as though the increased visibility also causes a stronger sense of loyalty.

### ***Homophily***

Homophily explains how people of one demographic can more easily relate to and communicate with others within that demographic. Within criminal law, Carrie observed this phenomenon. When discussing her observation that the majority of criminal lawyers are male, she stated that “predominantly they’re men who get charged...so I think that criminal clients gravitate towards males” (Carrie). Clara also had similar experiences in her field and commented that most of her clientele is female. She illustrated that “mainly because I’m female I tend to attract female clientele” (Clara). Clara continued and posited that this discrepancy arose because...

I would say that male clients by and large want a male lawyer. Male clients like men because they’re men. And because they think that women, because of their own sort of gender biases... think that women aren’t up to snuff (Clara).

Clara demonstrated a strong perception that male clients often prefer to deal with male lawyers. For instance, she outlined that “there are going to be male clients that don’t want a woman lawyer, they don’t want to talk to a woman lawyer, they don’t want a woman telling them how it’s going to be.” (Clara).

While it would appear that these female lawyers experience male clients who prefer to deal with male lawyers, Emily suggested that it may be the result of a multitude of circumstances. For instance, she explained that it could also be contributed to other aspects, in her case age. Emily responded that

I can certainly think of some situations where a client will call me and get advice from me and then he’s called the senior lawyer on the file who’s also a male so it’s hard to decipher whether it’s because I’m young or whether it’s because I’m a woman. He kind of wants to hear the man’s perspective even though the lawyer and I are obviously conferring, the advice we’re giving is the same (Emily).

While it would appear that homophily causes male clients to seek male lawyers, this remained inconclusive as other factors must be further evaluated.

Additionally, while many of the lawyers noticed a homophily tendency, sometimes characteristics ascribed to certain sexes appeared to make one sex more favorable over another. As such, reasoning and characteristics beyond homophily appeared to make some lawyers more desirable than others. For example, two of Kim’s corporate clients were white males. When asked why they chose Kim as a lawyer the clients explained to Kim that “they regard me as their mother therefore they rely on my advice as they would rely on their mother’s advice” (Kim). Additionally, Bertha alluded to the fact that the clients’ preference of lawyers is not always cut and dry. She stated that

Sometimes women are more comfortable with women, sometimes men are more comfortable with women... sometimes you know men...pick a lawyer who has a style that they are comfortable with, it doesn’t really matter if it’s a woman or a man, sometimes you know whether you’re going to mesh with a person (Bertha).

Through the interviews, it would appear that the lawyers agree that the existence of homophily affects their practice. While they most certainly expressed this view, they also alluded to other characteristic that may have been equally or more responsible for clients’ choices in terms of a lawyer.

### ***Female Lawyers Going Beyond Duty***

Another theme which quickly became apparent was that these women often go beyond their professional duties to please the members of their respective communities and clients. Primarily, the lawyers interviewed appeared to feel that within the small communities there was an enhanced concern over community relationships. This took the form of selflessly giving back to the community, in the absence of any desire to attract clients from their charity. Carrie described this as she stated that “you should give back to the community when you can. So I’ve been the lawyer for the Riverview children’s centre where all my children went to pre-school” (Carrie). While it may appear that this is a method to attract referrals, Carrie insisted that she supported the children’s centre solely out of goodwill. Clara also performed additional services for the community without the alternative motive of carrying out the tasks to attract clients. She revealed that “I developed a playground project, I didn’t get one client referral from that project, not one, but I did that because it was important to me” (Clara). Essentially, the lawyers demonstrated that they assist the community in a purely philanthropic sense. They felt that it was their duty to give back to their surrounding community.

Moreover, the lawyers demonstrated the desire to perform additional help for their clients, beyond the requirement of their professional duties. To illustrate, Jeanne explained that she was aware that she went beyond what is expected of her in assisting several clients. After one particular case in which she exerted tremendous effort in helping a client, she expressed that “I can say that not every lawyer would have gone to the lengths that I went to in a couple of cases that I’m thinking of, to... go to the wall for those particular clients” (Jeanne). This interview demonstrated Jeanne’s desire and ability to go beyond the perceived requirements of her professional employment. Whether her efforts are attributable to her sex or to the rural setting remains unclear. Jeanne was not the sole lawyer interviewed who demonstrated that she would go beyond the call of duty to ensure that her clients were satisfied. Kim also explained how she went beyond what many other lawyers would do in her position. During one particular situation involving a family signing a will, Kim noted that

I was doing a will for a couple that has six children and almost all of them are preschoolers. I took my secretary to their house to sign the will because there was no way that they had the capacity to bring six children into the office so they could sign a will. Not all lawyers would do this, I was talking to a lawyer in Ontario yesterday and he said one of his clients had died over the weekend and he had drafted the will ready for her to sign but she hadn’t signed it because he hadn’t gone to the hospital to get her to sign it. They had asked him to go and he said no, he couldn’t do that... so she died without the will being signed (Kim).

Essentially, these lawyers demonstrated a drive to surpass the requirements of their employment to meet the expectations of their clients. As stated earlier, it remains uncertain whether this can be associated to their sex or to the rural setting.

Additionally, the lawyers interviewed expressed an increased level of empathy towards their clients that they felt was greater than that of their male colleagues. Jeanne illustrated this as she stated that

I think the insights that I bring to being a lawyer in a fashion to some degree, to have moved through a period of time of women playing a greater role in many fields. With that comes a certain awareness and perhaps a certain, I guess, sensitivity to how I treat my clients (Jeanne).

In essence, she displayed that it may be her sex which has had a greater influence on her treatment of clients. Jeanne continued on to say, “I think I bring an empathy, a strength, and if perhaps, if I dare say, some wisdom to the crises that I’m helping people to get through” (Jeanne). Essentially, she explained that as a woman she shows more empathy towards her clients than her male counterparts. Additionally, Agnes explained that she had an alternative method of thinking and dealing with clients which she felt was a direct result of her sex. She stated

I don’t approach a problem the same way as a man; I deal in a more consolation and collaborative way. Male litigators go to court instead of attempting to collaborate; not in the best interest of clients (Agnes).

Kim also demonstrated an extra compassion towards her clients. She declared that “if I choose to not bill a client

because I have mercy on her, or I take pity on her or I don't think that she can pay well that's my choice, I can do it, I have the luxury to do it" (Kim). Here Kim expressed that she felt she had the 'luxury' to have the ability to not charge poorer clients.

Furthermore, the extra concern that female lawyers expressed towards their clients goes beyond what the clients see within the law office. Kim indicated concern for the future of her clients as she ages. She stated that,

My concern is that I will get too old to look after my clients and they will go on living longer than I'm willing to go on practicing law, which is something of a problem because somebody is going to have to do the ultimate service (Kim).

She exemplified a repeated theme whereby the lawyers felt a duty to secure their clients' futures.

The reasoning behind the increased feeling of duty and empathy towards clients was also discussed. One argument behind this was the idea that the education system has been historically biased in favour of males. The lawyers expressed that they felt that this bias had resulted in them showing more compassion and empathy towards their clients. For instance, Jeanne revealed that

Being in the minority as a woman going through an education system in the time that I went through it, which was still predominantly, I would think, geared towards male success not female success in education (Jeanne).

Resultantly, she felt that this had caused her to deal with clients in an alternative manner than her male counterparts. She explained that "I think that the only way my sex affects dealing with my clients is the sensitivity perhaps and the wisdom I have gained while having to face challenges as a woman" (Jeanne). Essentially, this demonstrated the idea of women feeling discriminated against within the education system. As a result of this discrimination, the lawyers felt an enhanced empathy for those who felt disheartened and were in need.

## Discussion and Conclusion

The intent of this study was to reveal the perceptions of female lawyers in regards to the effect of their sex on interactions with clients in a rural setting and to uncover issues which male focused research has previously ignored. The task has been to demonstrate matters that are perceived to be both unique to the rural setting and unique to female professionals.

The lawyers interviewed demonstrated aspects of their practice which they perceived to be unique to female lawyers in a rural setting. Many of the lawyers interviewed revealed that when practicing in an area of law that was male-dominated, they experienced troublesome client relationships. They expressed that the clients either did not seek guidance from female lawyers or blatantly displayed dissatisfaction with the sex of their lawyer. While this attitude was frequently displayed, it remains inconclusive. It is unclear whether this is solely attributable to the sex of the lawyer, or a combination of the sex of the lawyer and the rural nature of the community.

Additionally, a loss of anonymity was expressed by the lawyers as being a negative consequence of practicing in a rural community. Clara revealed that

You lose your anonymity here, there's advantages to practicing in a rural area but you lose your anonymity you really do... I don't take files that originate from families that are in my children's school, I can't because I can't go to the Christmas concert with a paper bag over my head (Clara).

This is consistent with other studies which have shown that the increased visibility of rural settings requires lawyers to be more cautious of their actions (Landon, 1982). Thus, increased visibility poses difficulty for both male and female

lawyers practicing in a rural community. Additional studies have exposed that clients often hold female lawyers to higher standards (Swenson, 1992). As such, the increased visibility may pose added difficulty for a female rural lawyer. Without a direct comparison between rural male and female lawyers this cannot be established with certainty.

Additionally, the lawyers interviewed often expressed a desire to go beyond what their duty required of them. This has significant implications, as members of rural settings often demand higher standards (Landon, 1985). Further, it has been demonstrated in past research that female lawyers exert more effort than their male counterparts in terms of going beyond what is deemed necessary to please their clients (Bogoch, 1997). Essentially, this may explain that the standards and levels of achievement are quite high for female lawyers in rural settings.

Moreover, this study has explored the concept of alternative interactions between lawyers and clients and its relation to education. Emily expressed that “both of the clients who I felt who might have had different perceptions because I was a woman both of them were mid forties, guys, white males from around here...both in very industrial-labour type jobs” (Emily). This is a consistent perception among the lawyers who felt that clients with less education/life experiences caused more problems. Further, Burke’s 2005 study revealed similar findings in that blue-collared males pose the most difficulty for female professionals (Burke, 2005). A quantified study to explore the demographic makeup of the communities may offer additional insight. This would potentially explain that a community with an increased profile of male blue-collared workers may pose more difficulty for its female lawyers.

As the motivation for the study was to evaluate the unique aspects of practicing law in a rural setting, a wide variety of attributes were explored. For example, this study delved into issues of standard of living and interpersonal relationships in terms of their uniqueness in a rural setting. The interviews demonstrated an impression that working in a rural setting offers a different experience than an urban practice. For instance, Jeanne stated that “if you’re going to practice law within a rural community, it would be very important to be a member of a rural community” (Jeanne). Further, the study explored the perception of a higher standard of living in a rural community. To illustrate, Bertha indicated that

You have a better standard of living in a rural area, it’s easier to get childcare, I think it’s an easier place to bring up children, the valley in particular you tend to have family nearby or friends you can rely on... you tend to work a little less, I don’t think we work here as much as they work in Halifax, I think we’re a little more laid back and we’re a little more accommodating of family (Bertha).

While Bertha explained the relaxed atmosphere of the rural setting Kim elaborated on this theme and felt that We are in this rural area, very much a backwater and an exception to the majority of Canada, and indeed the majority of the world. One of these days we are going to be discovered and to some extent that has happened and some people are coming back to a nicer way of life (Kim).

Thus, in both a general sense and a work-related sense the lawyers felt that they enjoyed a higher quality of life working in a rural setting.

Further, the study attempted to display the increased emphasis on interpersonal relationships in a rural setting. For instance, Kim expressed that “I speculate from my reading and from talking to urban lawyers that interpersonal relations are more important in a rural setting than they are in the cities” (Kim). Previous studies have illustrated that clients are more satisfied when their lawyers build an interpersonal relationship (Bogoch, 1997). Further, studies have revealed that female lawyers form rapport with their clients more easily than their male counterpart (Bogoch, 1997). This is because female professionals often feel that client relationships are more important than the hierarchical relationship that male lawyers form with their clients (Bogoch, 1997). As the current study attempts to demonstrate the increased interpersonal relationships in a rural community, it may demonstrate that female lawyers in a rural community may have additional capabilities in building rapport with their clients. Only a direct comparison study would confirm this.

Essentially the women interviewed offered their unique perspective on practicing law in a rural setting.

While they initially appeared to view their experience as being the same as their urban counterparts, they indirectly referenced multiple unique situations that they felt were either a result of their location or their sex. Previous research has attempted to dismiss the importance of evaluating the female rural lawyer (Economides, 1992). The study indicates there is value in further research into the differences experienced by practicing female and male lawyers in rural and urban settings.

### References

- Best's Review. (1994). A Plain Old Country Lawyer. *Oldwick Best's Review*, 91(6), 40-42
- Blacksell, E., Watkins. (1991). Justice Outside the City. *Pearson Higher Education*.
- Bogoch, B. (1997). Gendered Lawyering: Difference and Dominance in Lawyer-Client Interaction. *Law & Society Review*, 31(4), 677-712.
- Burke, R. J. (2005). Backlash in the workplace. *Women in Management Review*, 20(3/4), 165.
- Dye, K. (2006). *Acker Through the Looking Glass: Exploring Gendered Sub-Structures as a Method for Understanding the Gendering of Organizations*. Saint Mary's University, Halifax.
- Economides, K. (1992). The Country Lawyer: Iconography, Iconoclasm, and the Restoration of the Professional Image. *Journal of Law and Society*, 19(1), 115-123.
- Ely, R. (1995). The Power in Demography: Women's Social Construction of Gender Identity at Work. *Academy of Management Journal*, 38(3), 589-634.
- Halfacree, K. H. (1993). Locality and Social Representation: Space, Discourse and Alternative Definition of Rural. *Journal of Rural Studies*, 9, 23-37.
- Harl, N. E. (1982). Delivery of Legal Services in Rural Areas.
- Hosticka, C. J. (1979). We Don't Care about What Happened, We Only Care about What is Going to Happen: Lawyer-Client Negotiations of Reality. *Social Problems*, 26(5), 599-610.
- Kay, F. M., & Hagan, J. (1998). Raising the Bar: The Gender Stratification of Law-Firm Capital. *American Sociological Review*, 63(5), 728-743.
- Landon, D. D. (1982). Lawyers and Localities: The Interaction of Community Context and Professionalism.
- Landon, D. D. (1985). Clients, Colleagues, Community: The Shaping of Zealous Advocacy in Country law Practice. *Law & Social Inquiry*, 10(1), 81-111.
- Lee, C. P. M. B., and John Hunsley. (1998). Attorneys' Opinions Regarding Child Custody Mediation and Assessment Services. *Family Court Review*, 36(2), 216.
- Lewis, J. R. a. J. (2003). *A Guide for Social Science Students and Researchers*. London: Sage Publications.
- McCracken, G. (1988). The Long Interview. 13.
- Miller, E. K. a. S. H. (1974). *Social Research Design*. New York: Longman.
- Nelson, R. (1988). Partners with Power: The Social Transformatin of the Large Law Firm.
- Ostertag, R. L. (1992). Just a Country Lawyer. *ABA Journal*. Chicago, 78, 98.
- Pierce, J. L. (1995). Gender Trials: Emotional Lives in Contemporary Law Firms. *Berkeley and Los Angeles: University of California Press*.
- Roth, L. M. (2004). Bringing Clients back in: Homophily Preferences and Inequality on Wall Street. *The Sociological Quarterly*, 45(4), 613-635.
- Sherr, A. (1986). Lawyers and Clients: The First Meeting. *The Modern Law Review*, 49(3), 323-357.
- Shucksmith, M. (1994). Conceptualising Post-Industrial Rurality. *Towards Sustainable Rural Communities: The Guelph Seminar Series*.
- Strauss, B. G. a. A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine Publishing Company.
- Swenson, L. C. (1992). Sex and History: The Effects of Attorney Gender, Prior Mediation, and Litigation on Councilation Court Mediation Outcomes and Parent Attitudes. *Family Court Review*, 30(1), 64-80.
- Valerie du Plessis, R. B., Ray D. Bollman, Heather Clemenson. (2002). Definitions of "Rural". StatsCanada.

# Information & Human Resources

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## **A UNIQUE PATTERN OF COLLECTIVE BARGAINING: FISH FOOD AND ALLIED WORKERS UNION AND FISHERY PRODUCTS INTERNATIONAL LIMITED IN NEWFOUNDLAND AND LABRADOR**

A brief history of the company and union is followed by an examination of their collective bargaining and relationship with government in the context of labour relations in the fishery from the 1970s to the present. The three-way relationship is characterized by varying levels of cooperation, conflict and shifting alliances.

### **Introduction**

The academic literature on collective bargaining in the fishing industry is somewhat limited in scope and timeliness, despite valuable discussions of past legal barriers to harvesters negotiating fish prices (Steinberg 1974) or of new union developments in New Brunswick to represent fishers in the event of legislative change (Gurdon and Wright 1984). Other relevant literature is in the field of labour history (Inglis, 1986) or is policy-based (New Beginnings, 1998; Government of Newfoundland and Labrador [NL], 2003; Cashin, 2005). The NL policy documents comprise three government-commissioned reports in the last decade on the provincial fishery; they were initiated in large part due to conflict between the parties, signalling an academic interest in the industry's labour relations. The definition of collective bargaining used here is broad, and refers to more than bilateral negotiations between the company and union, including the parties' relationship with government. This paper fills a gap in the literature by closely examining the evolution of one particular set of collective bargaining relationships in the industry.

Moreover, the collective bargaining structure and process in the Newfoundland and Labrador fishery is unique in a number of aspects. First, in 1988 the provincial Labour Relations Board, under the Fishery Industry Collective Bargaining Act (FICBA), 1971, certified the Fishermen, Food and Allied Workers Union-Canadian Auto Workers (FFAW) to be the province-wide bargaining agent for all harvesters (except for the island of Fogo and north of Makkovik) in the negotiation of all fish prices (New Beginnings, 1998). Second, the FFAW represents a very broad but potentially unstable combination of groups comprised of fish plant workers, offshore trawler workers as well as onshore fishers, although the bargaining structure for the former groups is not province-wide. Third, experiments in dispute resolution systems for negotiating fish prices featured interest-based bargaining combined with final offer selection between 1998 to 2003, after which the centralized bargaining system broke down due to the withdrawal of the Fisheries Association of Newfoundland (FANL) (New Beginnings, 1998). Fourth, an element of industrial democracy is illustrated by the presence of FFAW's two directors on the Fishery Products International Limited (FPIL) board. Fifth, the historical influence and involvement of FFAW in fishery policy and, recently, in the complex negotiations at government level for the sale of FPIL, is unique in the industry. All these factors should be borne in mind as general labour relations context when reading the rest of the paper. The following material is based primarily on analysis of original documents available from the parties, such as position papers, policy briefs and press releases, and media sources where appropriate, accessed from archival sources or organizational websites.

## History of FPIL

In the 1920s Arthur Monroe had been handed the reigns of the Monroe Export Company, a family owned fish processing business which had been run by his father. The firm had a branch in St. John's and one in Throughfare, Bonavista Bay. In 1941 Monroe formed a new incorporated company, Fishery Products Limited (Maritime History). Fishery Products opened a fish processing plant in Burin in the early 1940s and by the 1950s Monroe had plants in several areas of Newfoundland including Catalina, Twillingate, and Trepassey. These plants bought fish from local inshore fishermen and the company employed plant workers to process it. The company soon expanded into the offshore fishery and bought their own deep sea trawlers on which they employed their own trawlermen. Over the years Fishery Products expanded both the number of plants and the number of trawlers it operated. It also continued to purchase fish from inshore sources.

In the early years there were several fish processing companies operating in the province. Most of these operated much the same way as Fishery Products did, employing plant workers and trawlermen, and buying fish from inshore fishermen. Some of these firms were National Sea Products Limited, Booth Fisheries, Bonavista Cold Storage Limited, The Lake Group, and John Penny and Sons Limited. By the early 1980s many of these companies, including Fishery Products Limited were in financial difficulty. In 1983 several of the fish processing companies remaining in the province merged into what is now known as Fishery Products International Limited (FPIL). The merger was facilitated by both the federal and provincial governments, and was enshrined in legislation. In a later submission to the 2002 All-Party Committee on the FPIL Act, the Newfoundland and Labrador Federation of Labour (NLFL) referred to the purpose of the "The Fisheries Restructuring Act" as to "find a just and lasting solution for the rebuilding of the deep sea fishery which recognizes the fundamental role which the fishing industry plays in Newfoundland and Labrador" (NLFL, 2002, page 1). Through this Act, FPIL was created from the merger of several struggling seafood companies and enabled by investment by both federal and provincial governments as well as the Bank of Nova Scotia (Government of NL, 2002).

In 1987 the crown corporation was converted back to a private company, becoming a publicly traded company. At the same time, the provincial government passed the "The Fishery Products International Limited Act", which restricted share ownership by an individual or group to no more than 15%, to prevent individual or groups of shareholders from acquiring control of the company (Government of NL, 2002). Even so, in 1999 NEOS Seafoods Ltd., a consortium of three companies from Nova Scotia, Newfoundland and Iceland offered to buy all of FPI's shares. This was contrary to the FPIL Act and was seen by many as a takeover bid. The government rejected the offer on the grounds that the bid did not show that the new company could add value to the Newfoundland economy as opposed to the shareholders pockets (Government of NL, 2002). Then, in 2001, FPI was subjected to a hostile takeover by Nova Scotia businessman John Risley (Companies Bidding, 2007). The board of directors of the company changed and the company was steered in a different direction. Risley wanted FPI to Purchase his Clearwater Fine Foods Inc., which was heavily in debt. The provincial government set up an All Party Committee to look into changing the Act; the Committee rejected the legislative amendment and Risley later withdrew the merger saying that "FPIL has agreed that it is best not to go forward in the current environment" (Clearwater, FPIL, 2002).

For several months up until the time of writing in June 2007, there has been much speculation once again about a sale of FPIL, and this most recent development is discussed later in the paper. To complete the brief history of the two parties, the next section will concentrate on the FFAW.

## History of the FFAW

In 1908 Sir William Coaker organized 19 men into the Fishermen's Protective Union (FPU) in Herring Neck, Notre Dame Bay with the aim of breaking the monopoly of the merchants by establishing union cooperatives. Within five years, Coaker had signed up 15,000 workers. In the general election of 1913, eight candidates of the FPU were elected to the legislature, and in 1919 the FPU and the Liberals formed a coalition party which governed Newfoundland. Coaker resigned as union president in 1926 and the union soon disbanded. In 1951 Joseph R. Smallwood, then premier of Newfoundland,

helped establish the Newfoundland Federation of Fishermen. The federation was mostly funded by government and as such could not engage in collective bargaining; the federation did not last long (Industry Canada, undated).

Moving ahead to 1970, the next step in unionizing the fishery was when Richard Cashin and Father Des McGrath formed the Northern Fishermen's Union in Port aux Choix, and the union became affiliated with the Canadian Food and Allied Workers Union (CFAWU) (Inglis, 1986). But the union mobilized to organize a wider membership fairly quickly:

“According to the men who were involved in the beginning, they originally intended it to be a regional organization with a potential membership of about six hundred. However when Fishery Products Ltd. proved to be unwilling to recognize the union as bargaining agent for the fishermen – though they were willing to consider such recognition for the plant workers – members realized that organization on a larger scale would be needed in order to press for changes in the Labour Relations Act to allow fishermen collective bargaining rights similar to those of employees.” (Inglis, page 57)

Eventually, the NFU changed its name to the Newfoundland Fishermen's Food and Allied Workers Union (NFFAWU), and Cashin became its first President. The union represented workers from all sectors of the fishery: fish plant workers, inshore harvesters and workers on the offshore trawlers. As such, it not only negotiated for many sectors of the fishery but also with many different fish companies. Separate although similar contracts had to be negotiated for each sector, and with each company. As pointed out by Inglis:

Observers of the NFFAWU were impressed by two main features of its development. First, it managed to draw together in one organization three groups with different and potentially conflicting interests: the “independent” inshore fishermen, the “co-venturing” trawler crewmen, and the wage-earning plant workers....Second, the union's development was remarkably rapid. (page 62).

Part of its success may have been its populist nature, as noted by the Assistant National Director of the new parent union, the CFAWU, Frank Ben: “It is more than just a union – it was a people's movement. It's still an unusual body within our union. We don't always understand it, but we're proud of it. I've never seen anything like the way that union took off.” (cited in Inglis, page 62).

The NFFAWU later became affiliated with the United Packinghouse Workers who were taken over by the United Food and Commercial Workers Union (UFCW). However, the ideology of the NFFAWU was not in line with that of the UFCW. Several of the NFFAWU leaders wished to break ranks and join the Canadian Auto Workers Union (CAW); they regarded the UFCW as a business union and themselves as a social union. In a video celebrating their 25<sup>th</sup> anniversary, FFAW president Earle McCurdy explained that “the FFAW's principle of social unionism is compatible with the CAW's great principle of social unionism across the country” (FFAW/CAW, undated). CAW's own version of its history provides further explanation:

The UAW (and then the CAW) always rejected business unionism — a unionism that limited itself to the price its members got for their labour. In contrast, the union espoused social unionism — a unionism that considered workers as more than just sellers of labour, that was sensitive to broader concerns, and that contributed to those in need in the community and internationally. (Gidin, undated).

After an acrimonious and militant campaign between the UFCW and the CAW to gain the membership of the provincial branch of the UFCW, the issue was finally put to a vote and the CAW won. The name of the union was changed to the Fish, Food and Allied Workers Union (FFAW). Subsequently, according to an article by Kennedy in *Labour News*, “the UFCW took the offensive, filing a complaint with the Canadian Labour Congress, suing the CAW and the fishermen's union for \$43 million in damages and seeking a permanent court injunction against any merger between the two unions”(1987, page 7). But, due to the court action, the provincial UFCW union members decided to take a different route; twenty three of the local's executive board members resigned and began a drive to decertify the UFCW and sign their members into

the FFAWU. Key union officials were quoted in Kennedy's report, such as Bob White, the then leader of the CAW who, pledging the full support of his 140,000 member union, stated: "We didn't come here to offer a magic solution to fishermen, we came here to provide a home for the fishermen to help them solve the problems for themselves" (page 13). Referring to the tactics of the UFCW, White commented that "...court injunctions are what the employers use to break strikes, but court actions won't stop workers from joining the union of their choice" (page 13). Reg Anstey, then the FFAWU Industrial Retail Division Director, promoted the new union by saying in the same article: "The re-creation of our union will provide a unique opportunity to build an organization ... [where] the grassroots of the union present their views in a meaningful way. I believe that together, our efforts will create the most dynamic union in this country" (page 13). In an insightful comment on the trend towards the internationalization of the Canadian labour movement, the closing statement of the article read: "It would be wise for the leaders of international unions to heed the message the Fishermen Food and Allied Workers Union has sent out to the North American labour movement" (page 13). Like the CAW before it, the FFAW defied a large international union (the UFCW) and became stronger because of it. The FFAW (with the help of the CAW) made a bold statement of independence, going against the traditional structure and power relations of organized labour at that time. The current FFAW is still strongly affiliated with the CAW, and promotes itself as:

... a social democratic union that represents approximately 20,000 working men and women throughout Newfoundland and Labrador... For more than 30 years, FFAW has helped shape the political, social, and economic life of Newfoundland and Labrador. In addition to collective bargaining and representing members in the workplace, FFAW is also concerned with broader social and economic issues. (One Ocean, 2001, page 1)

The FFAW has supported many social endeavors, ranging from urging its members to donate blood (FFAW/CAW, 2005), donating to women's shelters (FFAW/CAW, 2004), raising money for tsunami survivors (FFAW/CAW, 2005) to awarding annual scholarships to children of union members (FFAW/CAW, 2007). The paper continues with an examination of the three-way relationship between the union, company and government, in the context of labour relations in the industry up until the cod moratorium.

### **Labour Relations from 1971 to 1992**

After the fall of the FPU, working conditions and wages, along with fish prices, were at the discretion of the companies. In the early 1970s this began to change, primarily due to the formation of the NFFAWU and the passage of the 1971 FICBA. A several months' strike at a Burgeo fish plant in 1971, where the owner had refused to deal with the union, led to significant government intervention. The then provincial Premier, Frank Moores, signed a collective agreement with the NFFAWU in order to settle the strike and the government purchased the plant (Maritime History, undated). Collective bargaining and the union's power grew such that in 1973 the union signed contracts with fish companies containing a 72% wage increase over two years, as well as grievance procedures, a seniority clause, paid holidays and a health plan (Industry Canada, undated). In 1975 the NFFAWU won a bitter strike against FPIL's trawler workers, gaining better wages, per diem pay and improved working conditions. This new collective agreement acted as a pattern for contracts with other companies. The year 1980 saw two strikes in the fishery: plant worker strikes against FPIL and National Sea Products and an inshore fishery strike against FANL, a consortium of fishing companies who set fish prices in the province. The strikes were eventually settled with major improvements for the workers and increased fish prices for the fishermen (FFAW/CAW, undated). The NFFAWU faced significant challenges in their negotiations at this time. They not only had to negotiate with one company in one sector of the fishery, they had to negotiate with several companies in each sector. Often the contracts for various companies were up at different times and the workers of one company would be looking for the same (or better) benefits gained by their rivals at another company.

In 1980-81 the NFFAWU successfully lobbied the provincial government to provide fishers with workers' compensation coverage. Up until then workers injured at sea would likely end up on welfare. The provincial government passed a bill to include these workers in the plan and the fishing companies were forced to pay workers compensation premiums for the fishermen (FFAW/CAW, undated).

Overall, for most of the 1970s and 80s the NFFAWU and FPIL were adversaries in the majority of their dealings, with governments occasionally intervening on behalf of one or the other. However, in the 1980s and early 1990s foreign over-fishing in (and just outside) Canadian waters was considered by all parties to be a major problem and this eventually led to cooperation. In conjunction with the fishing companies, in March 1992 the FFAW organized a massive rally in St. John's which was followed by a protest at sea. A flotilla of Canadian fishing vessels sailed outside the 200 mile limit to symbolically claim the nose and tail of the Grand Banks as Canadian territory (FFAW/CAW, undated). The fishing companies, including FPIL, supplied the trawlers and the union provided the men to sail them and together they made the protest possible. This protest was considered to be a major show of solidarity between the union, the companies, and government to showcase to the world the problem of foreign over-fishing.

### **The Moratorium Years**

Unlike the 1970s and 1980s, the 1990s ushered in more cooperation between the FFAW and FPIL, sometimes even resulting in a united front against one or other level of government. In fact, the fishery of this decade featured a major change in direction for all of the players. In July 1992 Federal Fisheries minister, John Crosbie, announced a two year moratorium on northern cod (Industry Canada, 1992). The government argued that fish stocks were becoming dangerously depleted and that the moratorium was necessary in order to rebuild the fish stocks. No one could argue this point, but the lives of all concerned would be seriously impacted. The advent of the moratorium was a time in which the union, FPIL, and the provincial government stood together on issues against the federal government, such as appropriate income support and training programs for affected fishers.

Eventually, the federal government announced a 10 week payment of \$225.00 per week for the displaced harvesters and plant workers, a far cry from their normal salaries (Industry Canada, 1992). The government later introduced the Northern Cod Adjustment and Recovery Program (NCARP), providing income support and retraining opportunities for displaced fisheries workers. Under this plan, later known as The Atlantic Groundfish Strategy (TAGS), the provincial government and the FFAW organized and helped fund a significant amount of training opportunities aimed at retraining displaced fisheries workers to work in other areas of employment. The FFAW set up several training agencies for registration of their members in training programs, post secondary schools in the province would provide the training, and the federal government would provide project funding and income support for the workers. The FFAW played a major role in this program. One of the departments it set up became known as Deepsea Training Incorporated, and through this initiative the union provided seats for displaced trawlermen who either wanted to retrain for other jobs or who in some cases decided to upgrade their skills in their current trades in order to find employment in sea going careers outside the fishery. These initiatives were very successful in allowing the union, and the provincial and the federal governments to work together closely for several years, and as such, some very strategic relationships were formed.

Not surprisingly, the moratorium constituted a major challenge to FPIL as well; their major source of raw material - cod - had suddenly disappeared and quotas on many other ground fish species were reduced. The company was forced to diversify and to seek out other underutilized species in order to remain viable. Such species as hake, shrimp, and crab were to become the major sources of FPIL's finances. The expense of fitting out their trawlers and plants with the new gear and machinery to harvest and produce these new species added to the company's hardship.

In terms of conventional collective bargaining, the years following the moratorium were slow for FFAW and FPIL. Negotiating collective agreements took a back seat to the cooperative efforts of the parties involved. In these years the union demanded very little in the way of wage increases or other benefits, and the company and union worked together to get all concerned through the crisis as best they could. Cooperative efforts included such challenges as the harvesting of new species, keeping the company viable, keeping people employed, and retraining those displaced by the moratorium. The cod moratorium lasted much longer than two years as announced in 1992; for the most part it is still in effect today.

## Recent Developments

So far in this new century, the relationship between the FFAW and FPIL has for the most part been marked by tension, if not conflict, linked with the ousting of Vic Young as CEO of FPIL and the introduction of new CEO John Risley and a new board. Interestingly, the two FFAW directors were retained. A new management philosophy and style ensued. In 2004 and 2005 the company closed plants in Fortune and Harbor Breton, and dramatically cut the workforce in plants in Marystown and Burin (FFAW/CAW, 2005). The FFAW fought for the retention of these plants and jobs, mobilizing their members and provincial public opinion through, among other tactics, media campaigns. In a 2005 press release, union President Earle McCurdy responded to FPIL's cost cutting strategy by arguing that: plant workers who work for this company have already had their incomes cut in half...when this management team took over the company in 2001, they made a lot of promises to workers, their families and rural communities and quite simply they haven't kept those promises. Their takeover bid was like an election campaign (FFAW/CAW).

Part of the union's strategy to deal with the company's policy of workforce reduction has been to lobby government to provide an early retirement incentive plan for fishing industry workers. The FFAW made this demand a federal election issue in 2004, and encouraged its members to mail postcards to their members of parliament asking for an early retirement program (FFAW/CAW, 2004). The Government of NL announced that it was behind the workers in their early retirement campaign. Fisheries and Aquaculture minister Tom Rideout announced that "Government is prepared to work with all parties to provide tangible benefits for impacted FPIL workers. This includes the Government of Canada, all industry stakeholders and the company itself." He emphasized that "...an early retirement program is instrumental in finding our way forward." (2006).

In 2006, contract negotiations between the FFAW and FPIL were all but at a standstill and notably adversarial. This is not surprising considering all the strife in the fishery caused by plant closures, layoffs, and quota disputes. Moreover, FPIL developed a new policy of sending raw material to China for cheaper production. The President of NLFL, Reg Anstey, backed the union in its opposition when he:

...pledged the full support of the NLFL with the FFAW in calling on FPIL to deliver an acceptable operations plan for its facilities on the Burin Peninsula. The people of the Burin Peninsula have dedicated their working lives to FPIL and they deserve much better...Our resources should be used to create employment here and not in other countries. (NLFL, 2006)

Contract talks dragged on, and on October 30<sup>th</sup>, 2006 Human Resources, Labour and Employment minister, Paul Shelly, appointed a conciliation board to intervene in the negotiations (Government of NL, 2006). The company was seeking concessions on wages, arguing for "...a new collective agreement that is more consistent with industry standards and averages in Newfoundland and Labrador" (FPIL, 2006), and the union refused outright. On September 29, 2006 the company expressed disappointment at the failure of negotiations with the union and reiterated its requirement for concessions (FPIL, 2006).

In December, 2006 FFAW members voted 98% to reject the latest offer by the company. The President stated that "people are just not prepared to turn back the clock where the company was looking", and continued: "...in addition to substantial wage cuts, FPIL is also looking for other concessions on hours of work, overtime and vacation"(FFAW/CAW, 2006). Union members voted again to reject the next final offer from the company in April 2007 (FPIL, 2007). Later that month the negotiators reached a tentative agreement. Graham Roome, Chief Operating Officer for FPIL, stated that, "Contract negotiations have been lengthy, and have certainly been trying for all of us. Now we believe we have achieved a workable compromise." (FPIL, 2007). Nevertheless, the union membership again rejected the contract (FPIL, 2007).

Then, on April 30, 2007 FPIL announced that it had reached a "general agreement in principle" for the sale of certain FPIL assets in Atlantic Canada to Ocean Choice International. It also stated discussions were ongoing with High Liner Foods to purchase potential FPIL assets in Canada and the United States. FPIL has since agreed to sell its secondary

processing plant in Burin and marketing facilities in Massachusetts to High Liner Foods and several of its processing plants in Newfoundland to Ocean Choice International. The sale of FPIL must be approved by the provincial government, which will in turn require the FPIL Act to be either revised or revoked. In late May 2007 the provincial government approved the sale of FPIL to Ocean Choice and Highliner Foods. Stipulations in the sale were that the companies commit to maintain current employment levels for at least five years, Ocean Choice must commit \$8 million in capital improvements and High Liner was required to spend \$3 million in capital expenditures and research and development (Brautigam, 2007). Provincial Premier, Danny Williams, also insisted that \$3 million from any profit from the sale of FPIL be used to enhance workers' wages (Herridge, 2007). The federal government was to issue quotas to a holding company controlled by Ocean Choice, and the company must land its quotas in Newfoundland and Labrador. The provincial government was to have a 49% stake in the holding company (Brautigam, 2007).

In a very seldom seen move, the FFAW membership ratified a collective agreement with Ocean Choice International. At the time of writing, they have also accepted a tentative agreement with High Liner Foods. According to Alan Moulton, Vice president of the FFAW's Industrial Section, the \$3 million condition of sale imposed by Premier Williams is what sealed the agreement. It allowed the average wage to be raised to \$13.20 an hour instead of the reduction FPIL had wanted. The union also managed to substantially reduce other concessions (Herridge, 2007). This collective bargaining strategy is unusual in the world of labour relations as the union has signed collective agreements with companies who technically do not own all the assets, and it is clear that there would be no agreements at all without significant government intervention at both levels.

### Cooperation, conflict and shifting alliances

The above discussion has shown that the inter-relationship of the three parties has varied considerably, featuring cooperation, conflict and shifting alliances. The union has aligned itself with government against FPIL, the union has stood beside FPIL and fought government, FPIL and the government have worked together against the union, and there have been times when all three have been united against foreign governments. Although the decades leading up to the moratorium were largely adversarial, when the parties were faced with a major crisis consisting of no ground fishery, massive workforce reduction, restructuring and retraining, a more cooperative trend developed between all parties. This did not last, however, with a return to conflictual relationships upon the change in FPIL ownership and management. During the latest restructuring, one of the most interesting features of the collective bargaining relationship is that the union worked effectively with both levels of government to put pressure on a company whose operations are still seen as the backbone of the provincial economy, the cod moratorium notwithstanding. The characteristics of this very new set of collective bargaining relationships remains to be seen, but fishery labour relations in the province has been dramatically marked by the old dynamic and what can be predicted is that the future will be very interesting to monitor.

### References

- 3 Companies Bidding for plants, quotas: FPIL, CBC News, 2007  
<http://www.cbc.ca/canada/newfoundland-labrador/story/2007/01/12/FPIL-bidders.htm>  
[Accessed June 9, 2007]
- Brautigam, Tara, Canadian Press, NL Government approves sale of FPIL to Ocean Choice, High Liner, May 2007, <http://finance.sympatico.msn.ca/investing/news/businessnews/article.aspx?cp-documentid=4927799>. [Accessed June 10, 2007]
- Cashin, Richard, Report of the Chairman: RMS Review Committee, St. John's, NL, 2005.
- Clearwater, FPIL merger called off, CBC News, 2002, [http://www.cbcnews.ca/money/story/2002/02/15/FPIL\\_020215.html](http://www.cbcnews.ca/money/story/2002/02/15/FPIL_020215.html). [Accessed June 17, 2007]
- FFAW/CAW, FFAW/CAW: The First 25 Years, Video production, undated, St John's.
- FFAW/CAW, Fighting Back Makes a Difference - History: They said it couldn't be done, undated, <http://www.ffaw.nf.ca/History.asp>. [Accessed June 5, 2007].
- FFAW/CAW, FFAW/CAW Donates to Burin Peninsula Women's Shelter, June 7 2007,

- <http://www.ffaw.nf.ca/NewsDetails.asp?id=65>. [Accessed March 8, 2004].
- FFAW/CAW, Education, 2007, <http://www.ffaw.nf.ca/Education.asp#3>. [Accessed June 7, 2007].
- FFAW/CAW, FPI workers send strong message to Company, December 20, 2006, <http://www.ffaw.nf.ca/NewsDetails.asp?id=187>. [Accessed June 7, 2007].
- FFAW/CAW, FFAW/CAW Intends to make early retirement an election issue, May 21 2004, <http://www.ffaw.nf.ca/NewsDetails.asp?id=83>. [Accessed June 10, 2007].
- FFAW/CAW, FFAW/CAW Joins with other Fishing Organizations to Raise Money for Tsunami Disaster, January 18 2005, <http://www.ffaw.nf.ca/NewsDetails.asp?id=93>. [Accessed June 7, 2007].
- FFAW/CAW, FFAW/CAW Urges its Members to Donate Blood, August 15, 2005, <http://www.ffaw.nf.ca/NewsDetails.asp?id=142>. [Accessed June 7, 2007].
- FFAW/CAW, FPI Workers worry about their future, November 10, 2005, <http://www.ffaw.nf.ca/NewsDetails.asp?id=155>. [Accessed June 12, 2007].
- FPIL, Backgrounder on labour negotiations, July 19, 2006, <http://micro.newswire.ca/release.cgi?rkey=1407198014&view=14443-0&Start=20>. [Accessed June 6, 2007].
- FPIL, FPI disappointed at failure of negotiations with Union, September 29, 2006, <http://micro.newswire.ca/release.cgi?rkey=1409293391&view=14443-0&Start=20>. [Accessed June 7, 2007].
- FPIL, FPI reaches tentative Agreement with Plant Employees in Newfoundland and Labrador, April 22, 2007, <http://micro.newswire.ca/release.cgi?rkey=1504227950&view=14443-0&Start=0>. [Accessed June 7, 2007].
- FPIL, FPI signs non-binding letters of intent with respect to potential sale of assets, April 30, 2007, <http://micro.newswire.ca/release.cgi?rkey=1504302779&view=14443-0&Start=0>. [Accessed June 7, 2007].
- FPIL, Tentative Agreement rejected by FPI plant employees in Newfoundland and Labrador, April 26, 2007, <http://micro.newswire.ca/release.cgi?rkey=1504269854&view=14443-0&Start=0>. [Accessed June 7, 2007].
- Gidin, Sam, The Canadian Auto Workers: The birth and transformation of a union; towards a new unionism, undated, <http://www.caw.ca/whoweare/ourhistory/cawhistory/index.html>. [Accessed June 5 2007].
- Government of NL, A Review of the Fishing Industry Collective Bargaining Act: A Framework for Stability, St. John's, 2003.
- Government of NL, Fisheries and Aquaculture, All Party Committee Public Consultations on the FPIL Act, 2002, <http://www.fishaq.gov.nl.ca/pdf/AllPartyReport.pdf>. [Accessed June 4 2007].
- Government of NL, News Releases, March 21, 2006 <http://www.releases.gov.nl.ca/releases/2006/hrle/1030n04.htm>. [Accessed June 6, 2007]
- Gurdon, Michael & Wright, David, "Collective Bargaining in the Maritime Fishing Industry: Recent Developments", *Relations Industrielles*, 39(2) (1984), 259-271.
- Herridge, Paul, FFAW reaches agreement with Ocean Choice: Deal hinges on FPIL sale, *The Southern Gazette*, May 2007, <http://www.southerngazette.ca/index.cfm>. [Accessed June 4, 2007].
- Industry Canada. History of the Northern Cod Fishery. A Brief Look at the Story of the FFAW/CAW, undated, <http://www.cdli.ca/cod/history8.htm>. [Accessed June, 3, 2007].
- Industry Canada. Press release. Crosbie announces first steps in Northern Cod recovery plan, 1992. <http://www.cdli.ca/cod/announce.htm>. [Accessed June 11, 2007].
- Inglis, Gordon, "Lawyers, Priests, and Gangsters from Chicago": Factors in the development of the Newfoundland Fishermen, Food and Allied Workers' Union, in Rex Clark (Ed.), *Contrary Winds: Essays on Newfoundland Society in Crisis*, St. John's, NL: Breakwater, 1986, 56-74.
- Kennedy, Pete, Canadian Fishermen Form New Union to Escape UFCW, *Labor News*, June 1997, [http://www.cpcs.umb.edu/labor\\_notes/files/10007.pdf](http://www.cpcs.umb.edu/labor_notes/files/10007.pdf). [Accessed June 2, 2007].
- Maritime History Online Catalogue, Harold L. Lake, [http://www.mun.ca/mha/viewresults/Accession\\_No/mha00000546](http://www.mun.ca/mha/viewresults/Accession_No/mha00000546) [Accessed June 2, 2007].
- Maritime, History Online Catalogue, Monroe Export Company Limited, [http://www.mun.ca/mha/viewresults/Accession\\_No/mha00000282](http://www.mun.ca/mha/viewresults/Accession_No/mha00000282) [Accessed June 1, 2007]
- New Beginnings: Bringing Stability and Structure to Price Determination in the Fishing Industry. (1998) Report of

the Task Force on Fish/Crab Price Settlement Mechanisms in the Fishery Industry Collective Bargaining Act, St. John's. Newfoundland and Labrador Federation of Labour (NLFL). Submission to the All-Party Committee on the FPIL Act, 2002, <http://www.nfl.nf.ca/presentations/FPIL%20Submission.pdf>. [Accessed June 8, 2007].

One Ocean, One Ocean Industry Board. Fishing sector members. Fish Food and Allied Workers (FFAW) Union, 2006, [http://www.oneocean.ca/industry\\_board.htm](http://www.oneocean.ca/industry_board.htm). [Accessed June 7, 2007].

Steinberg, Charles, "The Legal Problems in Collective Bargaining by Canadian Fishermen", *Labour Law Journal*, 25(10), (October 1974), 643-654.

# Strategy

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## **IS THERE A 'GROWTH TRAP'? A PRELIMINARY ANALYSIS OF PROFIT AND REVENUE DATA FOR CANADIAN COMPANIES.**

Michael Porter (1996) has argued that managers frequently fall into a 'growth trap', focusing on growing revenues at the expense of a weakened strategy and reduced profits. Research by others offers mixed support for Porter's argument. This study reports preliminary results from analyzing data on revenue and profits for two years from 1,000 large Canadian companies. It shows that the relationship between revenue and profits is weaker than one might expect, but it is a positive relationship. Thus Porter's conclusion may be valid but only to a limited extent.

In an influential article Michael Porter (1996) has argued that managers fall into what he calls 'The Growth Trap'. That is, they unduly focus their attention on top-line or revenue growth. This in turn causes the company to lose its focus and weakens its strategy. The result, he says, is that while revenues increase, the profits stagnate, or may even decline.

Porter illustrates this with the example of Maytag Corporation. Maytag had sales of \$684 million in 1985, which came from just three product lines – washers, dryers and (more recently) dishwashers. These products were very reliable and lasted for years. By 1994 sales had grown to \$3.4 billion. Maytag achieved this growth in sales by expanding its product line and making several acquisitions of other brands. The company by now produced additional products such as refrigerators, cooking products, and vacuum cleaners. While the sales thus grew five-fold at a rapid rate, the return on sales declined from about 10% in the early 1980s to 1% in the early 1990s. The profit thus actually declined from about \$68 million to about \$35 million.

While Porter's argument about the relationship between revenue growth and profitability is plausible, he does not support it with empirical data aside from case studies such as Maytag. Porter has confirmed (personal communication, June 10, 2005) that he has not empirically tested the relationship between growth in sales and growth in profits.

There has been some research to examine the relationship between revenue and profits, although not aimed directly at testing Porter's assertion. Some of this research offers support for Porter's argument while other research contradicts it.

Based on European data, Zook and Rogers (2001) estimate that only about 10% of companies were able to combine revenue growth and profit growth, and the ones which did tended to reduce rather than expand the scope of their business. Stewart (2004) used market value added rather than profits as a measure of performance. Based on this measure he found that a very high proportion of companies with high revenue growth end up with little or negative market value added. Dodd and Favaro (2006) found that companies experience a tension between increasing profits and increasing revenue: only about 32% of companies from a worldwide sample of more than 1,000 achieved growth in both profitability and revenue at the same time.

On the other hand, Laurie, Doz and Sheer (2006) studied companies in the Fortune 50 list. These companies entered

the list with high revenue growth rates, ranging from 9% to 29%, usually because of large acquisitions. Soon after entering the list, however, they found it difficult to maintain their high revenue growth rate, and their share price declined by an average of 61%. Baghai, Smit and Viguerie (2007) studied the performance of 100 of the largest companies in the US and found that companies needed to grow revenue to survive. If a company's revenue growth was slower than that in the GDP, it was five times more likely to succumb through acquisition or bankruptcy.

These studies thus offer inconsistent support for Porter's argument. In addition, they use a wide variety of measurements, and do not test the argument directly. Thus the purpose of the present paper is to carry out a preliminary analysis on the relationship between revenue and profit using data from Canadian companies.

Porter's argument is based on two underlying assertions: (a) that top executives are highly concerned with growth in revenue; and (b) that this results in weakened profitability. My concern in this paper is primarily with assertion (b), but I will comment briefly on the assertion (a).

### **Executive Attitudes towards Revenue Growth**

To test assertion (a) requires entering into an executive's mind to find out what they are most concerned with in terms of their goals for the company. This is obviously difficult to do since executives might not reveal their thought processes when asked about them. It is possible to study their comments in public settings, whether to boards of directors, to the media, or to the shareholders in the form of their 'Letter to the Shareholders' in the annual reports. This last source is the easiest to investigate as it is easily accessible and comparable across companies, since almost all companies include such a letter in their annual reports. Whether these public pronouncements really reveal the executives' thinking, however, is uncertain.

A study of these 'Letters' reveals that chief executives typically do include 'growth' among their key goals. They are usually careful, however, not to single out growth in revenue. Instead they either mention growth without defining what kind of growth they are referring to, or they refer to growth in several different performance measures.

Since a qualitative study of CEO letters to shareholders is not the primary purpose of this paper, I will simply illustrate the point with a sample of six companies. These companies were chosen at random in the sense that they are the first three companies in the alphabetically organized S&P-TSX 60 Index for Canadian companies (except for ACE Aviation Holdings), and the first three companies in the Dow Jones Index for US companies. (ACE Aviation Holdings Inc is not included in the Canadian sample since as a holding company it mentions only the results of its holdings rather than its own goals).

#### **Three Canadian companies:**

*Agnico-Eagle Mines Limited:* "We made significant progress on all five of our major growth projects".

*Agrium Inc.* – "Transformation and growth" [were the key goals of the company in 2006].

*Alcan Inc.* – "On the strategic front, we ... launched a number of important growth projects".

#### **Three US companies:**

*Alcoa Inc.* "We're certain that now is the time to pursue our growth objectives to meet this demand".

*AIG Inc.* “Through [our employees’] efforts, we executed our strategy and achieved healthy growth in our businesses”.

*American Express Company* – “We pledged that a sharper focus on our high-performing payments businesses following the Ameriprise spin-off would produce strong growth, generate higher returns and position us well for the future”.

While the CEOs are careful, as seen in the above small sample, not to single out revenue growth as the goal, it appears that at some level their comments do have that emphasis. The CEO of Alcan, Mr. Dick Evans, for example, speaks of ‘growth and return’ targets. This seems to make a distinction between ‘growth’ and ‘return’, and implies that he thinks of ‘growth’ primarily as revenue growth as distinguished from returns or profits. A study based on interviews with 765 CEOs supports this interpretation (Pohle and Chapman, 2006). Research by Laurie, Doz and Sheer, 2006; Moore, 2007; and Baghai, Smit and Viguerie, 2007; also suggests that the term ‘growth’, unless qualified with some modifier, is used by executives to refer to revenue growth. Finally, Dodd and Favaro (2006) also speak of ‘profitability and growth’, implying that the word ‘growth’ taken by itself refers to revenue growth.

If it is true that CEOs focus primarily on revenue growth, this behavior can be understandable because executives have greater control on revenue than on profits. They can affect revenue figures to a considerable extent by increasing expenditures on advertising, opening more stores or branch offices, hiring more sales staff, reducing price, and several similar actions. On a more strategic level, they can also dispose of divisions where they do not hold a large enough market share (which was the key strategic decision by Jack Welch at General Electric), or make acquisitions of other companies to increase total corporate revenue. If they wish to go beyond these legitimate means, they can also manipulate sales figures by ‘stuffing’ the distribution channels as was done by ‘Chainsaw Al’ Dunlop at Sunbeam; or by creating fictional sales as was done at Enron. Controlling other measures such as profitability is relatively more difficult since they require control of the expense side as well as the revenue side of a company’s operation.

Research on agency theory (for example, Geiger and Cashen, 2007) offers another reason why executives might wish to focus on revenue growth. Agency theory posits that executives make decisions at least in part to serve their own interests, and since executive compensation is often determined by firm size, they have an incentive to increase sales which in turn affects other measures of firm size such as the number of employees.

A company’s focusing on increasing its revenue would be a harmless act if the increased revenue were to reliably increase profits as well. This can sometimes be the case. For example Mintzberg and Waters (1982) found that with very few exceptions the revenues and profits increased hand in hand each year at Steinberg Inc. over a period of 44 years, from 1931 to 1975. (See Figure 4 in the Appendix). However, if this relationship does not hold reliably, a focus on increased revenue could be questionable. The empirical question, therefore, is whether an increase in revenue can be reliably expected to result in a reasonably proportional increase in profits.

### Testing the Relationship between Revenue and Profits

#### Data

The data were taken from the 2006 *Globe and Mail Report on Business*. This database reports on the 1000 largest Canadian companies ranked according to their 2006 profits. It gives data for the year 2006 for profits, profit rank, revenue, revenue rank, total capitalization, asset level, dividend yield, debt to equity ratio, number of employees, price/earnings ratio, return on equity, and return on capital. It also gives comparative data for 2005 for a few measures – primarily percentage change in revenue and percentage change in profits.

## Data Analysis

For the purpose of the present preliminary analysis I treat percentage increase in profits as the dependent variable, with percentage increase in revenue as the primary independent variable. I also include two measures of company size (asset level and capitalization level) as additional independent variables along with an indicator of the company's financial policy, namely the debt-to-equity ratio.

While testing the relationship between revenue and profits is conceptually clear, the actual test creates some data-related difficulties. There are no data available for revenue change and/or profit change for approximately 60 out of the 1000 companies. More importantly, the percentage changes in revenue and profit span a very wide range – from -5,488% to +5,781% in profit changes, and from -103% to 7,128% in revenue change. Many of the extreme changes can be considered outliers, not representative of most companies. The question is: Where should one draw the line between outliers and the 'normal' companies? For this there is no straightforward answer – it is a matter largely of what one considers normal for changes in profits and revenues for companies.

The issue of deciding on outliers is not just a theoretical issue, however. As seen in Figures 1, 2 and 3, the nature of the relationship between revenue change and profit change changes depending on the treatment of the outliers. Figure 1 shows the distribution for all 1,000 companies in the database except cases where profit or revenue data were missing. Figures 2 and 3 show the distribution after removing either 50 or 100 outliers at the high and low ends as indicated in the explanation accompanying each figure.

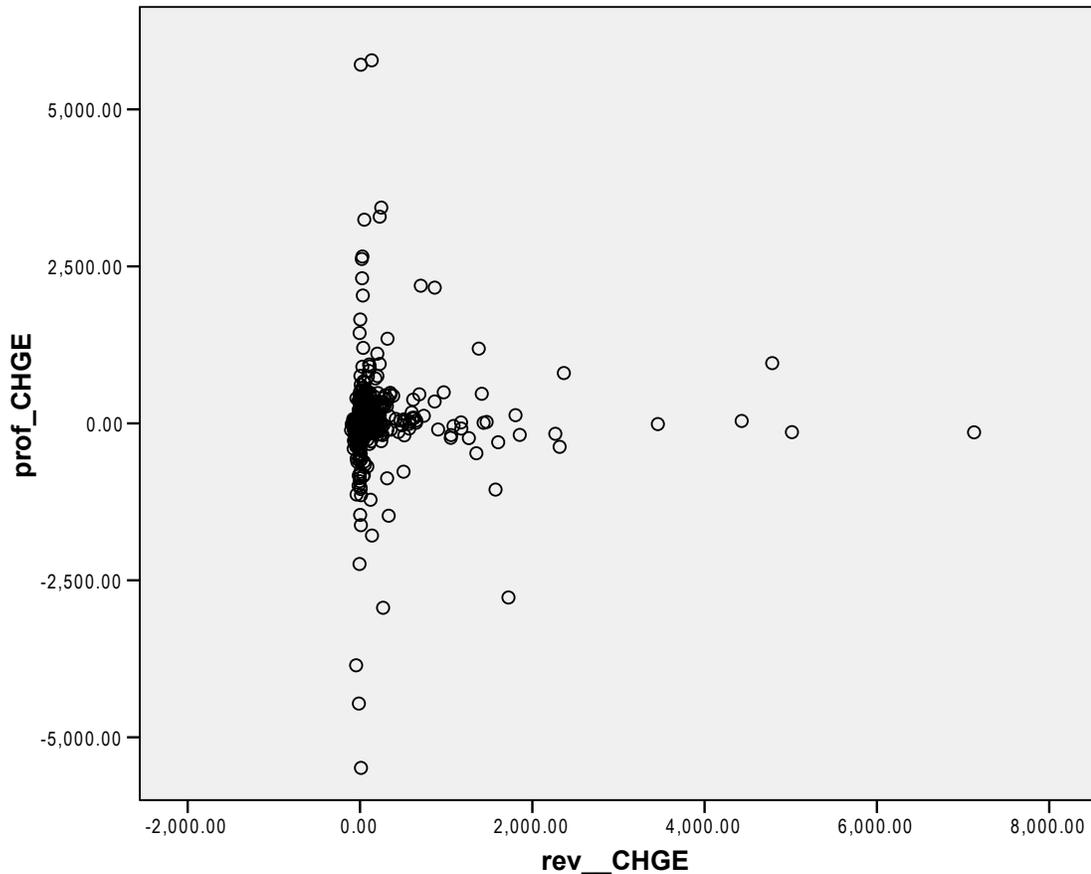


Figure 1 – Distribution of percentage changes in profits and revenue between 2005 and 2006 for 1,000 Canadian companies except companies for which data were missing.

The presence of the outliers disguises the relationship between revenue and profit changes. The correlation is essentially non-existent at .02,  $n = 928$ ,  $p = .543$  two-tailed.

A table of correlations (not included here to save space, but available from the author) shows just two correlations that achieve significance level. First, the change in the amount of company assets is correlated at .213 with change in revenue,  $n = 935$ ,  $p = .000$ . Second, change in the amount of company assets has a -.065 correlation with change in profit level,  $n = 941$ ,  $p = .047$ .

The first correlation suggests that many of companies achieve their revenue growth by adding assets, that is by acquiring other companies. If correct, this interpretation is consistent with the findings reported in some of the studies cited at the beginning of this paper. The second correlation suggests that an increase in assets has a negative impact, at least in the short run, on the level of profits, perhaps because the additional assets cause an increase in expenses but do not produce matching benefits in the short run.

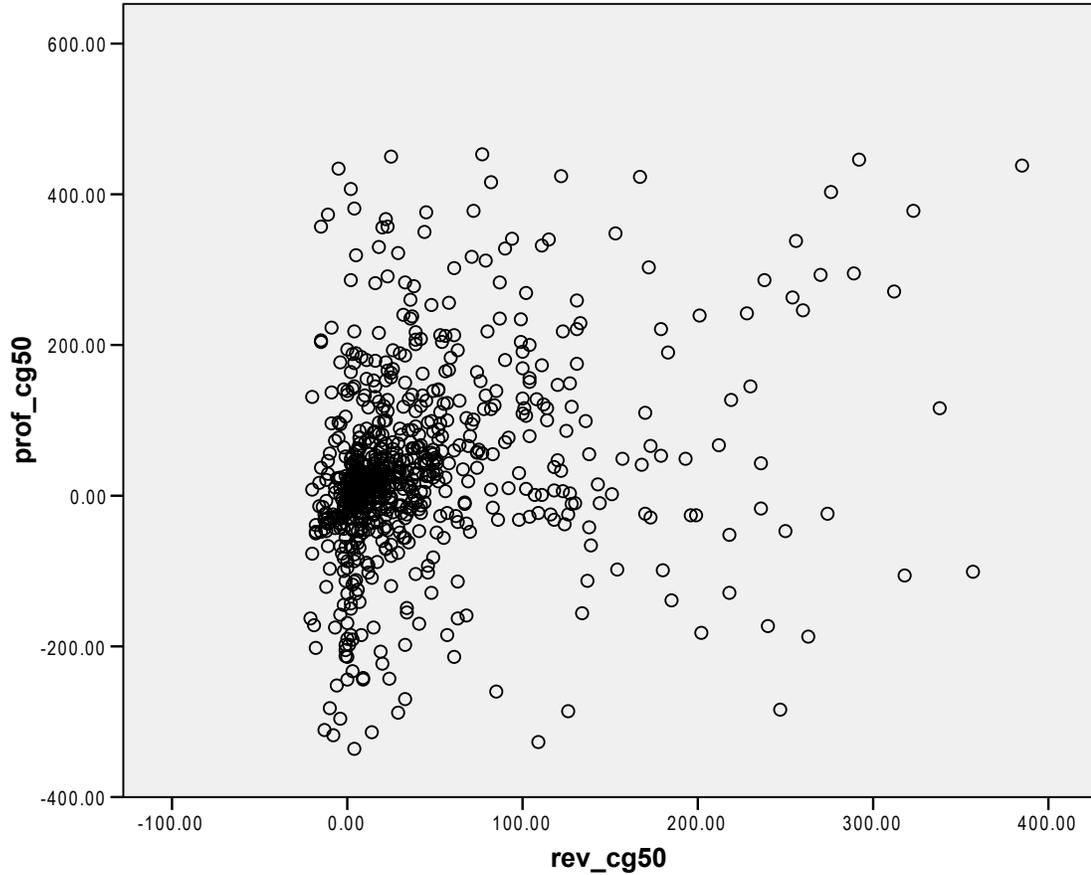


Figure 2: Distribution of percentage changes in profits and revenue for all companies after removing 50 companies with extremely high growth in profits and revenue, and 50 companies with extremely large decreases in profits and revenue. This removed companies whose profits decreased by 375% or more or increased by 453% or more; as well as companies whose revenues decreased by 21% or more or increased by 385% or more.

The removal of the outliers allows the underlying relationship to become more visible. The correlation between changes in revenue and profits is now .257,  $n = 752$ . It is significant at  $p = .000$ .

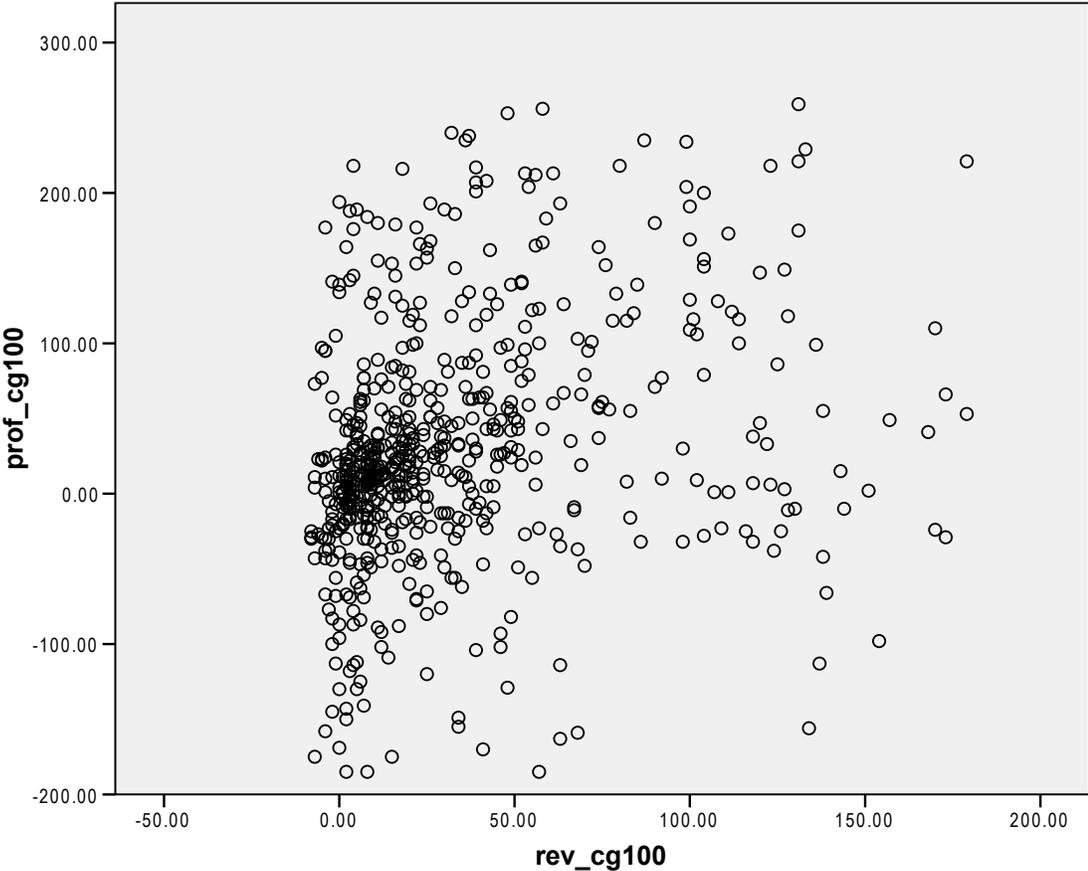


Figure 3: Distribution of percentage changes in profits and revenue for all companies after removing 100 companies with extremely high growth in profits and revenue, and 100 companies with extremely large decreases in profits and revenue. This removed companies whose profits decreased by 187% or more or increased by 259% or more; and companies whose revenues decreased by 8% of more or increased by 179% or more

The removal of the additional outliers does not have much further impact on clarifying the underlying relationship. The correlation between changes in revenue and profits is just slightly lower at 0.255, n = 617. It is still significant at p = .000.

**Regression Analysis:** I carried out regression analyses on the original data set as well as the data sets excluding the 50 outliers and 100 outliers. To save space, I only report the results for the data set that excludes 50 outliers at each extreme, since this dataset seems to bring out the underlying relationships reasonably well. (Other results are available from the author).

The regression had change in profits as the dependent variable. The independent variables were: change in revenue; total assets (as a size measure); change in assets (to bring in possible management decisions such as acquisitions); total market capitalization (as another measure of the size of the company) and debt to equity ratio (as an indicator of financial policy that management may have used to increase profits by use of debt since interest is a tax-deductible expense). The results of this regression are shown below, as is a table of correlations among the variables used in the regression.

It appears from the results shown below that change in revenue is the single biggest impact on the profit change variable, although the impact is relatively small. With a Pearson correlation of .257, it explains about 6.6% of the variance,

which is not a particularly large amount. Adding the other variables does not add significantly to explaining the profit change variance. With the total R of .291, they explain 8.5% of the variance.

The only other variable that shows a significant correlation with profit change is the debt-to-equity ratio, at -.118. When this is considered along with the relatively large correlation (= .475) between revenue change and asset change, it suggests the following: companies rely heavily on acquisitions to increase their revenue, and the increased assets that bring in added revenue are financed by a heavier use of debt. The additional interest expense, along with other expenses associated with a larger asset size, may thus be contributing to the lower profits.

**Model Summary**

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>
<i>1</i>	<i>.291(a)</i>	<i>.085</i>	<i>.076</i>	<i>120.92749</i>

a Predictors: (Constant), debtEquity50, assts50\_\$000, assts50\_chge, rev50\_chge, mktcap50\_\$MIL

b Dependent Variable: prof50\_chge

**ANOVA (b)**

		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>1</i>	<i>Regression</i>	<i>752109.005</i>	<i>5</i>	<i>150421.801</i>	<i>10.286</i>	<i>.000(a)</i>
	<i>Residual</i>	<i>8130642.101</i>	<i>556</i>	<i>14623.457</i>		
	<i>Total</i>	<i>8882751.106</i>	<i>561</i>			

a Predictors: (Constant), debtEquity50, assts50\_\$000, assts50\_chge, rev50\_chge, mktcap50\_\$MIL

b Dependent Variable: prof50\_chge

**Correlations**

		<i>prof50_</i> <i>chge</i>	<i>rev50_</i> <i>chge</i>	<i>assts50_</i> <i>\$000</i>	<i>assts50_</i> <i>chge</i>	<i>mktcap50_</i> <i>\$MIL</i>	
<i>prof50_</i> <i>chge</i>	<i>Pearson</i>	1	.257(**)	-.029	.053	-.013	-.118(**)
	<i>Correlation</i>		.000	.422	.150	.724	.004
	<i>Sig. (2-tailed)</i>						
	<i>N</i>	752	752	752	752	730	579
<i>rev50_</i> <i>chge</i>	<i>Pearson</i>	.257(**)	1	-.074(*)	.475(**)	-.096(**)	-.041
	<i>Correlation</i>			.042	.000	.009	.320
	<i>Sig. (2-tailed)</i>						
	<i>N</i>	752	752	752	752	730	579
<i>assts50_</i> <i>\$000</i>	<i>Pearson</i>	-.029	-.074(*)	1	-.054	.723(**)	-.018
	<i>Correlation</i>				.140	.000	.663
	<i>Sig. (2-tailed)</i>						
	<i>N</i>	752	752	752	752	730	579
<i>assts50_</i> <i>chge</i>	<i>Pearson</i>	.053	.475(**)	-.054	1	-.081(*)	-.028
	<i>Correlation</i>			.140		.029	.507
	<i>Sig. (2-tailed)</i>						
	<i>N</i>	752	752	752	752	730	579
<i>mktcap50_</i> <i>\$MIL</i>	<i>Pearson</i>	-.013	-.096(**)	.723(**)	-.081(*)	1	-.031
	<i>Correlation</i>			.000	.029		.459
	<i>Sig. (2-tailed)</i>						
	<i>N</i>	730	730	730	730	730	562
<i>debtEquity50</i>	<i>Pearson</i>	-.118(**)	-.041	-.018	-.028	-.031	1
	<i>Correlation</i>			.663	.507	.459	
	<i>Sig. (2-tailed)</i>						
	<i>N</i>	579	579	579	579	562	579

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**Company Size Effects:** I also explored whether the profit-change revenue-change relationship is more robust for the biggest companies, the mid-size companies, or the smallest companies. Since the variance explained by revenue change in all cases is rather modest, and to save space, I will very briefly indicate the findings.

For the biggest 200 companies (in terms of profits), the correlation is .261; for the middle 200 companies (ranking from 400 to 600) the correlation is .256, and for the smallest 200 companies the correlation is .042. The first two correlations are significant at .000 while the last is not significant. Thus the relationship between profit change and revenue change, modest as it is, is more pronounced for mid-size and larger companies, whereas it almost disappears for the smallest of the 1,000 companies.

**Conclusion and Suggestions for Further Research**

The data for the Canadian companies as analyzed here show that there is indeed a relationship between increased revenue and increased profit, and it is statistically very significant. On the other hand, in practical terms the relationship is very modest and explains just over 6 % of the total variance. Thus Porter is justified to a considerable extent in criticizing managers who focus heavily on increasing revenue. The managers' effort does not seem to do any harm to the companies,

at least in the short run, but it does not seem to do much good either, if the goal of the company is to increase profit rather than its size. This finding holds for companies of all sizes, but it is particularly true for the smallest among the 1,000 companies.

**Suggestions for Further Research:** As indicated in the title, this is a report based on a preliminary analysis of the data. There is a good deal of room for future research. First, the research can be extended to a longer time horizon, studying behavior of profits and revenue over periods of 5 years, 10 years or perhaps even longer periods. If there are long term effects of expanding revenue, they will become more obvious over these longer horizons. Second, the fact that there is an overall correlation of only about .25 between revenue change and profit change presumably hides the fact that for a group of companies the correlation is much larger, whereas for other companies it would be much smaller or even negative. Thus it would be interesting to separate companies into groups of varying levels of correlations and to attempt to identify what the common factors are among these companies. Finally, it would also be interesting to carry out a more qualitative analysis of strategies of companies with varying levels of correlation. For example, it may be that companies that have large profit growth, but only a very modest revenue growth, may be companies that follow Porter's (1996) advice to restrict their offerings in terms of variety of products, segments of consumers served, types of distribution channels used and so on. It is this kind of a combination of qualitative and quantitative study that would more definitively be able to answer the question of whether there is a 'growth trap'.

**Appendix – follows on the next page.**

**Figure 18**  
**Annual Sales Volume and Net Profit**

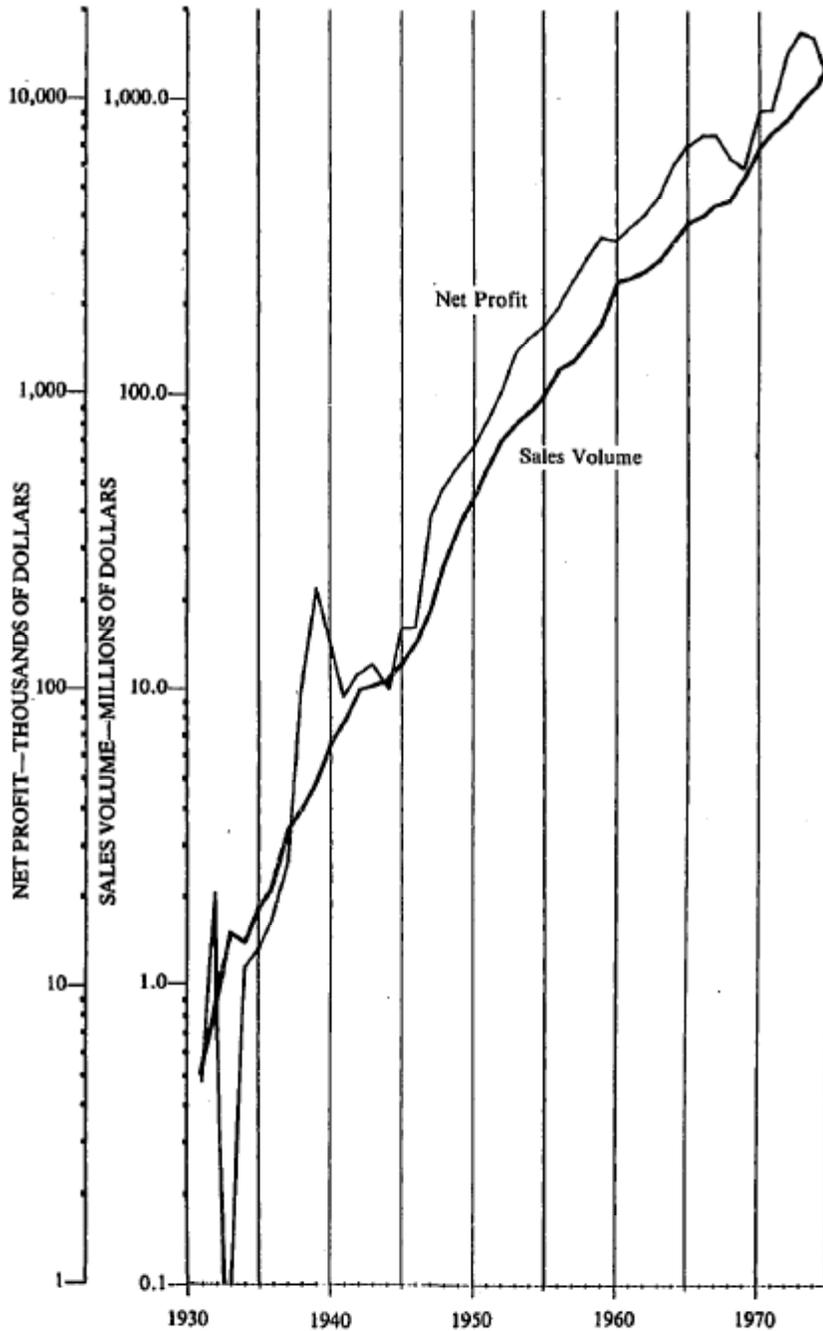


Figure 4: (Figure 18 in the original): Sales and Profit Growth in Steinberg, Inc. from 1931 to 1975. (From Mintzberg and Waters, 1982, page 481)

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### References:

Letters to the Shareholders in the 2006 Annual Reports of the following companies on their websites, all accessed in July 2007:

[www.aceaviation.com](http://www.aceaviation.com)

[www.agnico-eagle.com](http://www.agnico-eagle.com)

[www.agrium.com](http://www.agrium.com)

[www.aig.com](http://www.aig.com)

[www.alcan.com](http://www.alcan.com)

[www.alcoa.com](http://www.alcoa.com)

[www.americanexpress.com](http://www.americanexpress.com)

Baghai, Mercado; Smit, Sven; and Viguerie, S. Patrick, “The Granularity of Growth”, *The McKinsey Quarterly*, issue 2, 2007

Dodd, Dominic & Favaro, Ken, “Managing the Right Tension”, *Harvard Business Review*, December 2006.

Geiger, Scott W. & Cashen, Luke H., “Organizational Size and CEO Compensation: The Moderating Effect of Diversification in Downscoping Organizations”, *Journal of Managerial Issues*, Summer 2007.

Laurie, Donald L; Doz, Yves L., & Sheer, Claude P., “Creating New Growth Platforms”, *Harvard Business Review*, May 2006.

Mintzberg, Henry & Waters, James A., “Tracking strategy in an entrepreneurial firm”, *Academy of Management Journal*, September 1982.

Moore, Geoffrey A., “Focus on the Middle Term”, *Harvard Business Review*, July-August 2007.

Pohle, George & Chapman, Marc, “IBM’s Global CEO Report 2006: Business Model Innovation Matters”, *Strategy and Leadership*, Volume 34, issue 5, 2006.

Porter, Michael, “What Is Strategy?” *Harvard Business Review*, November-December 1996.

Porter, Michael, Personal Communication, June 10, 2005.

Stewart, G. Bennett III, “Champions of Profitable Growth”, *Harvard Business Review*, July 2004.

Zook, Chris & Rogers, Paul, “In Pursuit of Growth”, *European Business Journal*, Volume 13, Issue 2, 2001.

# Organizational Theory

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## **PARTNERED CARE – INSIGHTS FROM ECONOMIC THEORIES OF THE FIRM**

This paper offers ideas as to how economic theories of the firm might be used as a lens to inform the development of the Partnered Health Care Model of healthcare delivery in The Bahamas. The model is explained, concepts are offered and implications suggested.

### **Introduction**

How should a health care system be organized? What services should a government provide and what services can a private sector offer? Most readers are probably aware that these questions are not unique to any one country or one health care system. Around the world, professionals, administrators, government bureaucrats, elected officials and other stakeholders grapple with these issues on a daily basis. One thing that most of these questions have in common is a state of uncertainty surrounding the consequences of actively implementing any solution.

This paper argues for the role of theory as a lens through which scholars and practitioners can identify constraints and opportunities associated with the implementation of a new organizational form. It uses the example of a nascent health care delivery model being developed in The Bahamas. Underlying our arguments is an understanding that “an ... interpretation of what we know about medical organizations needs to recognize the extent to which we color our observations of phenomena and sharply focus our theories of viewing conditions through the lenses of the questions we pose and the assumptions we make.” (Flood and Fennel, 1995; p. 17)

The paper proceeds as follows. First, the concept of an economic theory of the firm is introduced. Then the state of health care in the Bahamas is summarized along with a description of the Partnered Care Model of Health Care Delivery. Brief highlights of a number of economic theories of the firm are then offered along with suggestions as to how each might contribute to understanding the challenges facing managers seeking to guide the implementation of the Partnered Care model. The ideas are then summarized in a table. A conclusion suggests ideas for future research, shortcomings of this paper and implications for managers.

### **Theory**

Whether as part of their professional careers or in their personal lives, health care is a topic of interest to most scholars. Indeed scholars have borrowed tools of analysis from many fields in their efforts to understand and predict

behaviour in this broad arena. One example in this regard can be found in the work of Flood and Fennel (1995). They make use of insight from organizational theory to suggest how we might improve research and enhance our understanding of critical issues related to our health care system.

This examination, “through the lenses of organizational sociology” (Flood & Fennel, 1995) suggests that ideas might be adapted from other bodies of literature to help guide behaviour in and among health care organizations. One body of literature that may play such a role is that of economic theory, specifically knowledge related to economic theories of the firm. Although theories of the firm refer to conceptualizations and models of business organization conduct, there is no one definition that unites those seeking to understand why companies act and organize as they do (Grant 1990, 109).

However there are some commonly accepted themes. One idea is that observers can explain and predict the structure and behavior of business enterprises. A second is acceptance that a theory of the firm should represent an “abstraction of a real world business enterprise designed to address a particular set of its characteristics and behaviors” (Machlup, 1980). In other words, these theories are concerned primarily with predicting the behavior of firms in external markets (Grant 1990, 109). Behavior also suggests outcomes or performance. This, in turn normally relates to the bottom line in an environment where the firm is considered a singular decision taker.

Aside from serving as explanations for why firms behave as they do, economic theories of the firm can also be viewed as lenses through which observers make sense of organized activity and possibly guide the behaviour of practitioners. Indeed, the case of a nascent health care system offers an example of how conceiving of theory as a lens can be useful for managers and theorists alike. The case refers to an initiative underway in The Bahamas to improve health care delivery to general. It is the Partnered Care Model of healthcare delivery and is described in the following paragraphs.

### **Health Care in the Bahamas**

For travellers, The Bahamas conjures up images of beautiful beaches, turquoise ocean water and picturesque sunsets. It is perhaps understandable if tourists and dreamers forget that this beautiful island chain is populated by over three hundred thousand Bahamians dependent on its government ensuring that they too have access to the same universal health and social services offered in other countries around the world.

Pan American Health Organization statistics ([www.paho.org](http://www.paho.org)) offer a glimpse of key indicators for this Caribbean nation. Its 2000 census indicated that overall life expectancy is almost 69 years for males and just over 75 years for females while 30% of its population is under the age of 15 years old. The fertility rate in 2000 was 2.1 children per woman. Universal access is offered to all essential social services and this is supported by public health expenditures per capita of \$420 or almost 15% of national expenditure. 453 physicians practiced in 2000 and 667 nurses were employed in the public sector. HIV/Aids was the leading cause of death. Cardio vascular diseases were also an important cause of death more specifically hypertension, cerebrovascular disease and ischemic heart disease. Other important illnesses included diabetes, prostate cancer for males and breast cancer for females.

While citizens of the Bahamas are offered universal access to social services, a recent examination of issues related to health insurance (Esmail, 2006) suggests that all might not well in paradise. “The Bahamas commits a relatively large share of its income to health care annually and yet does not stand out when compared to other nations in either access to services or the quality of services. ...statistics show that Bahamians do enjoy relatively good access to health care when compared to citizens living in the world’s most developed nations and to citizens living elsewhere in the Americas. On the other hand, the quality of care in The Bahamas is below that available in most developed nations despite the relatively high expenditure on health and availability of care.” (Esmail, 2006: 17)

While perhaps surprising to some, this suggestion is accepted by others. Indeed, one group of important players in The Bahamas health care arena have recognized the shortcomings of the system and has proposed a solution, termed Partnered Care. “Partnered Care is a.... means of making .... costly medical services

available to the general population irrespective of their ability to pay. It requires.. a ... partnership be formed between the three main sectors involved with health care: 1. the private sector, 2. the user sector, and 3. the government. The private sector finances the project and delivers the services. The user sector refers to the general public and main user of healthcare services. The government sector refers to the governing body of the country..... responsible for regulatory matters and for ensuring that all residents have appropriate and necessary health care services. Partnered Care requires that a discounted service system be implemented such that the population is divided into three main payer groups.... Insured patients have their medical care funded by major medical insurance programs. Private self pay patients seek private care but are not insured. Government or public patients are neither public nor insured. They may pay for their care or the government may sponsor or subsidize the cost of health care for these constituents”. (Brown et al, 2005:3)

The Partnered Care model in the Bahamas is an innovation originating in the private sector. Its creators suggest a critical role for the Bahamas Heart Center in implementing this system. Given the important role of a private sector organization in its implementation, it is reasonable to assume that economic theories of the firm may help to explain its success or demise over time. These theories suggest questions that might help guide the behaviour of managers tasked with driving the implementation of this model. Five questions are as follows:

1. Is there an optimal means of linking with business partners?
2. Which health related activities should be managed in house and which should be contracted out to the marketplace?
3. How might managers be motivated to act in the best interest of the firm implementing the partnered care system?
4. How might day-to-day uncertainty be managed?
5. What can the firm managing the Partnered Care system do better than other organizations and can these capabilities offer it a sustained advantage over time?

With these questions in mind, a number of economic perspectives may be relevant to this discussion. These include the network theory of the firm, transaction cost theory, agency theory, behavioural theory of the firm and the resource based theory of the firm. The following section highlights aspects of these theories and suggests a role for each in explaining the possible future trajectory of the Partnered Care model.

### **Is there an optimal means for the Bahamas Heart Center to connect to network partners?**

Regardless of their sources of funding or whether they are managed by the private or public sectors, it might be suggested that health care organizations are best not described using metaphors such as ‘island’ or adjectives such as ‘stand alone’ or ‘solitary’. They are by necessity linked to suppliers of products and services and other stakeholder organizations. In many instances, a state of mutual dependence exists between the health care organization and these external entities. Each is a source of valuable resources for the other, resources that help reduce uncertainty. In many instances as well, more than one potential resource provider exists. At issue is which organization to choose as a partner. The network theory of the firm offers insight regarding how such a decision might be made.

“Network perspectives build on the general notion that economic actions are influenced by the social context in which they are embedded and that actions can be influenced by the position of actors in social networks” (Gulati 1998, 295). In other words, work related transactions tend to overlap with patterns of social relations (Granovetter 1985). That corporations and other organizations are embedded in a social context is among the most important building blocks of insight related to the network perspective.

“Firms cluster because of their involvements on each other’s boards, ... such clusters relate to community influence, to corporate giving, to the adoption of defenses against corporate takeovers, or to the prices firms pay when acquiring other firms. We also know that network positions are related to power and that the

structure of resource dependence relations shadows how firms conform to the demands of other firms or how they extract profits from one another” (Tolbert, Salancik, Krackardt, and Andrews 1995, 343).

This suggests a response to the question of whether there is an optimal means of connecting to network partners. Uzzi (1996), suggests that firms which connect to their networks by embedded ties have greater chances of survival than do firms that connect to their networks via arms length relationships.

### **Which activities should the Bahamas Heart Center under take in house and which should it contract out to the marketplace?**

While a response to the previous question suggests a rationale for choosing a supplier or an external business partner, a related point of concern is the identity of specific activities that might best be performed by outside contractors. Transaction cost economics (Williamson, 1985) offers a formula for making decisions of this nature. It is a perspective that seeks to address how contracts between business entities should be written and enforced under conditions of uncertainty. It assumes that partner organizations are intendedly rational, but only in a limited sense. It also assumes that they are opportunistic - they pursue self-interest with guile. This perspective suggests three conditions must be present before a firm will prefer internalizing a transaction over contracting for the transaction - a high level of uncertainty must surround the transaction; assets involved in the transaction must be highly specialized to the transaction; and, the transaction must occur frequently. (Williamson 1975).

### **How can Bahamas Heart Center managers be motivated to act in the best interest of the owners?**

While these first two perspectives offer guidance for dealing with outside organizations, another body of ideas suggests how managers might be kept in line or motivated to work towards the goals of the shareholders of the Bahamas Heart Center. The perspective is termed Agency theory. It suggests that in some instances, managers might not pursue the interests of shareholder (Jensen and Meckling 1976). Moral hazard is one reason. It refers to a lack of effort on their part. Adverse selection is a second reason. This means that managers occasionally misrepresent their abilities when hired. These two concepts suggest that executives, or managers, are not to be trusted. Shareholders need to diligently protect their interests from these individuals. As a result, a key concern for shareholders is to determine the optimal or most efficient employment contract under varying levels of outcome uncertainty, risk aversion, and information disclosure. The challenge is to distinguish between the use of behavior-oriented contracts (e.g. hierarchical governance) or outcome-oriented contracts (e.g. market governance). An important factor in deciding among contractual options is the extent to which the decision makers have complete or incomplete information regarding their managers.

In terms of guidance for the shareholders of the Bahamas Heart Center, Agency theory suggests that when information is complete, they should make use of behavioral contracts to monitor the behaviour of managers. On the other hand, when information is incomplete, shareholders need to consider the threat of opportunistic behaviour by managers as a result of their lack of effort or an inability to perform as promised as a result of originally misrepresenting their abilities (Eisenhardt 1989). In this situation, shareholders need to choose between monitoring managers through instruments such as budgeting systems, reporting procedures, boards of directors, and separate layers of management (Barney 1996) or through market related contracts based on the outcomes of the manager’s behaviour. This latter option in turn serves to transfer risk to the manager. The former option is termed a behavioural contract.

### **How might the Bahamas Heart Center managers deal with day to day uncertainty?**

Along with managing in the best interest of shareholders, of interest might also be insight regarding how normal occasions of day-to-day operational uncertainty should be dealt with. Concepts underlying the behavioral theory of the firm (Cyert & March, 1963) may be helpful in this regard. Strategies for dealing with uncertainty are described in the following paragraph.

“Most organizations, most of the time exist and thrive with considerable conflict of goals. Except at the level of non-operational objectives, there is no internal consensus. Conflict is resolved by constructing acceptable –level decision rules, sequential attention to goals and by having individual subunits deal with a limited set of problems and a limited set of goals... Organizations avoid uncertainty ...by solving pressing problems rather than develop long run strategies and ...they negotiate the environment. They impose plans, standard operating procedures, industry tradition and uncertainty absorbing contracts on the environment. ...Search is stimulated by a problem and is directed toward finding a solution to that problem. ...Organizations adapt over time... When an organization discovers a solution to a problem by searching in a particular way, it will be more likely to search in that way in future problems of the same type. When an organization fails to find a solution by searching in a particular way, it will be less likely to search in that way in future problems of the same type” (Cyert and March 1963,116 –124).

**What are the key organizational competencies of the Bahamas Heart Center? How might it sustain a competitive advantage in the market place over time?**

A fifth questions concerns performance over the long term. Success breeds imitation. Managers tasked with guiding the implementation of the Partnered Care model need to realize that a successful implementation will be noticed by competitors or potential new entrants to the Bahamas health care market. The resource based theory of the firm suggest that managers should be concerned not only with profitability in the present and growth in the medium term but also with its future position and source of competitive advantage. Thought should be given to how they will compete when their current strategies are copied or made obsolete and how they might sustain any competitive advantage that is developed. This body of insight suggests that this is possible only if advantage creating capabilities are built on unique, difficult to copy resources.

More specifically this perspective suggests that resources must be valuable and non-substitutable.

“In other words they must contribute to a firm capability that has competitive significance and is not easily accomplished through alternative means.... Strategically important resources must be rare and or specific to the firm. They must not be widely distributed within an industry and /or must be closely identified with a given organization. Although physical and financial resources may produce a temporary advantage for a firm, they often can be readily acquired by competitors. On the other hand, a unique path through history may enable a firm to obtain unusual and valuable resources that cannot be easily acquired by competitors.” (Hart 1995, 998)

Partnered Care represents an intriguing approach to resolving some of the health care concerns of Bahamians. Economic theories of the firm such as the Network, Agency, Transaction Cost, Behavioural and Resource Based perspectives offer important insight for managers of the Bahamas Heart Center whose task might be to implement this new system of health care delivery.

### **Conclusion**

This paper sought to apply theory to practice. It highlighted a new initiative to introduce an alternative health care system in the Bahamas. It then outlined important theoretical concepts from a series of economic theories of the firm and suggested how each theory might inform the efforts of managers of this health care system to ensure its success over time.

A number of shortcomings characterize this paper. First, it is conceptual in nature and addresses a single case situation which limits the generalizability of the ideas. Second, the Partnered Care Model is a work in progress. Second, the multi-year nature of its implementation suggests that many of its defining characteristics remain conceptual at this point in time. Third, the literature related to this specific model of health care delivery is limited.

Despite these shortcomings, the contributions of this paper are important. It serves to enhance awareness of this nascent health care model and suggest how existing theories of the firm can serve to help guide important decisions related to the model's ongoing implement. It also offers an example of how theoretical models of firm behaviour can inform practice.

The paper suggests a number of implications for managers. Agency theory suggests a role for a series of monitoring and contractual mechanisms to guide managers' behaviour. Given the potentially catastrophic implications of poor decision making in a cardiac care facility, good advice might take the form of not relying solely on outcome based contracts to guide the behaviour of managers operating in this facility. In terms of day to day decision making, the behavioural theory of the firm suggests that managers will most likely be guided by experience and use decision rules similar to those used in the past. When faced with decisions to outsource a service or function, their decision can be guided in many instances by transaction cost economics. As to who they outsource to, network theory would suggest dealing with organizations with whom they have previous work experience. Finally, if its managers seek to develop a sustained competitive advantage over time relative to alternative health care delivery organizations, its managers may wish to make use of the insights offered by theorists in the tradition of the resource based theory of the firm.

A number of ideas come to mind in terms of future research endeavours. To begin, the Partnered Care Model represents an ideal basis for comparison across different national health care systems. Further, the Bahamas Heart Center represents an important case study to assess changing organizations over time. Finally, of interest would be an assessment of whether the Partnered Health Care model can deliver health care services more efficiently than the existing government based delivery system in The Bahamas.

## References

- Barney, J.B. and Arikan, A.M. "The resource based view: origins and implications," In *The Blackwell Handbook of Strategic Management*, eds. M.A. Hitt, R.E. Freeman, and J.S. Harrison, Oxford, UK: Blackwell Publishing, 2001, 124–188.
- Boatright, J.R. "Business Ethics and the theory of the firm," *American Business Law Journal* 1999, 34(2): 2–12.
- Brown, C., C. Sin Quee, H. Spencer, R. Roberts, H. Coleman, B. Francis, and C. King. "Partnered Care: A Model of Health Care Delivery for Developing Countries, especially The Caribbean," *West Indies Medical Journal* 2005, 5(30): 1–20.
- Coase, R.N. "The Nature of the Firm," *Economica N.S.* 1937, 4:386–405.
- Connor, K. "A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm?" *Journal of Management* 1991, 17:121–154.
- Cyert, R.M. and March, J.G. *A Behavioral Theory of the Firm*, Englewood Cliffs, NJ: Prentice Hall, 1963.
- Eisenhardt, K. "Agency Theory: An Assessment and Review," *Academy of Management Review* 1989, 14: 57–74.
- Esmail, N. *Health Insurance in the Bahamas*, The Nassau Institute, 2006.
- Gioia, E., and Pitre, D.A. "Multiparadigm perspectives on Theory Building," *Academy of Management Review* 1990 15(4) 588–589.
- Granovetter, M. "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 1985, 91(3) 481–510.
- Grant, Robert, M. "Toward a Knowledge Based Theory of the Firm," *Strategic Management Journal Winter Special Issue* 1996, 17: 109.
- Machlup, F. *Knowledge: Its creation, distribution and economic significance*. Princeton, NJ: Princeton University Press, 1980.
- Gulati, R. "Alliances and Networks." *Strategic Management Journal* 1998, 19: 293 – 317.
- Hart. S. "A Natural - Resource Based View of the Firm." *Academy of Management Review* 1995, 20(4): 996–1014.

- Jensen, M.C., and Meckling, W.H. "Theory of the firm: Managerial behavior, agency costs and ownership structure." *Journal of Financial Economics* 1976, 3: 305-360.
- Pan American Health Organization (PAHO) Basic Country Health Profiles for the Americas: Bahamas, 2002, Electronic document available on the Internet at [www.paho.org/english/dd/ais/cp\\_044.htm](http://www.paho.org/english/dd/ais/cp_044.htm).
- Tolbert, P.S., Salancik, G.R., Krackhardt, D., and Andrews, S.B. "Review Essay – Wanted: A Good Network Theory of Organization," *Administrative Science Quarterly*, 1995.
- Uzzi, B. "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect." *American Sociological Review*, 1996, 61: 674–698.
- Vibert, C. "Theorizing on Macro-Organizational Behaviour: A Handbook of Ideas and Explanations". Armonk: New York: M.E. Sharpe, 2004.
- Williamson, O.E., *Markets and Hierarchies: Analysis and Anti-Trust Implications*. New York: The Free Press, 1976.

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## IN SEARCH OF GOOD PR: SENSEMAKING AND IDENTITY IN PUBLIC RELATIONS

This study uses a sensemaking approach and draws upon role identity theory to explore individual understandings of the public relations identity. PR practitioners are asked to share their own sensemaking about their professional identities within the context of negative societal perceptions of the field.

### Introduction

*“When people tell me they need some ‘good’ PR it just makes me cringe. Because I know they don’t really mean PR – they mean they want their image polished in the media. PR is one of the most misrepresented professions I know of.”*

This quotation, from a participant in the following study of public relations (PR) practitioners, highlights the frustration of those who work in public relations around competing, and often conflicting, views of what they do.

Because of the lack of a clear definition of PR, and a lack of clear professional standards, practitioners in this field may have developed very different professional identities. As well, the role of PR practitioners has come under increased social scrutiny in the wake of corporate scandals that have involved unethical practice by public relations spokespeople. This may have contributed to the increasingly negative perception of the profession in the media, and created discomfort for those engaged in PR practice.

Using a sensemaking approach (Weick, 2001) as a heuristic to aid our understanding of how meaning is constructed and enacted, we were able to gather and share information with other PR practitioners in an attempt to gain insight into individual understandings of the PR identity, in order to explore avenues for change and growth within the field. Sensemaking helps capture a more profound understanding of how practitioners identify with the label public relations and make sense of their roles in that field given that society’s view of the profession tends to be negative. Weick’s (1995) properties of sensemaking provides a useful framework within which to analyze how PR practitioners make sense of their roles, as it explores the way individuals deal with the information they receive (Weick, 1995). The application of sensemaking properties, we feel, offers insight into the issues of social perception of the profession, the debate around professionalization and the relationship between good PR and ethical practice that seems to underlie the discourse of public relations.

Role identity research emphasizes the need that individuals have to establish a relatively stable and positive sense of self-definition (Erez & Earley, 1993). The literature also indicated that this self-definition is at least to some extent dependent on the perceptions of others (Felson, 1992). As a result, Ashforth and Kreiner (1999) suggest that due to the need for social validation, individuals involved in socially stigmatized professions may be reluctant to identify too strongly with their work. The interviews in this study will explore the responses of PR practitioners to the negative stigma of the profession, and the accompanying label of ‘spin doctor’.

## Public Relations

Public relations provides an interesting context for this study. The field itself is one that lacks a clearly defined identity. Even the definition of public relations is debated among practitioners, and there is no consensus as to what constitutes ‘good’ PR (Lages & Simkin, 2003).

Public relations is an ‘emerging’ social science discipline currently lacking paradigmatic and topic diversity and strongly influenced by practice. The paradigm struggle in public relations is due, in part, to the lack of any consensus as to what constitutes public relations, stemming from the diversity of the practice itself and from its constant adaptation to society’s evolutionary change. (Lages & Simkin, 2003:298)

A related issue in terms of establishing a shared definition of PR practice, is the struggle to establish PR as a profession. Several of the main characteristics defining a profession remain problematic in the context of public relations. Practitioners are not required to have a particular credential or formal education, there is no mandatory accreditation process – although each of the professional associations offer a voluntary process – and there have been no visible examples of the codes of ethics of these societies ever having been enforced.

The credibility of PR as a profession has also been linked to an imbalance in gender representation within the field. In 1985 the International Association of Business Communicators (IABC) Research Foundation published its study, “The Velvet Ghetto: The Impact of the Increasing Percentage of Women in Public Relations and Business Communication.” This report looked at the possibility of the communications field becoming a velvet ghetto, a field that employs a large number of women who subsequently experience drops in salary and status as the field moves from male dominated to female (Cline et al., 1986).

The 1985 study predicted that the credibility of Public Relations would decline as more women entered the field. Researchers looked at salaries and access to senior decision-makers within the organization as indicators of credibility of PR professionals. When the study was revisited by IABC in 2002, researchers found that although salaries had not declined, access to managerial decision-makers had. Fifty percent of respondents in the 1985 study said they reported directly to the CEO of the organization, compared to only 35 percent who reported to the CEO in 2002. And, in 1985, 80 percent of respondents said they always had direct access to the CEO. By 2002, only 53 percent of respondents had that same access (Taff, 2003:11).

The 2002 study also illustrated that the PR industry continues to be female-dominated, although this trend may be changing. From 1985 to 1989, the IABC male/female member mix reflected a 40/60 ratio. In 1995, IABC membership was 70 percent female, and according to IABC’s Profile 2002, three out of four members are women (76 percent) (Taff, 2003:10). According to the 2000 U.S. Department of Labor Statistics, the percentage of women to total workers in PR grew from 60 percent in 1985 to 68 percent in 1993, where it peaked. However, since 1993, numbers of men entering the field have begun to increase slightly. (Taff, 2003:10).

Another pressure in the struggle for PR professionalization is the problem of encroachment. As Lauzen (1992) reported, «encroachment,» or the growing number of non-public relations professionals, like lawyers and marketers, assuming public relations management positions is increasingly occurring. Lauzen concluded that increased management competencies on the part of PR practitioners, and an increase in positive attitudes toward management roles, would reduce the threat of encroachment to the profession.

Finally, the current media climate towards public relations presents images of PR practice as neither professional, nor working in the interests of the public. The media basically describe PR as a barrier to the ‘truth’ about organizational activities. The term spin doctor is one that we often hear connected with public relations through the media. The term began to be used in the late 1980s to describe individuals who could put a positive spin on an otherwise negative situation. It has

a negative connotation that implies whitewashing the truth.

### **Identity Construction in negatively perceived professions**

The role identity literature tells us that individuals prefer to see themselves in a positive light, and this contributes to a positive sense of self. The importance of occupation in this self image is an important piece of the individual's identity (Ashforth & Kreiner, 1999). "A major component of self-definition is the occupational identity – that is, the set of central, distinctive, and enduring characteristics that typify the line of work" (Van Mannen & Barley, 1984).

In terms of Public Relations, the field has never been seen as particularly noble, recent corporate crises in ethics have increased social mistrust of corporate communications. In terms of public confidence, PR people are seen as manipulative, unethical, and willing to lie. This impression is problematic for practitioners who aspire to more ethical practice as society labels the profession untrustworthy. As one respondent in this study stated: "I don't know how many people out in the public actually think PR is positive. They are either totally ignorant about what we do or they think we just work for the government and lie... That we lie or spin things. Or make things pretty."

According to Ashforth & Kreiner (1999), members of occupations that do experience low prestige tend to work collectively to secure positive meaning in the face of pervasive stigmas. This leads to a process of work role identification, where the members of the stigmatized group define themselves at least partly in terms of their occupational affiliation. However, role identity research emphasizes the need that individuals have to establish a relatively stable and positive sense of self-definition (Erez & Earley, 1993). The literature also indicated that this self-definition is at least to some extent dependent on the perceptions of others (Felson, 1992). As a result, Ashforth and Kreiner (1999) indicate that due to the need for social validation, individuals involved in socially stigmatized professions may be reluctant to identify too strongly with their work.

The field of public relations does not fit specifically into the categories of "dirty work" introduced by Ashforth and Kreiner's 1999 study. PR does not have the physical elements of "dirty" work experienced by garbage collectors or grave diggers, for example. However, it does reflect the issues of low occupational prestige. It also reflects the issue of moral taint described in the same study. Moral taint "occurs where the worker is thought to employ methods that are deceptive, intrusive, confrontational, or that otherwise defy norms of civility" (Ashforth & Kreiner, 1999:414). At the same time, the field of Public Relations brings with it some unique characteristics that may affect the relationship of practitioners to the profession. For example, most professions have a shared, clear definition of what members of that field do. They also include identified standards of practice. These definitions help to provide normative goals to denote conformative behaviour (Gordon, 1997). Since PR is lacking in this type of identity construction, individual practitioners must draw on other sources when making sense of their own role and identity.

### **Methodology**

In-depth interviews of 45- 60 minutes were conducted to gather data from respondents on their experiences as PR practitioners and understandings of their professional identity. Six participants were interviewed, three male and three female practitioners. The respondents were encouraged to reflect upon experiences in their PR careers which contributed to the manner in which they made sense of their roles and identities. This information was shared largely through anecdotes or stories from their own experiences or, in some cases, as a result of discussions and interactions they had previously had with colleagues or external parties about their profession and their role in it. The practitioners represented a broad spectrum of PR practice, from senior executive to junior account coordinator, across private and public sector organizations. Ages ranged from 28 years to 61 years of age, and participants were all currently employed in public relations practice.

Each respondent had worked in PR for the majority of his or her career, but had experienced at least one change of organization or sector during that time. Two respondents had changed organizations over five times to this point. The interviews were recorded and transcribed, and themes were identified through analysis of these items.

## Results

The findings of this study suggest that although PR practitioners acknowledge frustration around the social stigma associated with their profession, they tend to be more concerned with the image of their organizations or clients than with that of their profession. Much of the pride these practitioners expressed related to their work was related to the image of their client rather than their own image or that of their profession. They also emphasized the importance of their ability to influence organizational decision-making as a function of how well they could do their jobs. And, issues affecting their ability to influence management decisions, in particular gender, were also discussed.

### The struggle to define good PR, and a good PR person

When participants in this study defined “good” public relations in the course of our interviews, two items were consistently present, 1) the need for ethical practice and honest communication and 2) the ability to influence organizational decision making to reflect ethical practice and honest relationships with publics.

Comments such as the following emphasized these points:

“There are very good reasons for organizations to act ethically and tell the truth. One of them is that if you lie, or if you cover up bad practices, you will get caught in the media eventually. It is very difficult to recover from that. It just makes sense to be honest up front. The other is that it is the right thing to do.”

“If you’re only brought in to put out fires, or to put out the company message, then your own people are looking at you like a spin doctor. That’s what your job has become.”

Respondents also agreed that the times when they felt the least proud to be PR practitioners came when they had been unable to influence ethical practice in the organization and had to “toe the line in terms of corporate messages.”

“I got into PR because I definitely thought I could make a positive contribution, I thought I was doing a good thing in terms of communication. I think now that was a little naive. It often comes down to what the leadership is willing to do.”

Although there was no uniform agreement among participants on what constituted good PR, there certainly was agreement on what it was not. “It is not a technician role, not just someone who comes in to package a message after the plan is in place.”

“It is not a role where someone is hired to make things look good on the outside... you know, make things look pretty for the media,” said one respondent. And, “It’s not what you see in the media,” said another.

All of the participants acknowledge that they were aware of the stigma around the label Public Relations. “I have found people have an inherent bias against someone who does PR. They think we lie, twist or spin the truth.” Those sentiments were echoed in each of the interviews. All of the participants also expressed frustration with the stigma. “At times it hurts,” acknowledged one participant. “I am very proud of my profession, but I feel I have to constantly defend it. I get very defensive about it.” Respondents tended to feel very strongly that their practice and, in fact, their characters were being impacted by this negative perception. “It affects how I deal with people. It’s always a negative that I have to overcome.” “It affects how I do my job because I have to spend time up front explaining what I do and proving who I am.”

However, each participant agreed that the perception of PR as ‘slick’ emerged because there are, in fact, unethical practitioners out there. One respondent tended to attribute this to the fact that there is no professional requirement for a formal educational credential prior to setting up practice. Another agreed that unethical practice exists, but tended to attribute it to the fact that the PR people are in a position where they may be forced to cover up the truth to protect a CEO or company.

“The communications person almost becomes an extension of the CEO. You come to a point in your career in business where you have to make a decision, whether it is consciously or not, that do I want to be that ruthless person? The ones that make it the very top are the ones that are driven. They are not always the smartest, but they are always the ones that have that ruthless edge to them that can chop 5,000 jobs and still go to bed at night and not lose any sleep over it. It’s the communications person that has to be the mouth-piece for those types of people. Everybody in their career in public relations will come to that moment in time where they’ll have to make a choice.”

At the same time, each respondent emphasized the fact that the media portrayal of PR is decidedly one-sided and over-emphasizes these unethical practices.

“You know I think there are improvements but the media PR relationships is strained. The way public relations is portrayed in the media... I mean how many times do you hear the term PR flack? This company is waging a PR battle. Their PR person said this... it is always presented in a bad way. I think the language used in the media is not necessarily positive about the Public Relations field.”

Most respondents indicated that they thought the majority of PR practitioners were ethical, and the few that were not were the exception. As one respondent said, “a few bad apples made it bad for everyone. Ninety-nine percent of us are ethical, but someone does something unethical and it feeds the stereotype that’s out there.”

Nevertheless, the ‘spin-doctor’ image of PR was problematic for all the respondents. In some cases, the respondents chose to distance themselves from the label and identity of the PR person altogether. They preferred to describe themselves as in ‘advertising’ or ‘marketing.’ Of the three respondents in the study who reported that they distanced themselves from the label of PR, two of them said it was because they were able to do their jobs more effectively and have more influence on client behaviours if they were not stereotyped as PR people.

“If someone comes up to me on the golf course and asks me what I do, I’ll probably say advertising. It’s just easier.” “If I have to spend a lot of time justifying what I do and explaining to them what PR is and why they need it, I’ve wasted time. Everyone knows advertising and marketing are connected to the bottom line.”

“I always say I work in marketing or advertising. If they ask me now where do I work, I say I work at an advertising agency. I don’t say I work at a PR agency because public relations does have a stigma.”

These respondents were also in agreement in their desire to drop the term Public Relations from their professional designation all together. One of the participants was adamant that the term Public Relations is irreversibly tainted, and should be abandoned.

#### Issues affecting organizational influence, primarily gender

Several respondents identified gender as a challenge in improving the reputation of PR practice. One respondent felt this issue was part of a broader societal problem. “It’s still a man’s world. That’s not right. I feel that women have to work harder with the same talent as a man. It’s just the way society, unfortunately, is still built that way.”

In a similar vein, another respondent suggested that women, in general, did not command the same respect from top management in organizations as their male counterparts. “If you look at the corporations around here, traditionally the worker bees have always been women and the senior vice-president of PR guys have always been men. That may be changing a bit, but that’s still the norm.” This was problematic, in his view, “because PR is an old boy’s network. The CEO is probably still a man and the PR person needs to have access to the CEO.”

Another respondent said, “If I can get their attention, it’s a matter of educating them. People like CEOs who you would think just know that communication is as vital a function as HR and accounting and all those different things. It’s a little frustrating when those people, at that level in an organization don’t really understand.”

### Tension between individual and professional image versus the image of the organization

It appears difficult for PR practitioners to reconcile the pressure to protect the organization, or CEO, with the need to conduct themselves ethically as PR professionals. An essential element in this balance seemed to be the amount of influence the practitioner had on senior decision makers.

“My job is to protect the client’s reputation and build relationships with their key stakeholders,» said one respondent when defining his primary role. Another pointed out that, “our CPRS code of ethics requires us to respect the confidentiality of our clients and protect their relationships. Sometimes that might preclude us from actually taking something to the media... like an issue that might hurt the client.”

One participant expressed frustration with the tendency among CEOs to “bring the PR person in to write a news release, to put out the fires. Why don’t you do fire prevention, bring us in beforehand? Why don’t you get the PR person in to develop that policy. They could say, ‘When you did that strategy, did you not take into account this and that?’”

None of the respondents had a clear direction as to how to change the image of PR in society. One respondent said, “That’s just the way it is. I try to maintain high individual standards and maybe influence through example.” From a broader perspective, another respondent summed things up like this; “you know, that prevailing discourse of the bottom line. That the shareholders are not only the primary responsibility but the only responsibility. If we ever are going to affect some real change in how companies communicate, that has to change.”

### **Discussion: Implications for Theory and Practice**

There is a struggle among and within PR practitioners to construct an identity that defines what a “good” PR practitioner looks like. This struggle seems to come as a result of competing pressures from a number of directions. First, all respondents were very clear that their first commitment was to the organizations or clients they represented. As a result, if the decision-makers in the organizations represented turned out to be unethical, the PR practitioner’s own ethics were challenged. Second, the media representation of public relations is, for the most part, negative. Practitioners themselves are exposed, therefore, to frequent images of PR people portrayed as unethical, untruthful, and unprofessional. As well, the public also sees these portrayals and this contributes to the professions negative image. Third, there have been a number of very high profile incidents of unethical practice in public relations in recent years, and this has reinforced the media portrayals.

Weick’s (1995) work on sensemaking informs us that organizations, and the work that is done within them, are open to multiple interpretations. These interpretations may, in fact, conflict with one another and illustrate the perspectives of different stakeholder groups. This point seems quite germane in the struggle to define public relations. Particular stakeholder groups, for example journalists and other members of the mass media, tend to define PR in pejorative terms, implying a morally questionable profession. The practitioners themselves described the profession in lofty terms involving honesty, openness, and

Ashforth and Kreiner (1999:420) describe this process of “transforming the meaning attached to a stigmatized occupation” as *reframing*. One dimension of this process involves what is referred to as *infusing*, or describing the “espoused purpose for which the work was created in value laden terms” (420).

The competing definitions from external sources, as previously mentioned, have a much more negative perspective and imply manipulation. According to Weick’s sensemaking framework, when individuals receive too many different interpretations of a situation, they require values and priorities rather than more information. “Clarity on values clarifies what is important in elapsed experience, which finally gives some sense of what that elapsed experience means” (Weick., 1995:28).

Findings from these interviews suggest that sensemaking has generated interpretations of good public relations practice that are grounded in the role of manager and most valued for the ability to influence decision-making both inside and outside of the organization. To that end, the effectiveness of an individual PR practitioner is described as that individual's ability to influence organizational behaviour and subsequently communicate that behaviour successfully to target publics. Without that power to influence decisions within organizations, the role of the practitioner seems to be very much compromised. The conflict between the ethical position of the organization and the practitioner's loyalty to the organization appears to be a central theme in the struggle to define individual values and identity. As evidenced in IABC's latest survey on the PR profession, the issue identified as most affecting the profession was management's valuation of public relations' contribution to the organization (Iabc, 2002).

This necessity for organizational influence among PR practitioners relates to the close relationship between organizational ethics and PR practitioner ethics.

Public Relations practitioners function as communication liaisons at the interface of employees, external publics, and the dominant coalition, a group of powerful, influential people in the organization who typically set the strategic direction and define the organizational mission. Because they are supposed to shape the negotiation processes of the dominant coalition, they depend upon their upward influence tactics for success (O'neil, 2004:129).

One element of practice that emerged as very important to study participants was that of ethical practice. As the stigma associated with PR is one of spin-doctoring, the results of this study illustrate the need for practitioners to actually demonstrate ethical practice in order to feel good about their profession. This issue was very closely related to that of influence on organizational decision-makers. It appears that the ability of PR practitioners to enact ethical practice in the manner they would like depends significantly upon the ethical standards of the organization they work for and their ability to influence these.

In Ashforth and Kreiner's (1999) work on stigmatized occupations, organization members were seen to identify themselves in terms of their occupations.

Because organizations tend to be structured around occupational specialties, organization members are largely known by their occupations and come to situation themselves in terms of their occupations. (Trice, 1993; Van Mannen & Barley, 1984) Pipe fitters for Exxon likely will have a much different perspective of the workplace and their role within it than will PR managers, and they likely will be regarded by others in much different ways (Ashforth & Kreiner, 1999:417).

However, this study raises the possibility that PR practitioners may not define themselves as much by occupational specialty as by organizational practice. The close alignment between organizational messages and the actual work of the PR practitioner may create a situation where identity and value are derived through organizational image and reputation as opposed to that of the individual. The concerns around image expressed in these interviews, although the stigma related to PR was certainly acknowledge, were really related to the image of the organizations or clients for whom respondents performed public relations activities.

Women, because they typically have less influence in this area, may find the struggle to practice PR in a way they would define as "good" more difficult. Most of the respondents indicated that they felt men and women were equally qualified to be PR practitioners, equally skilled and professional. And, in most cases, explained the difference in representation of senior management levels as symptomatic of a broader imbalance among women in management. O'Neil's (2004) study on gender and upward influence among PR practitioners indicated that there was no difference in the influence tactics used by male and female practitioners. She does conclude, however, that "potential differences in upward influence tactic activity between men and women are due to intervening, situation-bound variables (i.e. power) – and not the result of more stable gender differences" (O'neil, 2004:135).

In conclusion, the issue of organizational ethics was important in the defining of good PR practice. It seemed to come down to the ability of the practitioner to influence ethical practice on the part of the organization or client. In the event that the organization still did not act ethically, the values of loyalty to the employer and the need to protect the organization seemed to take primary importance. The bottom line seems to be that good public relations is measured by the power to influence organizational decision-making. Most concerning for women in the field, then, is the fact that they are not in organizational decision-making roles, and do not have access to those who are. If the current trend continues and male practitioners begin to enter the profession in larger numbers, future research may be able to determine if the issues of access to the dominant coalition change along with it. Perhaps the identity of the “good” PR person cannot be defined independently from the identity of the “good” organization.

### References

- Ashforth, & Kreiner. (1999). «How can you do it?»: Dirty work and the challenge of constructing a positive identity. *Academy of Management Review*, 24(3), 413-432.
- Cline, Toth, Turk, Walters, Johnson, & Smith. (1986). *The Velvet Ghetto*: International Association of Business Communicators.
- Cutlip, Center, & Broom. (2000). *Effective Public Relations, 8th Edition*. Englewood Cliffs: Prentice-Hall.
- Erez, & Earley. (1993). *Culture, self-identity, and work*. New York: Oxford University Press.
- Felson. (1992). Coming to see ourselves: Social sources of self-appraisals. In E. J. Lawlor, B. Markovsky, C. Ridgeway & H. A. Walker (Eds.), *Advances in Group Processes* (Vol. 9, pp. 185-205). Greenwich, CT: JAI Press.
- Gordon. (1997). Interpreting definitions of public relations: self assessment and a symbolic interactionism-based alternative. *Public Relations Review*, 23(1), 57-67.
- Iabc. (2002). *PROFILE 2002: A Survey of IABC Membership*: IABC Research Foundation.
- Lages, & Simkin. (2003). The dynamics of public relations: Key constructs and the drive for professionalism at the practitioner, consultancy and industry levels. *European Journal of Marketing*, 37(1/2), 298.
- Lauzen. (1992). Public Relations roles, intraorganizational power, and encroachment. *Journal of Public Relations Research*, 4(2), 61-80.
- O’neil. (2004). Effects of Gender and Power on PR Managers’ Upward Influence. *Journal of Managerial Issues*, 16(1), 127.
- Prsa. (2004). *Public Relations Profession*, from [www.prsa.org/\\_Resources/Profession](http://www.prsa.org/_Resources/Profession)
- Sparks. (1993). Public relations: Is it dangerous to use the term? *Public Relations Quarterly*, 38(3), 27.
- Taff. (2003). Times have changed? IABC Research Foundation’s ‘The Velvet Ghetto’ study revisited. *Communication World*, 20(2), 10 - 12.
- Trice. (1993). *Occupational Subcultures in the Workplace*. Ithaca, NY: ILR Press.
- Van Mannen, & Barley. (1984). Occupational communities: Culture and control in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in Organizational Behavior* (Vol. 6, pp. 287-365). Greenwich, CT: JAI Press.
- Weick. (1995). *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.
- Weick. (2001). *Making sense of the organization*. Oxford, UK ; Malden, MA: Blackwell Publishers.

# Operations Research

ASB 2007  
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## DIAGNOSTIC IMAGING WAIT TIMES IN NOVA SCOTIA

### Abstract

Wait times for medical procedures have been increasing for many years. This trend has attracted much media attention, which has helped to focus efforts to reduce these waiting times. The Nova Scotia Department of Health recently began a project to reduce wait times for Diagnostic Imaging (DI) procedures in Nova Scotia. Diagnostic Imaging is the use of medical imaging procedures (e.g. CT Scans, X-Rays, Ultrasounds, etc.) to diagnose, and sometimes treat, diseases and conditions. DI is a critical component of many patients' medical treatment; yet it is usually a significant source of delay in the treatment process. The delay in procedure varies greatly between the District Health Authorities (DHA). For example, in the Annapolis Valley DHA, the wait time for an Ultrasound can be as low as 14 days, while in the Cumberland DHA it can be as high as 164 days. (Ultrasound, 2007) Each type of procedure, referred to as modality, has a similar variation in wait time throughout Nova Scotia. The Nova Scotia Department of Health has secured funding for a pilot project to help increase timely and appropriate access to DI procedures. The focuses of this paper are the appropriateness and efficiency components of the project. Four specific intervention types have been chosen for implementation in the province's DI clinics. These interventions are: a reminder system to decrease the number of patients not arriving for their appointment, or arriving ill prepared; a triaging system to determine the appropriate modality for each patient; changes to when and how patient appointments are booked; and a change to the appointment schedule based on machine cycle and preparation times. To assist in achieving the goals of these project components, and to ensure that the most effective interventions are performed at each clinic, a decision support tool is being created. This tool will allow decision makers to determine the most effective intervention(s) before it(they) are implemented.

### Problem Statement

The wait times for Diagnostic Imaging in Nova Scotia have been increasing. The province's Department of Health has recently secured funding to begin a project to reduce wait times and increase appropriate access for DI procedures.

### Project Background

The Diagnostic Imaging – Improving Access Project has three major components. The first is to improve the appropriateness of DI services in Nova Scotia. Currently it is thought that many procedures ordered by physicians are inappropriate for the patient (e.g. ordering a CT scan when an Ultrasound will suffice). The goal of this component is to ensure that all patients receive the correct test(s) for their conditions, based on national evidence-based guidelines<sup>1</sup>. The second is to improve efficiencies in DI services by implementing a reminder system to ensure patients know when their appointment is, as well as what preparations are necessary for their procedure(s). A typical approach to decrease wait times and/or to increase throughput is to increase capacity (e.g. hiring more staff and/or radiologists, or purchasing more machines

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<sup>1</sup> These guidelines are based on the average radiation dosage by modality. For example, while a CT scan may provide a better quality image to diagnose the patient than an ultrasound, it also has a much higher radiation dosage: the increased image quality may not be as important for the patient as the lower radiation dosage delivered by the ultrasound.

for a given modality). This is usually, at best, a short-term fix. The additional resources tend to stimulate more demand: it is assumed that since there are more resources available, more tests can be handled, so the additional capacity is usually gone quickly. The inefficiency in the system is the number of patients that either do not show up for their appointment or show up ill prepared. Without significant notice of the cancellation, the clinic is unable to schedule another patient in the given slot. Since time cannot be inventoried, this represents lost capacity to the system. The goal of this component of the project is to increase the efficiency of the province's DI clinics to ensure that they are maximizing their utilization of resources by reminding patients of when their appointment is as well as the necessary preparations for the procedure. The third is to support patients' right to choose when and where they receive care. Patients currently have the option to request where they make their appointment, but this is not widely known. The goal of this component is to create an easy-to-use interface for patients to book their own appointment at the clinic that is best suited for them at a time that is convenient (i.e. travelling further to get to an appointment sooner than in their home DHA).

The focuses of this paper are the appropriateness and efficiency components of the project. Four specific intervention types have been chosen for implementation in the province's DI clinics. These interventions are: a reminder system to decrease the number of patients not arriving for their appointment, or arriving ill prepared; a triaging system to determine the appropriate modality for each patient; changes to when and how patient appointments are booked; and a change to the appointment schedule based on machine cycle and preparation times. To assist in achieving the goals of these project components, and to ensure that the most effective interventions are performed at each clinic, a decision support tool is being created. This tool will allow decision makers to determine the most effective intervention(s) before it(they) are implemented.

### **Diagnostic Imaging Literature Review**

There are two main flavours for Diagnostic Imaging (DI) literature: clinical and operations management. The clinical literature relates to the functionality of the DI equipment, and thus is not a concern for this project. The quality management literature also comes in two categories. The most abundant relates to the process of applying quality management techniques to DI, and to healthcare in general. For instance, (Erturk et al., 2005) provide an overview to the application of various quality management techniques to the field of DI. They suggest the implementation of continuous quality improvement techniques in DI. (Erturk et al., 2005), like most of the literature, discuss how techniques can be used, rather than describing application of these techniques. (Milosevic & Bayyigit, 1999) discuss the impact of quality improvement efforts with respect to the satisfaction of patients in a public clinic. They found that patient satisfaction concerning wait times and appointment availability at the clinic increased due to the quality improvement efforts.

The second category of quality management literature provides insight into the application of quality management techniques. (Lau, 2006) discuss the process to implement quality improvement techniques in healthcare organizations, specifically in DI. This process overview is a high-level diagram of the next steps to improve DI quality for patients. (Ondategui-Parra et al., 2004) provide a more in-depth process for improving DI quality. They suggest breaking the process redesign into two main phases. In the diagnostic phase, the baseline is established and a gap analysis is performed to determine the gap between current and expected performance. The redesign phase uses quality management tools to improve process performance and uses operational research tools (e.g. queuing models, simulation models, and statistical models) to determine the actual performance gains over the original process.

(Bluth et al., 1993) undertook a project in a DI department to determine whether CQI tools could be applied successfully. Their methodology was similar to that proposed by (Ondategui-Parra et al., 2004). The project resulted in a 72% decrease ( $p < .0302$ ) in wait times for DI procedures. (Glynn et al., 2003) describes an initiative to reduce elective surgery wait-times in Saskatchewan through the creation of a patient registry and a new patient assessment process. (Gauld & Derrett, 2000) examine the implementation of a booking system in New Zealand. The goal of the booking system was to eliminate the use of wait-lists for medical and surgical procedures by scheduling procedures based on patients' priority for care. (Gauld & Derrett, 2000) note that the implementation lead to problems with its use. Rather than utilizing pilot

introductions in certain areas, the New Zealand government decided upon a nation-wide blanket implementation on a specific date. (Gauld & Derrett, 2000) feel that this type of implementation has been detrimental to the performance of the system and state that, despite the initial expectations of the project, the booking system's performance is comparable to that of the waiting lists. The booking system would be more effective had more studies and pilot projects been conducted prior to national implementation.

If pilot studies were deemed too expensive then Operational Research tools such as queuing theory and simulation models could have been used to determine the efficacy of the new system. (Rosenquist, 1987) used queuing theory to determine the optimal number of X-Ray machines in a radiology department. (Sepúlveda et al., 1999) used simulation modelling to identify scheduling changes to a cancer treatment centre, allowing for a 30% increase in patient throughput with the same resources. (Pitt, 1997) also describes the use of a simulation model in a hospital. The model "offers strategic managers a facility to determine the likely effects and magnitudes of any changes which are planned or envisaged" without the expense of first implementing them in pilot projects. (Rosenquist, 1987), (Sepúlveda et al., 1999), and (Pitt, 1997) are excellent examples how effective queuing theory and simulation models can be for decision making in a healthcare environment.

### **Development of Decision Support Tool**

The decision support tool is a discrete event simulation (DES) model of a general DI clinic. The current state of the model is based on the process flow map for the pilot clinic, the DI clinic at the Cobequid Regional Health Centre.

#### **Process Map**

The Cobequid clinic is unusual in comparison to the others in Nova Scotia, as it only serves outpatients, not inpatients, and it has a common registration desk for all non-emergency patients. It is felt, however, that the dynamics of the system will be generic enough to make the model applicable, at least in a prototypical fashion, to other clinics in the province.

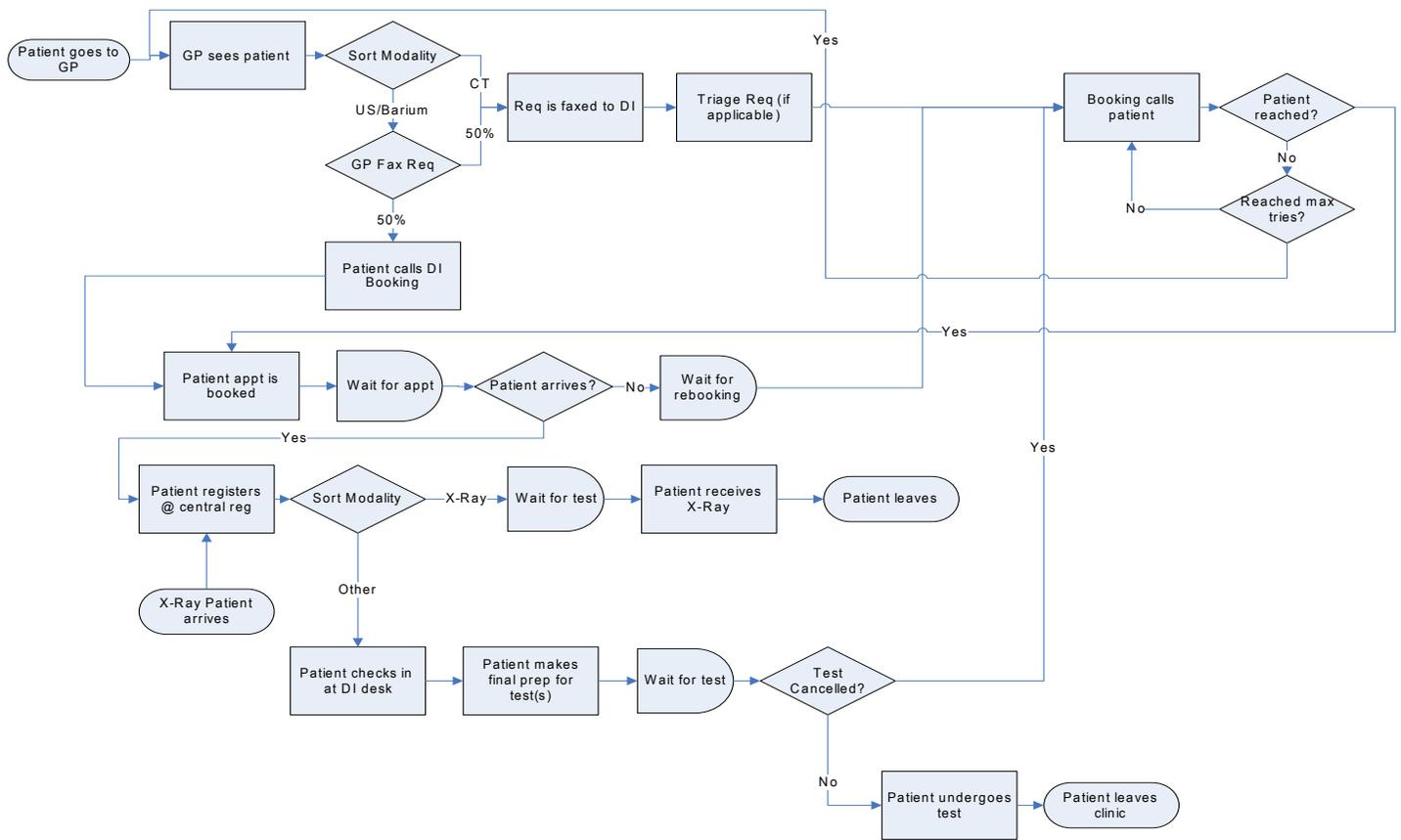
The system, as modelled, is considered to be from the time a patient goes to their general practitioner (GP) to the time when their final test at the DI clinic has been completed. The process map was developed from the perspective of the patient (i.e. any work required on the part of the clinic that does not involve direct contact with the patient is excluded from the system).

The map begins with the patient going to their GP for an appointment and receiving a referral to the DI clinic. All CT Scan (CT) patients must have their condition triaged by a radiologist to determine the urgency of the appointment (three categories: within 24 hours, within 3-4 days, and the next available appointment). Since the radiologist must be involved before the appointment can be booked, all CT requisitions are faxed to the DI clinic. After the patient's requisition has been triaged, a booking clerk will attempt to contact the patient via phone to inform them of their appointment time, as well as any preparations for the appointment. Approximately half of the Ultrasound (US) and Barium (e.g. Upper Gastro-intestinal and barium enema) patients have their requisitions faxed to the DI clinic. These patients are contacted by a booking clerk as soon as possible, and booked into the next available appointment slot. If the booking clerk cannot reach a patient, the requisition is put aside for a time and they try again. After XX number of unsuccessful calls to the patient, the clerk calls the patient's GP to inform them of the difficulty in contacting the patient. The other half of the US and Barium patients are given their requisitions by their GP and call the booking office themselves. This eliminates the problem of not being able to contact the patient, as the patient contacts the office at a time that is convenient for them.

Once the patient has been booked for their procedure, the "wait-time" begins. This period ends when the patient

arrives at the clinic on the day of their appointment and registers at the front desk. If the patient fails to show up for their appointment, or they cancel in advance, the wait time will begin again after they have booked another appointment. The pilot clinic operates a common registration desk: outpatient DI procedures, walk-in X-Ray procedures, and blood collections are all registered at the same desk. Once registered, the patient proceeds to his or her final destination, waits for their procedure, takes part in their procedure, and leaves. The process is shown graphically in Figure 1. The blood collection patients have been omitted from the diagram, as they only affect the central registration desk in the system, and can be represented simply as a reduced number of available clerks.

**Figure 1 – Process Map of Cobequid’s DI clinic**



### Discrete Event Model

A DES model was chosen because it will be flexible enough to allow for relatively easy experimentation of inputs (i.e. design of experiments), yet still provide meaningful experimental results.

A reusable simulation approach is being used for the construction of the model. The goal is to create the model in such a way that it will be easily transferable to other DI clinics, regardless of size. This will mean little development time to create a model at a particular DI clinic, as the general framework can be implemented quickly and easily. The literature on reusable simulation models states that a significant amount of time for spent on simulation projects occurs in the design and development phase, because each simulation is, typically, a one-off “craft” product. It is envisioned that this generic framework will be similar to the Kendall-Lee notation used for queuing models (e.g., anyone with knowledge of queuing theory knows the behaviour of an M/M/1 queue). It is too early in the project to say whether the model will be configurable

(i.e. a large model whose inputs can be changed to reflect the various clinics) or composable (i.e. being composed of generic process modules that can be pieced together in any combination to create the various clinics). This choice will be made as more DI sites are visited and mapped.

### **Work to Date**

To date, the majority of time spent on the model has been focused on construction and refinement. For this reason, few experiments have been performed. Many assumptions have been made for parameter values; as such, experimental results remain to be validated.

### **Future Work**

The next stage in the development of the model will be further refinement, based on data collected from the pilot clinic. This data will be used both as input for the model, and as a comparator for model validation. The data collection will begin in late 2007 or early 2008, depending on the readiness of the project team. This data collection will coincide with some initial interventions to take place at Cobequid.

The model will be used alongside the interventions in an iterative process. The initial interventions will be planned and executed separately from the model. This will allow data to be collected to determine the impact of the interventions. In turn, this data will be used in the model to determine the effect of interventions at future sites. While the process flows will be different between the various DI clinics throughout Nova Scotia, it is assumed that the effects of the interventions will be similar. Once the model has been used for a particular site, the interventions will then be held. Any discrepancies between the predicted and actual outcomes will be used to increase the model's accuracy, such that future model runs and clinic interventions will be statistically indistinguishable.

While the main use of the model will be to determine the effect of the four types of interventions at each DI site, experiments may also be run to increase a clinic's efficiency by other means (i.e. through basic Industrial Engineering techniques). Any efficiency gains noted outside of the agreed upon interventions will be recommended to the clinic(s) in a final report.

### **References**

Bluth, E. I., Havrilla, M., & Blakeman, C. "Quality Improvement Techniques: Value to Improve the Timeliness of Preoperative Chest Radiographic Reports." *American Journal of Radiology*, 160, (1993), 995-998.

Ertuk, S. M., Ondategui-Parra, S., & Ros, P. R. "Quality Management in Radiology: Historical Aspects and Basic Definitions." *American College of Radiology*, 2, (2005), 985-991.

Gauld, R., & Derrett, S. "Solving the Surgical Wait List Problem? New Zealand's 'Booking System'." *International Journal of Health Planning and Management*, 15(4), (2000), 259-272.

Glynn, P. A. R., Donnelly, L. M., Calder, D. A., & Brown, J. C. "The Saskatchewan Surgical Care Network - Toward Timely and Appropriate Access." *Hospital Quarterly*, 7(1), (2003), 44-48.

Lau, L. S. "A Continuum of Quality in Radiology." *American College of Radiology*, (2006), 233-239.

Milosevic, D., & Bayyigit, M. "Quality Improvement: What is in it for the Patient?" *IEEE Transactions on*

Engineering Management, 46(3), (1999), 346-358.

Ondategui-Parra, S., Gill, I. E., Bhagwat, J. G., Intrieri, L. A., Gogate, A., Zou, K. H., et al. "Clinical Operations Management in Radiology." American College of Radiology, (1), (2004), 632-640.

Pitt, M. "A Generalised Simulation System to Support Strategic Resource Planning in Healthcare." Proceedings of the 1997 Winter Simulation Conference, Andradóttir, S. et al (eds), 1155-1162.

Rosenquist, C. J. "Queuing analysis: A useful Planning and Management Technique for Radiology." Journal of Medical System, 11(6), (1987), 413-419.

Sepúlveda, J. A., Thompson, W. J., Baesler, F. F., Alvarez, M. I., & Cahoon, L. E. III. "The Use of Simulation for Process Improvement in a Cancer Treatment Center." Proceedings of the 1999 Winter Simulation Conference, Joines, J. A. et al. (eds), 1541-1548.

"Ultrasound – Nova Scotia Wait Times – Department of Health." [web page] n.a.; [http://www.gov.ns.ca/health/waittimes/wt\\_treatment\\_service/diagnostic/ultrasound.htm](http://www.gov.ns.ca/health/waittimes/wt_treatment_service/diagnostic/ultrasound.htm). [Accessed July 27, 2007].

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## **PATIENT SCHEDULING IN THE IWK'S EYE CARE CENTRE**

The IWK's division of Ophthalmology currently provides clinical service to over 8000 patients per year. Eye Care Centre patients were experiencing long waits between registration and their ophthalmologist appointment. This paper details the development of a patient scheduling methodology that utilizes "just-in-time" philosophy to reduce the wait time experienced by Eye Care Centre patients.

### **Introduction**

The IWK Health Centre is located in Halifax, Nova Scotia and provides quality care to children, youth, women, and families in the Maritime Provinces and beyond. As a tertiary care health centre dedicated to education, research, family centered care and health promotion, the IWK promotes a mission of caring, learning and advocacy. First and foremost, staff, volunteers and partners are committed to helping children, youth and women in the Maritimes be the healthiest in the world [2].

Each year, approximately 5,000 babies are delivered at the IWK; Maritime children, women, youth and newborns spend approximately 260,000 days as inpatients or in clinics at the Health Centre. The IWK has 101 adult beds, 110 beds for babies and 121 beds for children. The Health Centre employs more than 2,400 staff and has over 750 volunteers. There are 173 active medical and dental staff who are experts in a wide range of specialties including pediatrics, surgery, psychiatry, dentistry, laboratory medicine, diagnostic imaging, anaesthesia, obstetrics, gynaecology and family medicine [2]. The IWK is also a world-class research facility studying disorders and disease affecting children and women, and services provided to mental health and addictions patients [2].

The IWK's division of Ophthalmology currently provides clinical service to over 8000 patients per year. In addition, another 5,500 active files have been referred to the IWK Eye Care Team as a result of the closure of a local, community-based pediatric ophthalmologist practice. These services are not offered elsewhere in the Maritime region. Patients are served by the following Eye Care Centre staff:

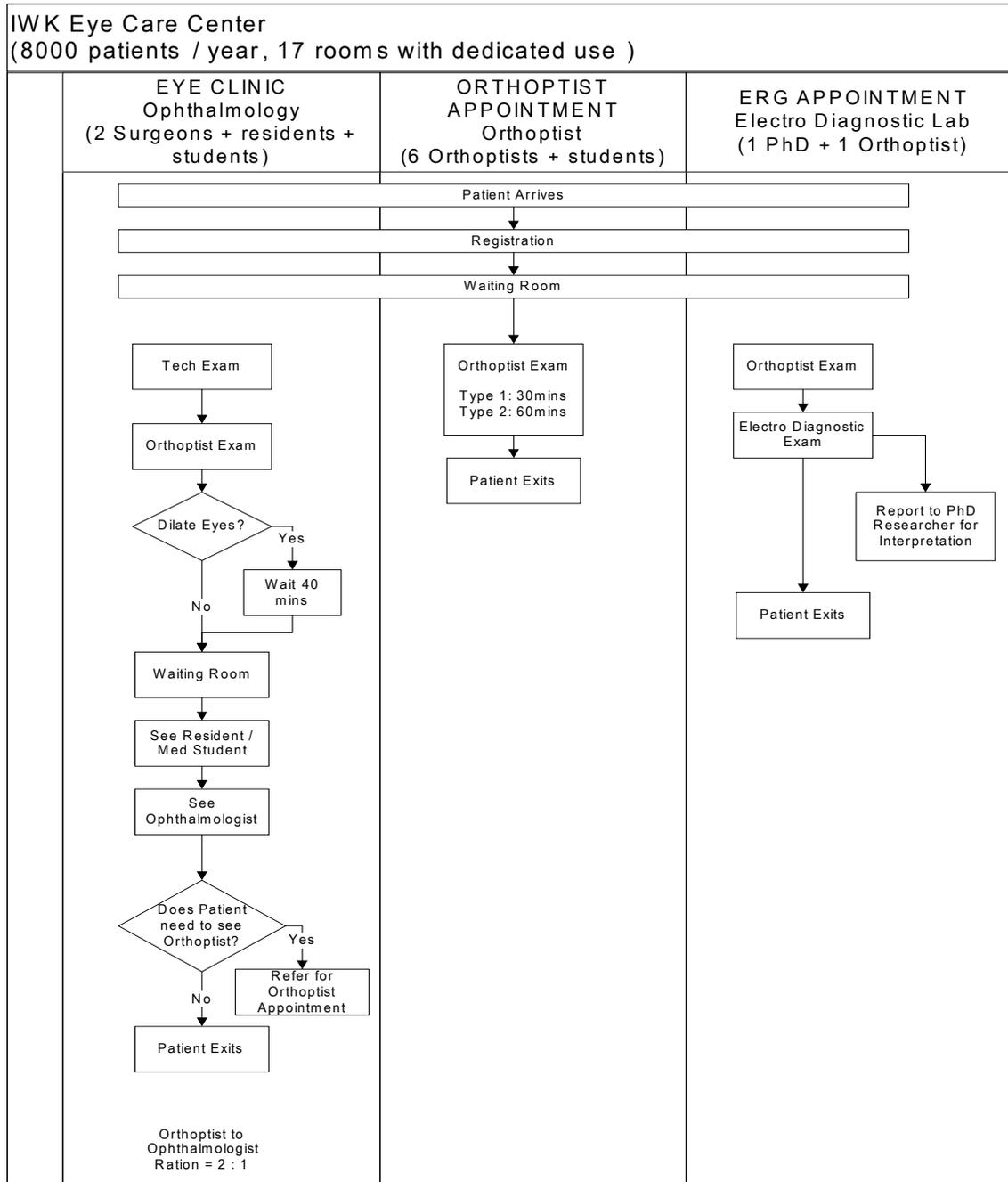
- Ophthalmologists (two surgeons as well as fellows and residents whose numbers vary with time);
- Orthoptists (six orthoptists as well as students whose numbers vary with time);
- Electro Diagnostic staff (one PhD, as well as one orthoptist); and
- Eye Care Centre clerical staff (booking and registration clerks).

### **Eye Care Centre Patient Flow**

The flow diagram shown in Figure 1 shows the flow of patients through Eye Clinic in the IWK Eye Care Centre. Patients enter the clinic and will have one of three different types of appointment, depending on what type of clinic is being

held.

**Figure 1: Eye Care Centre Patient Flow**



**Problem Statement**

Waiting patients are not considered work-in-progress in most ambulatory clinics, and therefore their “cost” is not an active concern. The result is clinics are over booked in the morning and either under booked or late in the afternoon.

Although scheduling patients in this fashion results in high physician utilization throughout the day, it can cause extensive waits for patients.

Patients of the Eye Care Centre clinics at the IWK Health Centre patients were experiencing long waits between registration and their ophthalmologist appointment. All Eye Clinic patients “checked in” by an orthoptist; some required a 40-minute wait while their eyes dilated. This information was not considered when scheduling patients, resulting in a situation where patients arrive in consistent increments but are ready for the ophthalmologist sporadically. As a result of patients being ready sporadically, the ophthalmologists learned to wait for a buffer of “ready” patients before starting their day. This buffer, in conjunction with the variation in preparation time, results in extensive waits for patients.

### **Patient Time in System Study**

To reduce patient wait time between registration and specialist examination baseline measures, such as how long patients currently wait and the number of patients seen in a clinic, had to be determined. Thus, a patient time in system study was required.

To prepare for the study, memoranda and an example of the data collection form to be used were sent out to Eye Care Centre staff. The memorandum emphasized patient confidentiality and assured physicians that the study was for statistical purposes only. A pilot run was conducted on June 26, 2006 with positive results experienced in regards to data collection form fill rate. The actual study was conducted over a period of three clinic days during the first week of July 2006.

#### **Execution**

Data collection forms, or “passports,” were issued with patient charts on the days the study was conducted. Progress checks were performed at various times throughout the day; however, the success of the study relied on the co-operation of the Eye Care Centre staff to ensure that the data collection forms were filled out correctly.

#### **Results**

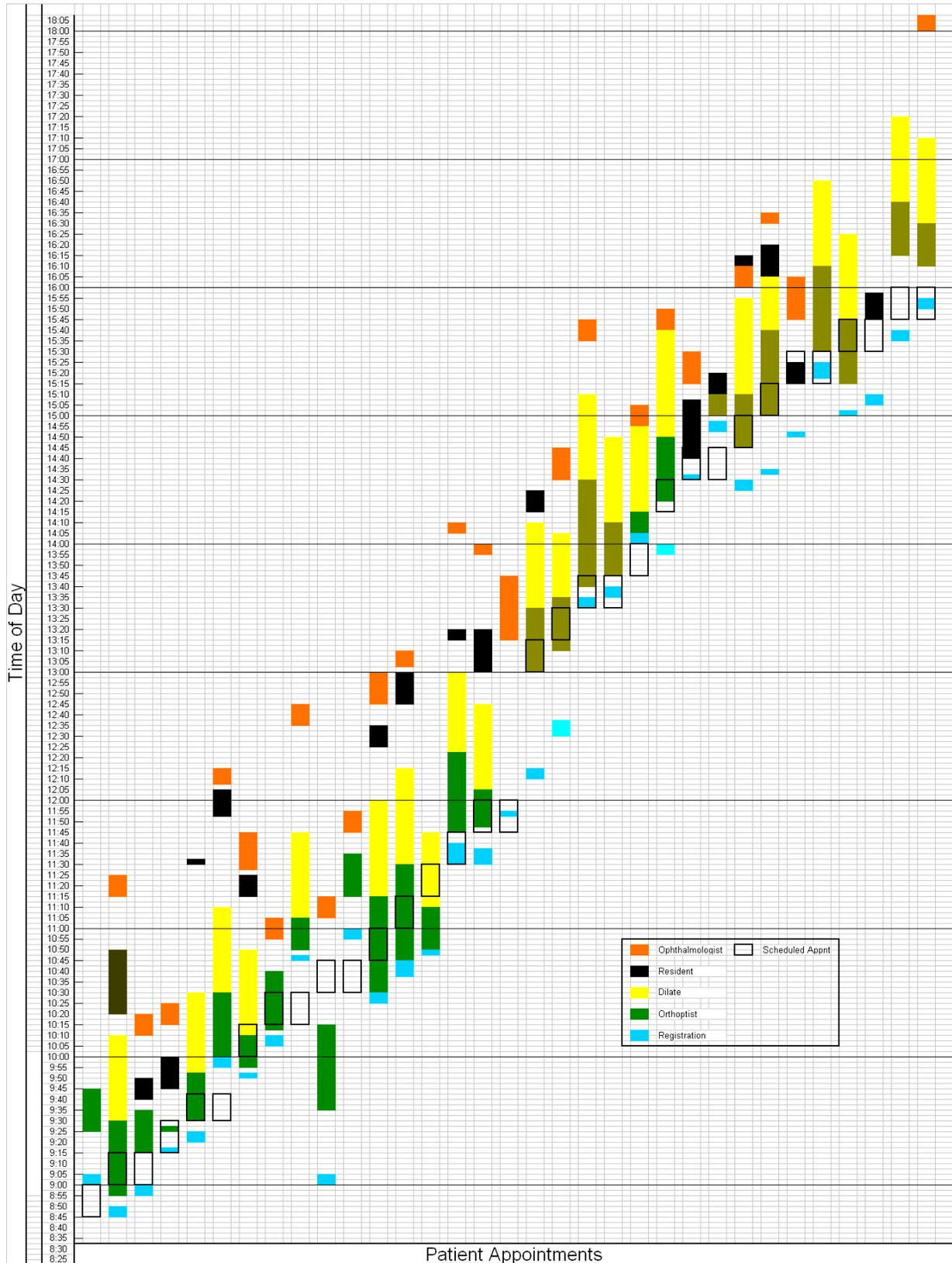
Upon the study’s completion, all data collected were input into spreadsheets from which the ratio of patient wait time to service time was determined. The results for one of the clinic days observed are shown in Table 1.

**Table 1: Patient Time in System Study Results**

	<i>Time (Minutes)</i>			
	<i>Mean</i>	<i>Median</i>	<i>Max.</i>	<i>Min.</i>
<i>Registration</i>	<i>0:04</i>	<i>0:03</i>	<i>0:11</i>	<i>0:02</i>
<i>Wait for Orthoptist</i>	<i>0:04</i>	<i>0:01</i>	<i>0:30</i>	<i>0:00</i>
<i>Orthoptist Examination</i>	<i>0:24</i>	<i>0:25</i>	<i>1:10</i>	<i>0:00</i>
<i>Dilate</i>	<i>0:40</i>	<i>0:40</i>	<i>0:50</i>	<i>0:30</i>
<i>Wait for Resident</i>	<i>0:09</i>	<i>0:00</i>	<i>0:43</i>	<i>0:00</i>
<i>Resident Examination</i>	<i>0:07</i>	<i>0:05</i>	<i>0:30</i>	<i>0:00</i>
<i>Wait for Ophthalmologist</i>	<i>0:26</i>	<i>0:20</i>	<i>1:20</i>	<i>0:04</i>
<i>Ophthalmologist Examination</i>	<i>0:10</i>	<i>0:09</i>	<i>1:31</i>	<i>0:00</i>
<i>Min. Waiting for 10 Minutes with Specialist</i>	<i>6.46</i>	<i>6.17</i>	<i>15.93</i>	<i>1.14</i>

As shown, the mean time a patient waits for 10 minutes of service time with a specialist was 6.46 minutes. This ratio was higher than the project sponsor and Eye Care Centre Core team desired. This ratio of wait time to service time results in significant patient waits and disruptions in patient flow. A visual display of patient flow through the clinic on the same day is shown in Figure 2.

**Figure 2: Patient Time in System Visual Result**



From Figure 2 it can be seen that even though patients are scheduled to be examined by the ophthalmologist every 15 minutes, patients are ready for their examinations at sporadic times. This is due to the fact that the time required to

prepare the patient for the ophthalmologist (e.g. registration, orthoptist examination, and possible dilation) is not considered when scheduling.

### **Solution Methodology**

The patient time in system study indicated that a new patient scheduling methodology was required for the Eye Care Centre. The current scheduling method did not consider the time required for preparing patient. This resulted in patients being ready to see the ophthalmologist at sporadic times, instead of the 15-minute intervals that are scheduled. To reduce patient wait times, preparation time must be considered when scheduling patients into Eye Clinic. If information regarding preparation time is included, patients can be scheduled in such a way that they arrive to the Eye Care Centre at sporadic times, but are ready for examination by the ophthalmologist in fifteen minute intervals. This methodology is known as “Just-In-Time”, or JIT, planning and scheduling.

#### **Just-In-Time Planning and Scheduling Literature Review**

According to Silver et al [3], the goal of the Just-In-Time (JIT) system is to “remove all waste from the manufacturing environment, so that the right quantity of products are produced in the highest quality, at exactly the right time (not late or early), with zero inventory, zero lead time, and no queues.” Waste is considered to be anything that disrupts the flow of products and does not contribute to making or selling them. The JIT system also seeks to eliminate all uncertainty within the production process. JIT is “appropriate in a high-volume, repetitive manufacturing environment [3].” Although the IWK Eye Care Centre is not a manufacturing environment, but a service environment, it is desirable to reduce in-clinic patient wait time (work-in-progress). Silver et al [3] state that one of the benefits of JIT is a reduced work-in-progress inventory. Another benefit is short lead times. Thus, since this is what is desired in the Eye Care Centre, JIT serves as a useful paradigm.

#### **Eye Clinic Just-In-Time Patient Scheduling**

Although JIT is primarily utilized in manufacturing environments, the nature of Eye Clinic operations presents an opportunity for its application in a service environment. Under this assumption, patients will be considered a product that is to be manufactured. The Eye Clinic will be considered a production (or assembly) line. The product (patient) is considered to be “manufactured (serviced)” upon completion of the ophthalmologist examination and after which the patient the system (Eye Clinic). However, to achieve a balanced production line, it was first necessary to quantify the time necessary to complete each process the product requires along the production line (i.e. how much preparation time the patient requires before being examined by the ophthalmologist).

#### **Eye Clinic Patient Appointment Types**

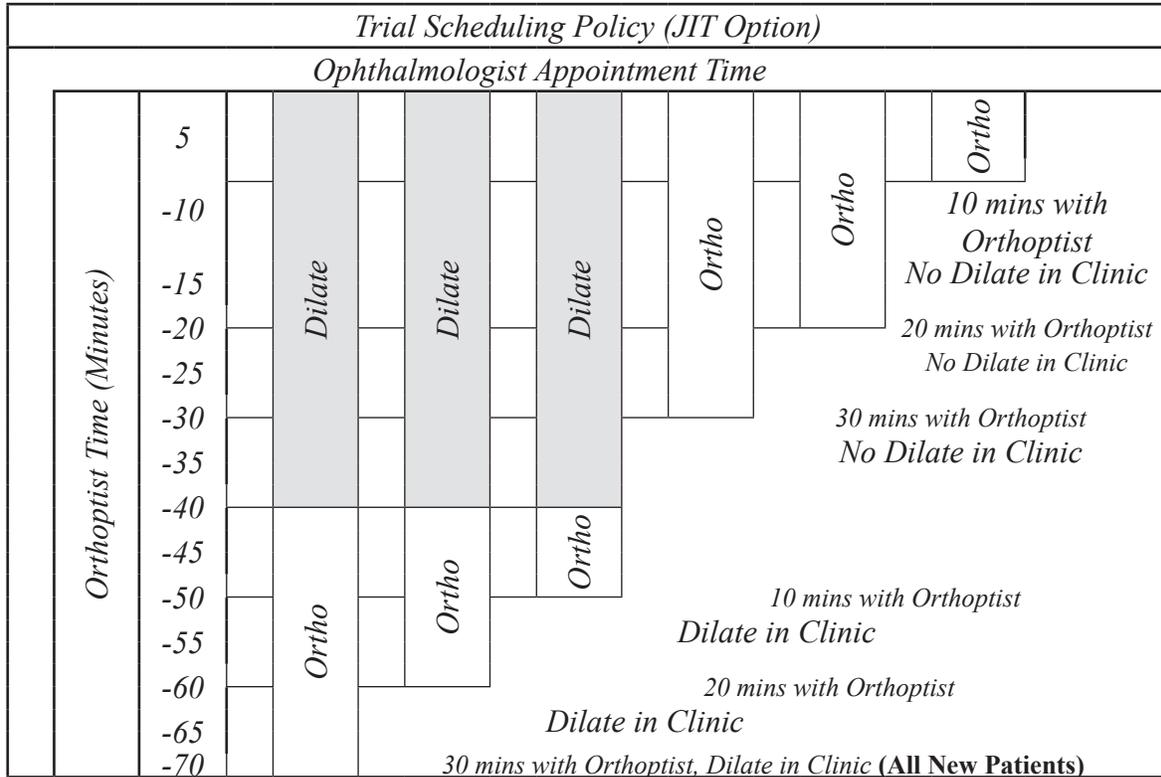
There are two categories of patients that are examined in Eye Clinic: new and return. All patients register upon arrival to clinic, and are then “checked in” by an orthoptist. This orthoptist examination consists of tests that provide the ophthalmologist with information regarding the patient’s condition. Orthoptist examinations for new patients require 30 minutes [1]. All new patients are dilated during the orthoptist exam and require 40 minutes dilation time [1]. Once dilation is complete, the patient is ready for his/her 15 minute ophthalmologist examination.

The time required for a return patient orthoptist examination is determined during the patient’s previous examination and can be 10, 20, or 30 minutes [1]. The ophthalmologist determines whether a patient will need to be dilated for his/her next Eye Clinic appointment [1]. All return patients are scheduled for a 15-minute ophthalmologist examination.

Thus, all patients can be categorized into one of six appointment types. These appointment types are shown in Figure 3. The method used to collect the preparation time information required to categorize a patient appointment is

detailed in the next section of this report.

**Figure 3: Eye Clinic Patient Appointment Types**



Not shown in Figure 3 is that new patients require a 10 minute registration time slot and return patients require a 5 minute registration slot.

It should be noted that any one of the appointment types shown in Figure 3 could also be considered a “time plus” appointment. The majority of Eye Care Centre patients are children, and due to the nature of children, patients are sometimes not as co-operative as desired. If a patient is particularly difficult to examine, he/she will be considered as “time plus.” A “time plus” appointment offers the same services as a normal appointment, but the time allotted for each service is doubled to ensure that all examinations can be successfully completed.

**Execution of Just-In-Time Patient Scheduling**

To successfully execute the JIT patient scheduling system in the Eye Clinic, all relative information required to determine the patient’s appointment type must be accessible to the scheduling clerk. Thus, a booking slip was designed and will be attached to patient charts. The booking slip is shown in Figure 4.

**Figure 4: JIT Patient Scheduling Booking Slip**



----- Eye Clinic Booking Slip -----

**Orthoptist Section**

Estimated Check in Time \_\_\_\_\_

**Ophthalmologist Section**

Dilate(in Clinic):       Yes    No

Orthoptist Check In:    Yes    No

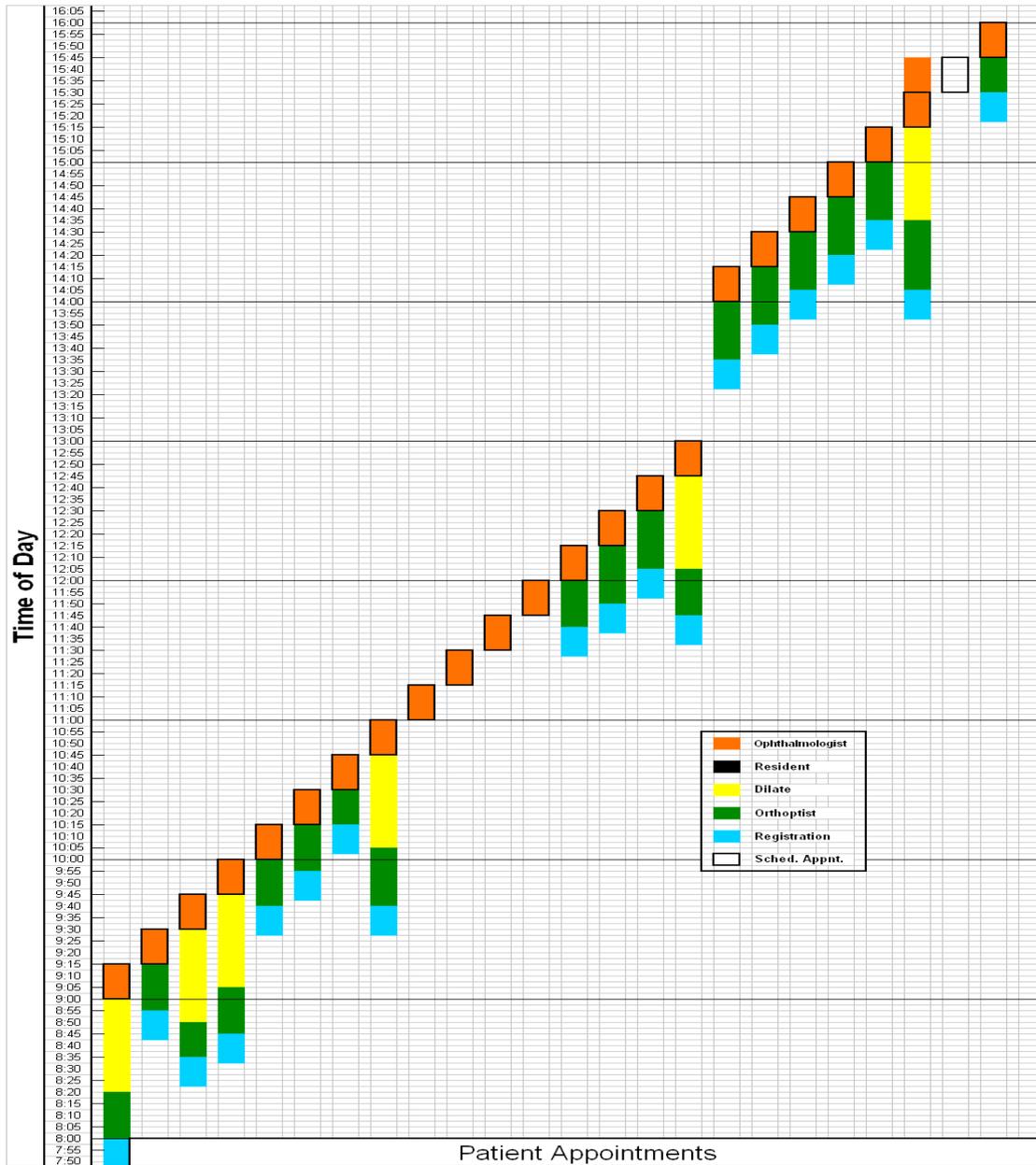
Time Plus Patient:      Yes    No

This slip will be completed by the appropriate medical specialists and sent back to the scheduling clerk. The clerk will then determine the appointment type the patient requires. Once determined, the clerk will schedule the patient’s appointment with the ophthalmologist, and then using the amount of preparation time the patient requires determine the time the patient is required to come in for registration. For example, if a patient is scheduled to see the ophthalmologist at 10 a.m., and requires a 40 minute dilation time, 20 minute orthoptist examination, and 5 minute registration time, the patient should be asked to arrive in clinic  $40 + 20 + 5 = 65$  minutes before his/her scheduled 10 a.m. ophthalmologist examination time. This means that this specific patient should arrive in clinic for registration at 8:55 a.m. This registration time is what patients will now be provided when notified for an appointment. Using this scheduling methodology, patients will arrive in clinic to be registered at sporadic times, but will be ready to be examined by the ophthalmologist every 15 minutes, or, “just-in-time.”

**Just-In-Time Patient Scheduling Trial**

A trial date for the proposed JIT scheduling methodology was set for August 28, 2006. Since booking slip information for the patients selected for clinic on that day was not yet available, the Eye Care Centre core team (including medical specialists) examined each patient’s history and individual appointment types were determined. Using the JIT scheduling methodology, a visual schedule of Eye Clinic for August 28, 2006 was developed and is shown in Figure 5.

**Figure 5: Eye Clinic JIT Visual Schedule**



**Recommendations**

Based on the data collected and the research conducted, the following recommendations were made to the IWK Eye Care Centre:

- Provide an information session for all Eye Care Centre staff to present the “Just-In-Time” scheduling methodology and discuss how it will affect the Eye Clinic’s operations;
- Train the Eye Care Centre’s scheduling clerk to use the “Just-In-Time” scheduling methodology;
- Develop a standard procedure document for the scheduling clerk outlining the steps required to schedule patients using the “Just-In-Time” methodology;
- Implement the “Just-In-Time” patient scheduling methodology for the Eye Clinic; and

- Periodically review the standard procedure document and “Just-In-Time” scheduling methodology to ensure they conform to Eye Care Centre operations.

If these recommendations are implemented, it is believed that the IWK Eye Care Centre will experience a reduction in patient wait times between registration and specialist examination, as well as fewer disruptions in patient flow.

### Conclusion

The objective of this study was to reduce patient wait time between registration and specialist examination through improvements to patient scheduling and flow. Based on the observations and data collected, it was determined that to achieve this objective a new patient scheduling methodology was required for the Eye Care Centre. A new scheduling methodology based on “Just-In-Time” philosophy was devised, proposed, and trialed. Results from the trial date were positive; reductions in patient wait times were realized and disruptions in patient flow were minimal. Three additional trials were conducted in October 2006. Based on the results of these trials, Eye Care Centre staff has decided to implement the “Just-In-Time” scheduling methodology for all Eye Clinics.

### References

- [1] E. Hahn, Private Communication, 2006.
- [2] IWK Health Care Centre, < <http://www.iwk.nshealth.ca/allaboutus/index.cfm>>, Accessed August 31, 2006.
- [3] E. Silver, D. Pyke, and R. Peterson, *Inventory Management and Production Planning and Scheduling*, Third Edition, John Wiley & Sons Inc., 1998.

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## **USING LINEAR PROGRAMMING IN LUNG CANCER TREATMENT PLANNING AT THE QUEEN ELIZABETH II HEALTH SCIENCES CENTRE**

### **Abstract**

Medical physicists at the Queen Elizabeth II Health Sciences Centre (QEII) located in Halifax, Nova Scotia, use a process known as forward treatment planning when planning radiotherapy treatment for lung cancer patients. This paper details the development of a linear programming model that calculates optimal beam weightings that assists medical physicists at the QEII in lung cancer forward treatment planning.

### **Forward Treatment Planning for Lung Cancer**

Forward treatment planning for radiotherapy is the process of deciding how the beams of radiation will travel through the patient so that they deliver a tumoricidal dose of radiation to the cancerous region, while at the same time, delivering a limited dose of radiation to the critical structures surrounding the cancer so that they can survive the treatment. This is done by determining optimal radiation beam gantry angles, field apertures (beam shapes), and relative beam weightings. The forward treatment planning process is initiated when the radiation oncologist issues a prescription consisting of his/her aspirations for the tumor, typically a tumoricidal dose, and upper bounds for the non-tumorous tissue. Using this prescription and the patient's CT scan images, a medical physicist (or dosimetrist) designs the treatment plan.

At the QEII, PC based commercial software (Theraplan Plus Version 3.8, Nucletron – Oldelft Corporation) is used in forward treatment planning for lung cancer. The four variables involved in the planning process are:

- Beam energies – The energy of therapeutic X-rays expressed megavolts (MV);
- Beam orientation – The angle at which the radiation beam is placed;
- Beam aperture (shape) – The shape of the radiation beam; and
- Beam weightings – The relative length of time that each radiation beam is active (being administered to the patient) for. The beam weight factor is a multiplier for the default beam normalization. The default weight is 1.0.

For lung cancer six to eight radiation beams are used to treat the patient. Beam energies are always set at 6 MV in lung cancer cases. This voltage is the maximum electric potential used by a linear accelerator to produce the radiation beam. Currently medical physicists at the QEII determine beam gantry angles and field apertures through dosimetric procedures and they are comfortable with the results obtained using these procedures [1].

Medical physicists at the QEII have no method to determine optimal beam weightings. Currently, trial and error is practiced. That is, using the optimal beam orientations and apertures that have been calculated, medical physicists interact with the treatment planning software by inputting beam weightings (by analyzing tumor anatomy, medical physicists can reasonably estimate a set of initial beam weightings) to devise a treatment plan. This treatment plan is evaluated by the medical physicist and beam weightings are then adjusted such that an improved plan is the result. This procedure is repeated until a satisfactory treatment plan is obtained. This process is typically time consuming and requires extensive manual effort. For a simple case, a satisfactory treatment plan can sometimes be obtained in one hour, however, for a case that is more complex, a satisfactory treatment plan may take up to two days to obtain.

### Problem Definition

The authors have defined the problem as an inefficient lung cancer treatment planning process since there is no mathematical model in place to calculate optimal beam weightings quickly and accurately. The purpose of this paper is to detail the methods and analyses used in the development of a linear programming model that calculates optimal beam in lung cancer forward treatment planning.

### Dose Calculation and Treatment Concerns

The proceeding sub-sections detail modeling dose distribution, emphasizing that dose distribution can be represented by a linear function. The constraints that must be put in place to ensure that normal tissues are protected while a tumoricidal dose is delivered are also detailed.

#### Modeling Dose Distribution

Lung cancer treatment planning is performed using information collected during the patient’s CT simulation. A CT scan contains several cross-sectional images of the patient’s anatomy (tumor and surrounding critical structures). These cross sections are known as slices. A slice is a two dimensional matrix consisting of  $N \times M$  pixels that represent the position ( $x, y$  coordinates) and intensity of all beamlets (each radiation beam is decomposed into small beamlets, typically of size  $0.5 \times 0.5$  centimetres) in a beam. This two dimensional matrix is known as the dose deposition matrix. The value of each pixel in the dose deposition matrix represents the intensity (in % dose) of the beamlet at that location. There exists a dose deposition matrix for each beam and slice combination analyzed in the treatment planning process.

A typical CT scan consists of 100 slices. Although all of these slices are available for the medical physicist to consult, typically only 5-10 slices are analyzed in lung cancer forward treatment planning. A dose deposition matrix is constructed for all beams (6 to 8) used in treatment for each slice. For analytical purposes, these matrices are exported to Microsoft Excel from the commercial treatment planning software (one pixel = one cell in the spreadsheet).

The goal in forward treatment planning is to calculate radiation intensities, or weights, for all beams being used for treatment. Thus, beam weights are decision variables. The decision variable representing the weight of beam  $k$  is denoted by  $w_k$ .

As a beam of radiation travels through a patient, it deposits radiation along its path. Therefore, each beam deposits radiation to a large number of pixels and consequently, each pixel receives radiation from several beams. Although not entirely accurate, it is common practice to represent the relationship between beam weights and dose received by a pixel in a linear way [2]. Letting  $D_{jk}$  denote the dose received in pixel  $j$  from beam  $k$  at unit weight, the total dose,  $T_j$ , received by a pixel as a function of beam weights  $w_k$  is:

$$T_j = \sum_k D_{jk} w_k \quad \forall_j \quad (1)$$

It should be noted that the dose delivered to pixel  $j$  from beam  $k$  on slice  $i$  is independent from the dose delivered to pixel  $j$  from beam  $k$  on slice  $i + 1$ .

It should also be noted that the radiation dose deposited to the tumor is always normalized at the centre of the tumor. Normalization means that the % dose at the tumor centre is 100% (value at the pixel corresponding to tumor centre is equal to 100), and the dose distribution for the tumor and surrounding normal organs are relative to the point dose at the tumor centre. This normalization point is known as the tumor isocentre. The Theraplan Plus software calculates a normalization vector that includes a normalization factor for each beam being used in treatment that ensures the % dose at the tumor centre is 100%. If we denote  $ISO_k$  as the normalization factor associated with beam  $k$ , then

$$1 = \sum_k ISO_k w_k \quad \forall_j \quad (2)$$

### Structure Identification

Upon construction of the dose deposition matrices, pixels corresponding to structures must be identified within the matrices. For lung cancer, these structures include the tumor, lungs, and spinal cord. A program based on dosimetric procedures is in existence that allows these pixels to be identified on each slice analyzed [1]. The result of this program is the determination of the coordinates of the pixels corresponding to these structures on each slice analyzed.

These pixels must be identified due to the fact that the dosage delivered to each is constrained. These constraints are detailed below.

### Tissue Constraints

The primary goal of forward treatment planning is to develop a treatment plan that maximizes radiation exposure to the tumor such that a tumoricidal dose is delivered, while at the same time minimizing radiation exposure to the surrounding critical structures so as to alleviate side effects. Structures that are considered critical in lung cancer treatment planning are the lungs and spinal cord. Consequently, limits on the radiation that can be deposited to pixels corresponding to these structures are specified. If  $V_x$  denotes the percentage of pixels corresponding to the lung that cannot have a value greater than  $x$ , then the dosage constraints pertaining to the lung are:

$$V_{32} \leq 30 \quad (3)$$

$$V_{16} \leq 50 \quad (4)$$

The above constraints ensure that no more than 30% of the lung receives a dosage intensity greater than 32% (that is only 30% of the pixels corresponding to the lung may have a value greater than 32) and no more 50% of the lung receives a dosage intensity greater than 16% (that is only 50% of the pixels corresponding to the lung may have a value greater than 16). It should be noted that the values 30% and 50% are accurate when all pixels corresponding to the lung are taken into consideration (that is, all slices are analyzed).

To ensure that the spinal cord is not damaged, an upper bound on the radiation intensity a pixel corresponding to the spinal cord can receive is set. If  $C_{MAX}$  denotes the maximum dosage intensity a pixel corresponding to the spinal cord may have, then the upper bound constraint pertaining to the lung is:

$$C_{MAX} \leq 83 \quad (5)$$

The above constraint ensures that no pixel corresponding to the spinal cord receives dosage intensity greater than 83%.

Finally, in order to deliver a tumoricidal radiation dose, a lower bound on the radiation intensity a pixel corresponding to the tumor can receive is set. If  $P_{MIN}$  denotes the minimum dosage intensity a pixel corresponding to the tumor may receive, then the lower bound constraint pertaining to the tumor is:

$$P_{MIN} \geq 95 \quad (6)$$

The above constrain ensures that no pixel corresponding to the tumor receives dosage intensity less than 95%.

### Solution Methodology

First, model variables and coefficients are defined. An integer programming model with elastic constraints is then presented. The section concludes with an overview of the modeling process and model results.

#### Variable and Parameter Definitions

Here we define model parameters, main decision variables, accounting variables, and lastly, the integer accounting variables.

*Model Parameters: These parameters do not change during a model run; they are predetermined.*

$c_{jk}$  – Denotes the % dose received in pixel  $j$  from beam  $k$  at unit weight, where  $j$  corresponds to a pixel located in the spinal cord.

$p_{jk}$  – Denotes the % dose received in pixel  $j$  from beam  $k$  at unit weight, where  $j$  corresponds to a pixel located in the tumor.

$l_{jk}$  – Denotes the % dose received in pixel  $j$  from beam  $k$  at unit weight, where  $j$  corresponds to a pixel located in the lung.

$C_{MAX}$  – Denotes the maximum % dose that a pixel corresponding to the spinal cord can receive. Typically,  $C_{MAX} = 83$ .

$P_{MAX}$  – Denotes the maximum % dose that a pixel corresponding to the tumor can receive. Typically,  $P_{MAX} = 110$ .

$P_{MIN}$  – Denotes the minimum % dose that a pixel corresponding to the tumor can receive. Typically,  $P_{MIN} = 95$ .

$V_{32}$  – Denotes the percentage of pixels corresponding to the lung that cannot have a value greater than 32. Typically,  $V_{32} \leq 30$  (that is, only 30% of pixels corresponding to the lung may have a value greater than 32). Once this parameter has been defined, it is converted from a percentage to a number based on the total number of pixels corresponding to the lung.

$V_{16}$  – Denotes the number of pixels related to the percentage of pixels corresponding to the lung that cannot have a value greater than 16. Typically,  $V_{16} \leq 50$  (that is, only 50% of pixels corresponding to the lung may have a value greater than 16). Once this parameter has been defined, it is converted from a percentage to a number based on the total number of pixels corresponding to the lung.

$ISO_k$  – Denotes the normalization value corresponding to beam  $k$ .

$\lambda_i$  – Denotes the coefficient value of target deviation accounting variable  $i$ . Target deviation accounting variables are defined in the accounting variables section. These are user defined parameters.

*Decision Variables: The main decision variables are the beam weightings. Thus, the model has only as many decision variables as there are radiation beams being used in the treatment. As stated previously, six to eight radiation beams are used in lung cancer treatment. We refer to these as the decision variables although these are not the only variables in the model. However the other variables are just accounting variables and are a consequence of choices made for the  $w_k$ .*

$w_k$  – Denotes the weighting value corresponding to radiation beam  $k$ .

Australia

Thus, the model has only as many decision variables as there are radiation beams being used in the treatment. As stated previously, six to eight radiation beams are used in lung cancer treatment.

*Accounting Variables: These variables change during the model run and are dependent on the decision variables.*

$C_j$  – Denotes the weighted % dose received in pixel  $j$  from all  $k$  beams, where  $j$  corresponds to a pixel located in the spinal cord.

$P_j$  – Denotes the weighted % dose received in pixel  $j$  from all  $k$  beams, where  $j$  corresponds to a pixel located in the tumor.

$L_j$  – Denotes the weighted % dose received in pixel  $j$  from all  $k$  beams, where  $j$  corresponds to a pixel located in the

lung.

$EC_j$  – Denotes the value by which the weighted % dose received in pixel  $j$ , where  $j$  corresponds to a pixel in the spinal cord, exceeds  $C_{MAX}$ .  $EC_j$  is an accounting variable that measures deviation from the spinal cord maximum % dose target.

$\beta_c$  – Denotes the sum of  $EC_j$ s, where  $j$  corresponds to a pixel in the spinal cord.

$EPH_j$  – Denotes the value by which the weighted % dose received in pixel  $j$ , where  $j$  corresponds to a pixel in the tumor, exceeds  $P_{MAX}$ .  $EPH_j$  is an accounting variable that measures deviation from the tumor maximum % dose target.

$\beta_{PH}$  – Denotes the sum of  $EPH_j$ s, where  $j$  corresponds to a pixel in the tumor.

$EPL_j$  – Denotes the value by which the weighted % dose received in pixel  $j$ , where  $j$  corresponds to a pixel in the tumor, falls short of  $P_{MIN}$ .  $EPL_j$  is an accounting variable that measures deviation from the tumor minimum % dose target.

$\beta_{PL}$  – Denotes the sum of  $EPL_j$ s, where  $j$  corresponds to a pixel in the tumor.

$\beta_{32}$  – Denotes the number of pixels corresponding to the lung exceeding  $V_{32}$  (that is, the number of pixels corresponding to the lung that exceed 30% of pixels corresponding to the lung, that have a value greater than 32).  $\beta_{32}$  is an accounting variable that measures deviation from the  $V_{32}$  lung volume target.

$\beta_{16}$  – Denotes the number of pixels corresponding to the lung exceeding  $V_{16}$  (that is, the number of pixels corresponding to the lung that exceed 50% of pixels corresponding to the lung, that have a value greater than 16).  $\beta_{16}$  is an accounting variable that measures deviation from the  $V_{16}$  lung volume target.

*Integer Variables: These variables are dependent on the decision variables.*

$y_j$  – Binary variable that takes on a value of one when pixel  $j$ , where  $j$  is a pixel corresponding to the lung, has a value greater than 32. Otherwise  $y_j$  takes on a value of 0.

$z_j$  – Binary variable that takes on a value of one when pixel  $j$ , where  $j$  is a pixel corresponding to the lung, has a value greater than 16. Otherwise  $z_j$  takes on a value of 0.

These integer variables serve as counters (upon summation over  $j$ ) that ensure the lung constraints discussed in preceding sections are adhered to.

All variables and parameters defined in this section are included in the integer programming model used to calculate optimal beam weightings in lung cancer forward treatment planning developed by the authors which is presented in the proceeding sub-section.

### Integer Programming Model

This sub-section details the integer programming model developed by the authors that calculates optimal beam weightings in lung cancer forward treatment planning. The integer programming model is:

$$\text{Minimize} \quad |_C \mathbf{b}_C + |_H \mathbf{b}_H + |_E \mathbf{b}_E + |_Z \mathbf{b}_Z + |_6 \mathbf{b}_6$$

Subject to:

$$C_j = \sum_k c_k w_k \quad \forall_j \quad (7)$$

$$P_j = \sum_k p_k w_k \quad \forall_j \quad (8)$$

$$L_j = \sum_k l_k w_k \quad \forall_j \quad (9)$$

$$C_j \leq C_{MAX} + \mathbf{E}_j \quad \forall_j \quad (10)$$

$$\mathbf{b}_C = \sum_j \mathbf{E}_j \quad \forall_j \quad (11)$$

$$P_j \geq P_{MIN} + EPL_j \quad \forall_j \quad (12)$$

$$\mathbf{b}_E = \sum_j EPL_j \quad \forall_j \quad (13)$$

$$P_j \leq P_{MAX} + EPH_j \quad \forall_j \quad (14)$$

$$\mathbf{b}_H = \sum_j EPH_j \quad \forall_j \quad (15)$$

$$L_j \leq \mathbf{Z} + (P_{MAX} - \mathbf{Z})y_j \quad \forall_j \quad (16)$$

$$L_j \leq \mathbf{6} + (P_{MAX} - \mathbf{6})y_j \quad \forall_j \quad (17)$$

$$z_j \geq y_j \quad \forall_j \quad (18)$$

$$V_Z \geq \sum_j y_j - \mathbf{b}_Z \quad \forall_j \quad (19)$$

$$V_6 \geq \sum_j z_j - \mathbf{b}_6 \quad \forall_j \quad (20)$$

$$1 = \sum_k ISO_k w_k \quad \forall_k \quad (21)$$

$$w_k \geq 0 \quad \forall_k \quad (22)$$

$$y_j \in \{0,1\} \quad \forall_j \quad (23)$$

$$z_j \in \{0,1\} \quad \forall_j \quad (24)$$

The objective function and the constraints in this model are linear, thus, the model is linear.

The model's objective function attempts to minimize the weighted sum of the target deviation accounting variables. If the value of the objective function upon model run completion is 0, then a perfect solution has been obtained, that is, all tissue constraints discussed previously have been satisfied. However, these constraints can sometimes never be satisfied and thus the use of target deviation accounting variables is satisfied. The objective function is subject to a series of constraints that determine the weighted % dose delivered to each pixel corresponding to a structure and constraints that mathematically model the tissue constraints. The integer variables are included in the constraints corresponding to the lung and serve as

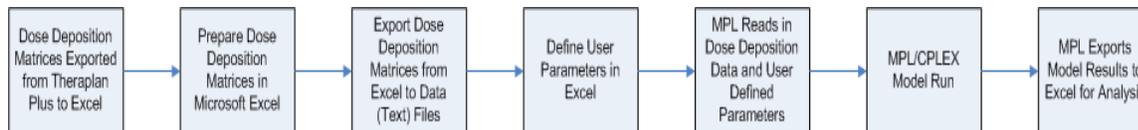
counters to tally the number of pixels that receive more than a 32% and 16% dose. The logic behind these constraints is now discussed.

Constraints (7), (8), and (9) calculate the weighted % dose received by the pixels corresponding to the spinal cord, tumor, and lung, respectively. Constraint (10) corresponds to the upper bound of % dose that a pixel corresponding to the spinal cord can receive. It includes a target deviation accounting variable since it may not be possible for all pixels to satisfy the strict upper bound. Constraint (11) is a summation of the target deviation accounting variables for the pixels corresponding to the spinal cord upper bound constraint. Constraint (12) corresponds to the lower bound of % dose that a pixel corresponding to the lower can receive. It also includes a target deviation variable since it may not be possible for all pixels to satisfy the strict lower bound. Constraint (13) is a summation of the target deviation accounting variables for the pixels corresponding to the tumor lower bound constraint. Constraint (14) corresponds to the upper bound of % dose that a pixel corresponding to the lower can receive. It also includes a target deviation accounting variable. Constraint (15) is a summation of the target deviation accounting variables for the pixels corresponding to the tumor upper bound constraint. Constraints (16) and (17) tally the number of pixels corresponding to the lungs that receive a % dose greater than 32 and 16, respectively. This is done using the  $y_j$  and  $z_j$  integer variables. For example, in constraint (16), if the pixel  $L_j$  has a value equal to or greater than 32,  $y_j$  will take on a value of 1. If the pixel  $L_j$  has a value less than 32,  $y_j$  will take on a value of 0. Constraint (17) functions in a similar manner. Constraint (18) ensures that  $z_j$  is greater than or equal to  $y_j$ , since a pixel that receives more than 32% dose clearly receives more than 16% dose, but does not necessarily receive a % dose greater than 32 if it receives a % dose greater than 16. Constraints (19) and (20) sum the  $y_j$ 's and  $z_j$ 's and compare them to the upper bound constraints that have been placed on the lung regarding the level of dose a specified volume of the lung can receive. These constraints include target deviation accounting variables since it may not be possible for all pixels to satisfy the strict upper bounds. Constraint (21) states that the sum of the normalization factor and beam weighting products must equal 1, so that the % dose received at the tumor's isocentre is 100. Constraints (22), (23), and (24) are bound constraints. (22) ensures that all beam weightings are greater than or equal to 0, and (23) and (24) define  $y_j$  and  $z_j$  as integer variables which can only take on the value of 0 or 1.

## Results

An overview of the modeling process is shown in figure 1. The authors used MPL as the environment in which to program the model. MPL is an advanced modeling system that allows the model developer to formulate complicated optimization models in a clear, concise, and efficient way. MPL then relays the model code to the optimization solver package CPLEX which solves the model. This is all done in the background so that the model developer only needs to focus on formulating the model.

**Figure 1: Overview of the Modeling Process**

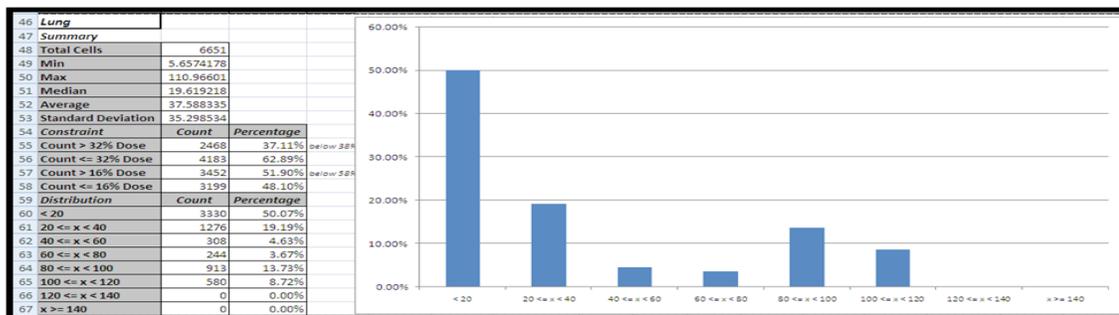


Once MPL finishes exporting the variables, the user can open the ‘Output’ Microsoft Excel worksheet and view the results. The beam weights which were exported from MPL are shown in this worksheet. These variables are crucial to the forward treatment planning process.

The weighted % dose deposited to each pixel  $j$  corresponding to the spinal cord, tumor, and lung are also exported to the ‘Output’ worksheet. Excel functions are used to perform statistical analyses and build dose volume distributions for the spinal cord, tumor, and lung using these data.

Statistical analyses on the weighted % dose deposited to each pixel  $j$  corresponding to the spinal cord, tumor, and lung (for the lung, in addition to the basic statistical analyses, the percentage of pixels in the lung that receive a % dose greater than 32 and 16 dosage are tabulated) are performed in the ‘Output’ worksheet. To provide the user with a visual representation of how dose is distributed throughout these structures, dose volume histograms are constructed using the model output data. An example of the statistical analyses and dose volume histogram for the lung is shown in Figure 2. The vertical axis represents percentage of pixels in the spinal cord or tumor that have a weighted % dose within the specified dose interval (x-axis). The statistics and dose volume histograms allow the user to quickly analyze the quality of the solution obtained based on the distribution of weighted % dosages that are below the upper bound target set for the spinal cord, and the weighted % dosages that are within the upper and lower targets set for the tumor.

Figure 2: Lung Statistical Analyses



The ‘Output’ worksheet allows the user to review the model solution and decide if it is satisfactory. If the solution is not satisfactory, the user can adjust input parameters in the ‘Input’ worksheet and re-run the model in MPL. The ‘Input’ and ‘Output’ spreadsheets allow for an iterative process of adjusting inputs, running the model, and reviewing the results until the user is satisfied.

### Conclusion

Calculating optimal beams weightings in forward treatment planning for lung cancer required the development of a mathematical model. An integer programming model was developed to perform this optimization. The current version of the model uses target deviation accounting variables and includes user interfaces for input parameters and reviewing results. The model has been tested using three patient cases under various scenarios and satisfactory solutions were obtained for each. Model run time is case specific and the time required for the model to run to completion for the cases analyzed varied from seconds to two hours. Model results have been verified and validated using the Theraplan Plus treatment software. A series of recommendations have been made to the Medical Physics Department at the QEII regarding the model’s implementation. The model significantly reduces the time required to complete the forward treatment planning process.

### References

- [1] Meng, J. *Private Communication*. 2006.
- [2] Washington, C., Leaver, D. "Principles and Practice of Radiation Therapy: Introduction to Radiation Therapy." Mosby-Year Book, Inc. 1996.

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## **PLANNING FOR SPACE REDUCTION AT THE IWK HEALTH CENTRE<sup>1</sup>**

In June 2007, the IWK Health Centre started major renovations in the children's OR Department. This paper details efforts undertaken to ensure the department will fit into the reduced space during construction. These efforts included 5S events to reduce clutter and improve organization in the department.

### **Introduction**

This report details a project undertaken at the IWK Health Centre in Halifax, Nova Scotia. The IWK is the only facility in the Maritimes to provide tertiary care to infants and children. In addition to providing quality care, the hospital is also a leading research facility in the study of diseases and disorders affecting women and children. ("IWK Health Centre: About", 2006) The hospital's physical environment has changed little since its construction in 1970, although health care practices have made significant advancements. In 2005, the hospital launched a restructuring plan to realign the hospital's physical environment with its patient care. ("IWK Health Centre, Paediatrics", 2006) The plan will affect 160,000 ft<sup>2</sup> of space and add 48,000 ft<sup>2</sup> of new space. One of the three main priorities in the restructuring plan is to update the operating room department at the Children's site.

### **Children's Operating Rooms**

The IWK Children's Operating Room Department (OR) conducts both emergency and elective surgeries on children aged 3-16. Elective surgeries are performed during regular working hours, and generally occupy only five of the nine operating rooms available. Emergency surgeries can be performed at any time and as soon as two hours after being requested. Currently, six of the nine rooms are equipped only for a single type of surgery (e.g. cardiac or urology) while the other three are designated "general surgery" and handle the remainder of the cases.

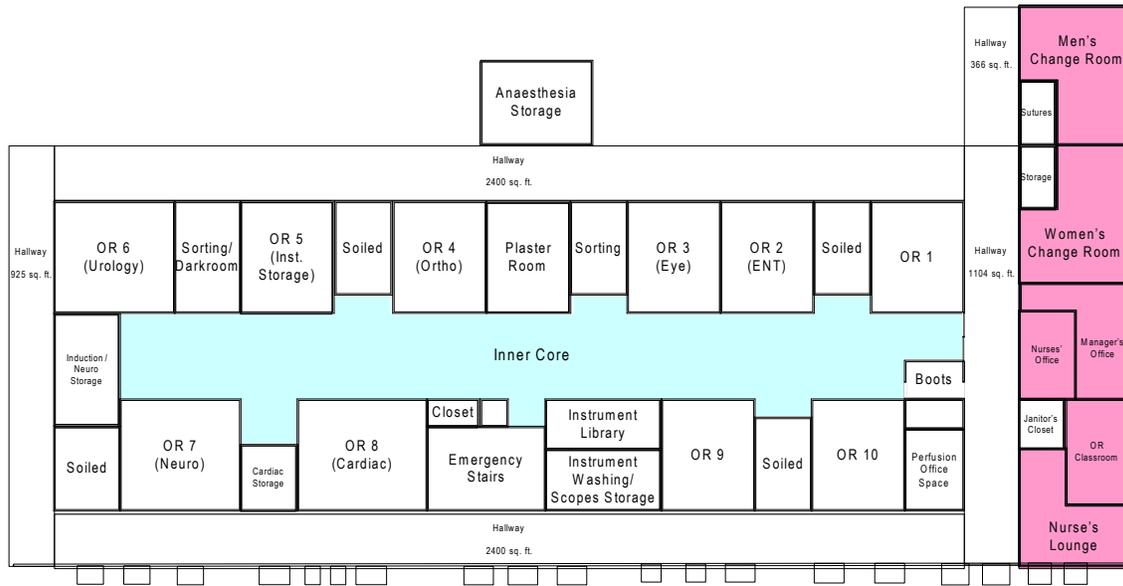
### **OR Layout**

Figure 1 shows the OR's original floor layout. The Inner Core (shown in blue) connects all operating rooms from the inside. It is a sterile environment (free of germs), and thus is not used to transport patients or soiled materials. The Outer Core (shown in green) connects the operating rooms from the outside. It is a non-sterile environment, used for patient transfer and equipment and stretcher storage. Lastly, offices and staff areas are shown in pink. Together, these areas make up what is referred to as the "OR".

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<sup>1</sup> The authors would like to thank the management, administration, and staff at the IWK for their hard work and dedication to the project. The project could not have succeeded without their involvement and support.

**Figure 1 – Original OR Layout**

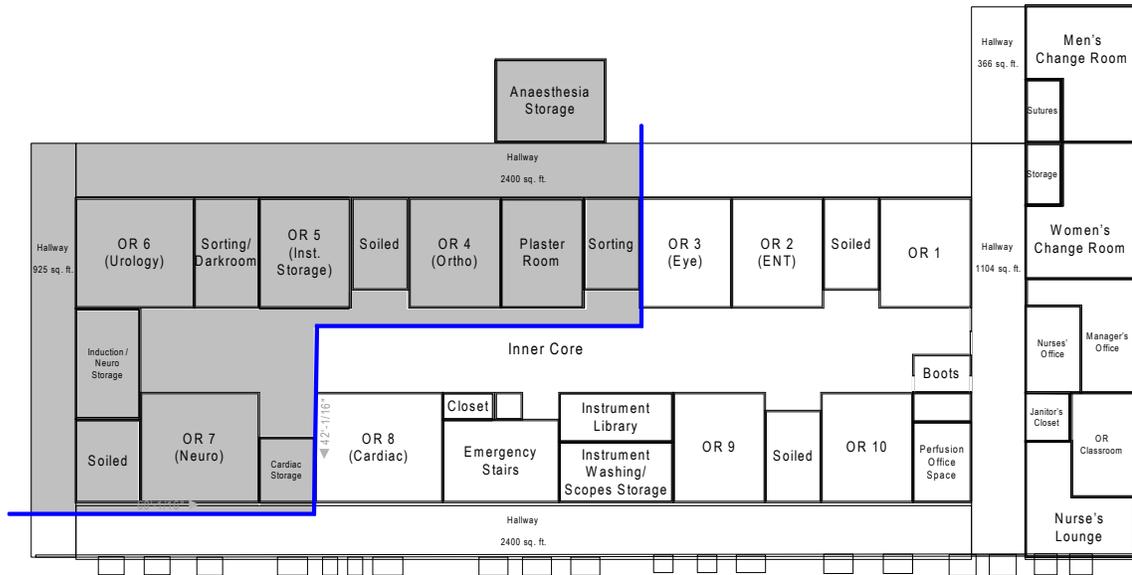


**OR Renovations**

In September 2006, the OR started preparing for large-scale renovations that would begin in June 2007. The renovations are designed to update equipment, standardize the operating rooms, and ultimately provide additional space for patient care. By standardizing the operating rooms, so that they are equipped to handle any procedure, the OR can schedule surgeries more effectively and efficiently.

The IWK will complete the renovations in two phases, with alternating halves of the OR under construction in each phase. As Figure 2 shows, the wall dividing construction and non-construction areas for Phase 1 will result in the loss of three operating rooms, four storage rooms, and roughly half of the Inner and Outer Cores. It is important to note that the OR will continue to operate at its normal capacity throughout the renovations, with elective surgeries taking place in five of the remaining six operating rooms and emergency surgeries taking place in the sixth. This creates an interesting challenge, as the OR will lose half of its space but not half of its demand.

**Figure 2 – Phase 1 Renovations**



Even before the renovations began, the OR had an inventory storage problem: window sills were used for storage, long forgotten supplies had expired, sterile supplies were stored in non-sterile environments, and one operating room had been converted into a storage room. Part of the problem was that staff had a conservative stock policy due to the potentially severe repercussions of stock outs. This culture caused staff to keep items on-hand that had not been used in years, on the off chance that they might be needed again. Another contributor to the inventory problem was the lack of central storage locations for items. Custom surgery packs (bulky packs containing the necessary disposable supplies for a given procedure) were stored in twelve different locations in the OR. In addition, since these locations were not fixed they often changed from day to day. This led to over ordering because the total inventory levels could not be easily observed.

**Problem Statement**

The purpose of this project was two-fold. The first task was to document and analyse the current inventory in the OR to determine if it would fit into the reduced space. Second, if the inventory would not fit, a plan was needed to help the OR operate at its desired service level in the new space. This involves identifying ways to make efficient use of the space available, create new storage spaces where possible, and minimize inventory levels. (A formal policy was considered beyond the scope.)

**Methods**

The initial focus of the project was to identify, catalogue, and measure inventory to determine if it would fit into the reduced space. If it was found that the inventory levels were too high to fit all the supplies in the reduced space, strategies were developed to reduce inventory and maximize the use of space available.

**Assessing Inventory Levels**

The first step in cataloguing the inventory was to define what constituted “inventory”. For the purpose of this analysis, any mobile items (with a few exceptions) were considered “inventory”. This included surgical equipment, consumable supplies, stretchers, storage carts, reference materials, and surgical instruments. The first exception was materials stored

in the operating rooms. The organization of inventory within an operating room is based on the nature of the operations performed there, and is complex enough to merit a study unto itself. Second, general supplies kept at scrub sinks that would be lost in Phase 1 were not considered. These supplies are available at every sink, so it was not necessary to move them. Finally, the cleaning supplies kept in the soiled rooms were not considered for the same reason as the sink supplies.

Once the definition of inventory had been determined, items were catalogued and measured. Rather than identifying and measuring individual items, smaller items were generally grouped together based on storage method, such as in cases or on carts. An Excel spreadsheet was used to track each item (or item grouping), its measurements (length, width, height, and volume), and current location. Items that could not be stacked (e.g. carts, equipment) had their height recorded as 71.6 inches, the 95<sup>th</sup> percentile reach height for women. (Wickens, 2004) (This value was chosen because it is reachable by 95% of women and a greater percentage of men.) The total volume of inventory was 10,277 ft<sup>3</sup>.

### Assessing Storage Space

The next step was to compare this volume with the volume that would be available during renovations. All areas that would be dedicated to inventory storage were identified and measured. Since the theoretical storage volume could never be fully utilized in practice (due to oddly shaped items, and the need for accessibility), it was assumed that one third of the storage space would be lost. The total volume of available storage space was estimated to be 6715 ft<sup>3</sup>. This meant that the space required was 152% of the space available. Thus, strategies had to be developed that would reduce the space requirements.

### Reducing Space Requirements

No additional storage space existed elsewhere in the hospital, and the project team concluded that the only way to operate in the reduced space would be to minimize the inventory and keep only what was necessary.

Clinical Leaders (operational management) were approached to get their opinions regarding where items should be placed within the OR during Phase 1, as well as to identify storage areas that were not being properly utilized. After identifying the areas for improvement, methods were developed and implemented to maximize the use of space. These methods included 5S events, equipment and inventory consolidation, and staging inventory elsewhere in the hospital.

**5S Events<sup>2</sup>.** Several 5S events were held within the OR during the project. Since hospital personnel were not familiar with the concept of 5S, an introductory presentation was given to explain the methods and benefits of 5S and to collect suggestions about which rooms needed organization most. Six rooms were identified that could benefit from the events. Each event was executed by a team consisting of the students, the nurse responsible for the room's upkeep, a housekeeping employee, and any specialists involved in the room (e.g. Perfusion specialists were involved in the event for the Cardiac Storage room). On average, the three events held during the project resulted in a 50% reduction in space requirements. The success of the first event led many staff members to perform their own "mini-5S" events on their personal workspaces, resulting in further inventory reductions. Figure 3 shows the before and after views (left and right, respectively) for one of the 5S events.

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<sup>2</sup> 5S is a Japanese methodology for organization. The goal of 5S is to reduce waste by maintaining visual order, organization, cleanliness, and standardization of inventory storage. The five S's are: sort, straighten, shine, standardize, and sustain

Figure 3 – Before and After a 5S Event



**Inventory Consolidation.** Inventory consolidation involved the application of 5S concepts on a smaller scale, such as a single cart or shelf. This method was applied to several carts in the Inner Core, as well as shelves in several of the storage rooms. A Clinical Leader successfully reduced two exchange carts (a cart filled with consumable supplies for surgery, sent to the Storage Department on a daily basis for replenishment) to a single cart. Not only did this result in a space reduction in the OR, it also meant fewer trips to the Storage Department. This was done in December 2006, and by April 2007, there had been no incidents of stock outs.

**Equipment & Inventory Staging.** Some inventory items were kept onsite for convenience. This included stretchers, case carts, a variety of equipment, and custom surgery packs. Since the luxury of extra space will be lost during renovations, it was important to find alternative storage locations for these items. The Clinical Leaders determined that it was only necessary to have one stretcher in the Outer Core for each operating room in use (i.e. five at a time). The remainder could be staged elsewhere. Similarly, the case carts could be kept in a hallway just outside the OR, and brought in as required.

It was also decided that the quantity of custom surgery packs kept in the OR was excessive: there were several months' demand in the OR, despite the fact that packs could be reordered in a single week. A logical location to store the excess packs was the Storage Department, as many of the packs were already ordered through them. The manager of that area was contacted and agreed to order all packs through the department as well as store the excess packs there. This resulted in a 500 ft<sup>3</sup> space savings in the OR. Finally, it was decided that since lasers were never needed on an emergency basis, they could be stored elsewhere. Space was found for the lasers in the Women's side of the hospital.

### Inventory Plan

After identifying the space saving methods, the results were summarized in a spreadsheet for the Clinical Leaders and OR staff. The Inventory Plan was an extension of the Inventory Catalogue: a list of each item in the OR, its measurements, and current location as well as recommendations for where it will be placed during Phase 1, methods to reduce its size, expected new volume and any additional comments to aide in the space reductions. Accompanying the Inventory Plan was a map of the OR with the proposed placement of the reduced items.

### Analysis

The initial analysis compared inventory levels to the storage space available during Phase 1, and showed that the inventory would not fit into the reduced space. The proposed inventory reductions will result in a space requirement of approximately 6285 ft<sup>3</sup>. This represents 90% of the space available during Phase 1, although this does not account for constraints imposed by sterility. Sterile items can only be stored in the Inner Core, and it is at its maximum storage capacity. The items that could not be assigned sterile storage locations in the inventory plan amounted to a volume of 430 ft<sup>3</sup>. However, approximately 1150 ft<sup>3</sup> remains available in the Outer Core. If the constraints are relaxed, all items could fit into the OR. Table 1 shows the space required in the Inner and Outer Cores, as well as the space available.

**Table 1 – Space required and available (ft<sup>3</sup>)**

<i>Area</i>	<i>Required</i>	<i>Available</i>
Inner Core	3024	2448
Outer Core	3261	4417

As shown in Table 1, the space required in the Inner Core is 124% of the space available, while the space required in the Outer Core is only 70% of the space available.

### Recommendations

It was recommended that the suggested space reductions outlined in the Inventory Plan be implemented. The report given to Clinical Leaders outlined all opportunities for space reductions as well as future locations for each item or item grouping. These recommendations attempted to place items in an ideal location while still ensuring that they fit in the space.

It was also recommended that Clinical Leaders identify any items currently kept in the Inner Core that could be moved to the Outer Core. It was also suggested that they should identify and implement any further opportunities for space reductions (e.g. additional 5S events).

### Conclusion

It is not possible for the OR’s current inventory to fit into the reduced space during renovations. If the proposed changes to reduce the inventory are implemented, and options are explored to move Inner Core items into the Outer Core, it will be possible to fit into the reduced space. However, aggressive steps must be taken to identify the items that are not sterile and therefore can be kept in the Outer Core.

The transition to Phase 2 will be considerably less work than the transition to Phase 1. This is because the OR will already have a reduced inventory. The OR will also have all inventory stored on carts with wheels, thus allowing the move to occur very quickly with minimal labour.

This project will benefit the OR in several ways. The reduced inventory will allow the OR to operate more efficiently within the larger space after renovations are complete. With more centralized inventories, the chance of overstocking is reduced. The centralized inventories will also reduce the amount of outdated stock, which reduces the amount of waste in the department. Thus, the implementation of the proposed inventory reductions in this report will have lasting benefits for the department.

### Authors' Note

A follow-up visit to the IWK Children's OR was made several weeks after submitting the final report to the Clinical Leaders. In this short time, the Clinical Leaders had implemented all of the recommended space reductions, as well as many of their own. They were able to fit all of the OR's items into the reduced space more than a month ahead of the schedule proposed by the authors. The staff were pleased with the success of the project and were confident in their ability to operate in their temporary space. (Beauchamp Day, 2007), (Gillis, 2007)

### References

- Beauchamp Day, Leigh. "Real World Solutions", Dalhousie News [web page] Apr 2007; <http://www.dal.ca/news/2007/05/14/IWK.html>. [Accessed 3 August 2007]
- Gillis, John. "IWK Staff Thrilled with Uncluttered Look", Chronicle Herald. April 22, 2007.
- "IWK Health Centre: About Us." [web page] n.a.; <http://www.iwk.nshealth.ca/index.cfm?objectid=83035FEC-96DF-D496-5C20716B6DFB391E>. [Accessed November 30, 2006]
- "IWK Health Centre, Paediatrics History." [web page] n.a.; <http://pediatrics.medicine.dal.ca/department/history3.htm>. [Accessed November 26, 2006]
- Wickens, C. D., Lee, J. D., Liu, Y., & Becker, S. E. G. An Introduction to Human Factors Engineering Second Edition, New Jersey: Pearson Prentice Hall, 2004.

# Organizational Behaviour

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## A META-ANALYSIS OF WORK TEAMS AND PROCEDURAL JUSTICE

Meta-analysis is used to assess the somewhat neglected relationship between work teams and procedural justice. Specifically, the effect of a team's process control, their level of commitment, collectivism and the presence of voice on procedural justice are observed. Results of the meta-analysis show that there is a strong relationship between the factors tested and highlights the need for future research in this area.

### Introduction

In a work environment where equity has become a key issue, employees often question whether the procedures used to assess allocations or outcomes are just (procedural justice) (Colquitt, 2001; 2004). Although much organizational scholarly research has addressed the question of procedural justice at work (Colquitt, Conlon, Wesson, Porter & Ng, 2001; Cohen-Charash & Spector, 2001; Hauenstein, McGonigle & Flinder, 2002), this work has only begun to address a key development in work environments: the increasing use of teams at work (Mills, Helms Mills, Forshaw & Bratton, 2007). This is surprising given the seminal work of Lind and Tyler (1988) who suggested that their group value model of procedural justice would be of special interest for organizational scholars looking at work teams. In this oft cited piece, Lind and Tyler put forth two models of procedural justice (self interest model and group value model) which they argued should be viewed holistically. Specifically, they suggested that the group value model would be particularly useful for the study of groups at work to understand group dynamics and the formulation of group procedural justice perceptions. Whilst much of the organizational literature on organizational and procedural justice at work draws on and cites Lind and Tyler's model, most have abandoned the group value model and have instead drawn solely on the instrumental model to understand how procedural justice perceptions at work are formed (see for example: Colquitt, 2001; Colquitt et al., 2001). As a consequence of using only an instrumental model of procedural justice, many researchers have also limited their work to the individual level of analysis.

The rationale for this meta-analysis is threefold. First, the meta-analysis provides a literature review of procedural justice as well as past studies looking specifically at the relationship between work teams and procedural justice. Second, the meta-analysis cumulates the results of the relationship of these two variables across studies. Third, it is hoped that findings pertaining to the strength of the relationship between work teams and procedural justice will give some indication of the need for organizational scholars to focus on this relationship in future research.

### Literature Review

#### Early Work on Procedural Justice

Research on procedural justice at work has proliferated in recent years (Hauenstein et al., 2001). In conducting their analysis, organizational scholars have looked to the early work of psychologists for ways of studying justice in a work setting and have thus adopted the early social psychological work in justice. But in drawing on popularized social psychological work, organizational theorists may have fallen short in accounting for early questions posed in the social psychological literature, questions which in today's context are increasingly gaining relevancy.

Early works on procedural justice put forth the notion that individuals were not only motivated by outcomes (distributive justice) when formulating fairness judgments but were also concerned with the fairness of the processes and procedures used in arriving at a particular outcome (procedural justice). In a field previously dominated by notions of distributive justice, Thibaut and Walker (1975) originated the notion of procedural justice but defined it in terms of the allocation of outcome fairness thus placing greater emphasis on outcomes rather than the process itself (Lind & Tyler, 1988). Drawing on Thibaut and Walker's seminal work, Leventhal (1980) advanced the notion of procedural justice by arguing for a wider application across social contexts and concurrently across academic fields. Specifically, Leventhal (1980) developed procedural fairness standards which could be applied to any situation to determine the procedure's fairness. He put forth six rules pertaining to procedures: that they should be consistent across all involved, not be biased, based on accurate information, correctible, all parties should have the opportunity for representation and should conform to personal standards of ethics (Leventhal, 1980). It is based on this earlier work that Lind and Tyler (1988) developed their theory of procedural justice which outlines the main arguments of this paper.

Lind and Tyler's (1988) work advanced the notion of procedural justice by putting forth two models that when taken together were said to provide a unified and holistic view of procedural justice. Informed by Thibaut & Walker (1975), Leventhal (1980) and drawing primarily on notions of self interest, Lind and Tyler (1988) offered as their first model "the self interest model" (also referred to as the instrumental model). This model suggested that individuals experienced the fairness of procedures based on the maximization of personal gain (instrumental gains). But arguing that a sole focus on this model to study procedural justice would provide an incomplete analysis of the subject, the theorists developed another model which they termed: "the group value model" (also referred to as the relational model). Fundamentally, this referred to the idea that individuals developing affective relations through their interaction in groups put aside their individual self-interest when formulating perceptions of fairness in favor of helping all members in a group. In their work "The Social Psychology of Procedural Justice", Lind and Tyler (1988) devoted an entire chapter to the application of procedural justice in organizational settings and specifically the final chapter recommended a "group value model" as pertinent for study in an organizational context. Lind and Tyler (1988) suggested that the "group value model" offered some insight into group dynamics and their formulation of procedural justice. They predicted that groups experiencing process control, commitment and voice would experience higher levels of procedural justice (Lind & Tyler, 1988: 235-236).

### **Organizational Justice Literature and Procedural Justice**

The wealth of organizational justice research privileging a self interest model at an individual level of analysis as opposed to a group or team level of analysis is evident in past meta-analysis's conducted on the subject (Colquitt et al., 2001; Nowakowski & Conlon, 2005; Cohen-Charash & Spector, 2001; Hauenstein et al., 2002). To date, three known meta-analysis have been conducted on the organizational justice literature.

The first of the three known meta-analysis is that of Colquitt, Conlon, Wesson, Porter and Ng (2001). They included 183 studies and drew on Colquitt's (2001) operationalization of organizational justice as a construct with four dimensions, namely procedural, distributive, interpersonal and informational justice. This meta-analysis confirmed Colquitt's 2001 study that provided evidence of construct discrimination for each dimension of organizational justice (Colquitt, 2001; Colquitt et al., 2001). Although the meta-analysis looked at each dimension of the construct of organizational justice, it concluded that procedural justice was positively related to outcome satisfaction, job satisfaction, organizational commitment, trust and agent-referenced evaluation of authority. A weak relationship was reported between procedural justice and agent referenced organizational citizenship behavior. No analysis was conducted between work teams and procedural justice.

In an other attempt to meta-analyze results of the organizational justice literature, Cohen-Charash and Spector (2001) included 190 studies and examined organizational justice using a slightly different operationalization of the construct. They operationalized organizational justice as a construct with three dimensions namely distributive, procedural and interactional (collapse of interpersonal and informational justice). In this meta-analysis, organizational justice as a global construct was meta-analyzed with a series of factors, including demographic variables, personality variables, work performance, counterproductive work behaviors, as well as others. As with the Colquitt et al. 2001 meta-analysis, this study did not address the team variable and procedural justice focusing instead on instrumental concerns of organizational justice.

Recently, the two fore mentioned meta-analysis (Colquitt et al., 2001; Cohen-Charash & Spector, 2001) were compared and contrasted in a paper by Nowakowski & Conlon (2005) in which the issue of the lack of attention given to the relationship between teams and procedural justice was again neglected. Finally, the third meta-analysis (Hauenstein et al., 2002) relevant to the organizational justice literature included 63 studies and attempted to estimate the relationship between procedural and distributive justice. Again, the authors made no mention of the relationship between teams and procedural justice.

### **Key Directions for Procedural Justice Research in Organizations**

The above paragraphs outline the relative neglect of the team variable and relational model of procedural justice in the organizational justice literature. Although Lind and Tyler's (1988) instrumental model of justice has clearly received the most attention, there are some studies which have looked at the relationship between teams and procedural justice, thus address Lind and Tyler's predictions that teams having process control, voice and experiencing commitment may be highly related to procedural justice.

Perhaps the only explicit mention of the neglect of a relational model of procedural justice and its potential relevancy for explaining team dynamics is found in a brief paragraph in Colquitt's (2001: 388-389) oft cited work. Unfortunately, Colquitt's mention only contributed to the further neglect of a relational model of procedural justice by his stating that this aspect of Lind and Tyler's work (1988) would be subsumed "under other items that measure procedural and interactional justice" for the purpose of his study (Colquitt, 2001:389). His specific reasons for subsuming the relational model were unspecified. Although Colquitt's 2001 study did investigate the relationship between teams and procedural justice, Lind and Tyler's relational model was marginalized in Colquitt's (2001) analysis.

Studies investigating the relationship between teams and procedural justice have been few. This is surprising given the strong relationship of these variables listed in the existing research. To date, the relationship between process control within teams and procedural justice has been observed with a strong positive correlation found (Giacobbe-Miller, 1995; Philips, 2002), team commitment and procedural justice have been investigated with strong positive correlations reported (Colquitt, 2001; Konovsky, Folger & Cropanzano, 1987; Mansour-Cole & Scott, 1998; Masterson, Lewis, Goldman & Taylor, 2000; Mossholder, Bennett & Martin, 1998; Murphy, Ramamoorthy, Flood & MacCurtain, 2006; Nauman & Bennet, 2000) and the ability to voice concerns in a team and procedural justice have been the subject of research also reporting strong positive correlations (Bies, 1987; Bowes-Sperry, Kidder, Foley & Chelte 2005; Conlon, 1993; Dulebohn & Ferris, 1999; Korsgaard, Schweiger & Sapienza, 1995). Perhaps the only disagreement when looking at the relationship between teams and procedural justice has been with the notion collectivism. Studies investigating this relationship have mostly found a positive correlation between team collectivism and procedural justice (Bowes-Sperry et al., 2005; Colquitt, 2001; Colquitt, Noe and Jackson, 2002) with the exception of Colquitt's 2004 study that found a weak negative relationship.

Comparing the amount of studies listed investigating the relationship between teams and procedural justice to the total amount of studies investigating an instrumental model of procedural justice highlights the neglect of work done in this area. On a positive note, the listed studies enable the possibility to meta-analyze the correlations between the variables to assess the strength of the relationship between teams and procedural justice to outline directions for future research.

### Rational for the Meta-Analysis

In their seminal piece, Lind and Tyler (1988) put forth a unified model of procedural justice composed of two interdependent models which they called the self interest model (known as instrumental model) and the group value model (known as the relational model). Lind and Tyler made predictions for both models. Specifically, it was hypothesized that the group value model would be useful for organizational justice researchers to investigate team dynamics at work and the instrumental model would be useful to understand individual behavior at work. They specified the need for researchers to draw on both models to create a holistic examination of procedural justice.

Although three meta-analyses (Colquitt et al., 2001; Cohen-Charash & Spector, 2001; Hauenstein et al., 2002) have been conducted to date in the organizational justice literature, none have investigated the relationship between teams and procedural justice. Instead, the specific relationships investigated in the past meta-analysis have taken what Lind and Tyler (1988) termed an instrumental approach in their examination of organizational justice and a particular outcome.

In an effort to test the predictions put forth by Lind and Tyler's (1988) group value model, this meta-analysis looks at the relationship between teams and procedural justice. Lind and Tyler hypothesized that a relational model would be useful in predicting the effect of team process control, team voice and team commitment on procedural justice. This meta-analysis looks at these relationships in hopes of addressing Lind and Tyler's concerns, outlining areas for future research and assess if the current area's neglect is warrantable.

### Research Measures and Hypothesis

The team construct used in this meta-analysis draws on Lind and Tyler (1988) predications based on a group value model of procedural justice. In their seminal piece on procedural justice, Lind and Tyler predicted that teams experiencing process control, commitment and voice would experience high levels of procedural justice. Added to this model is the variable of collectivism as past studies have highlighted the importance collectivism in workplace teams (Bowes-Sperry et al., 2005; Colquitt, 2001; Colquitt, 2004; Colquitt et al., 2002).

For the purpose of this meta-analysis, team (independent variable) is defined as a group of two or more individuals who have interdependent work tasks, are committed to their fellow team members and experience a degree of collectivism. In their work tasks, they experience a degree of process control and have the opportunity to voice concerns relevant to their work tasks. Procedural justice (dependent variable) is defined as the fairness of the process and procedures used to determine outcome distributions or allocations (Colquitt et al., 2001). Following Leventhal (1980), the process must be consistent across all people and across all time, free from bias, use accurate information, correctible, conform to ethical standards and ensure that opinions of all involved have been taken into account.

**Teams.** Central to this meta-analysis is the question of a relationship as well as the strength of the proposed relationship between work teams and procedural justice. Based on Lind and Tyler (1988), it is suggested that there will be a positive relationship between work teams and procedural justice (see table 1 for conceptual model).

*Hypothesis 1:* There is a positive correlation between work teams and procedural justice.

**Process Control.** Research on work teams who were given the opportunity to influence the collective decisions made by the team concerning issues of procedural justice have shown a positive relationship between the process control experienced by the team and their experience of procedural justice (Giacobbe-Miller, 1995; Philips, 2002). Therefore it is hypothesized that there will be a positive relationship between process control in work teams and procedural justice.

*Hypothesis 2:* There is a positive correlation between process control in teams and procedural justice.

**Commitment.** Studies have shown that work teams who experience a high level of commitment to their team are very concerned that the procedures used within their work teams when resolving issues are fair and just (Colquitt, 2001;

Konovsky et al., 1987; Mansour-Cole & Scott, 1998; Masterson et al., 2000; Mossholder et al., 1998; Murphy et al., 2006; Nauman & Bennet, 2000). Existing theory suggests that committed work teams will experience higher levels of procedural justice

*Hypothesis 3:* There is a positive correlation between commitment in teams and procedural justice.

**Collectivism.** Past research has shown that teams who experience a high degree of collectivism formulate high perceptions of procedural justice (Bowes-Sperry et al., 2005; Colquitt, 2001; Colquitt, 2004; Colquitt et al., 2002). Based on these past findings, it is hypothesized that there will be a positive relationship between collectivism and procedural justice.

*Hypothesis 4:* There is a positive correlation between team collectivism and procedural justice.

**Voice.** Existing research has outlined that teams whose individuals are encouraged to voice their concerns experience higher levels of procedural justice (Bies, 1987; Bowes-Sperry et al., 2005; Conlon, 1993; Dulebohn & Ferris, 1999; Korsgaard et al., 1995). Based on the results of these past studies, it is theorized that there will be a positive relationship between voice and procedural justice.

*Hypotheses 5:* There is a positive correlation between voice in teams and procedural justice.

## Method

### Meta-Analysis Strategy

The statistical method of meta-analysis has been praised for its ability to cumulate results across studies as they pertain to a particular relationship in the literature while correcting for various artifacts that can bias the relationship estimates (Hunter & Schmidt, 1982). Particularly useful in areas where there has been debate about the nature of a relationship across studies, this method has also been useful in tabulating with certitude non-controversial relationships to assess their strength and highlight the specific areas where there is a need for future research. Although three meta-analyses (Colquitt et al., 2001; Cohen-Charash & Spector, 2001; Hauenstein et al., 2002) have been conducted in the organizational justice literature to date, this meta-analysis is the first to focus on the relationship between teams and procedural justice. The meta-analysis follows the statistical and theoretical processes currently put forth and accepted in the literature (Hunter & Schmidt, 1982; Rosenthal, 1991; Rosenthal, 1978; Hedges & Olkin, 1980; Hunter & Schmidt, 2004).

### Sample of Studies

To populate a list of studies for the meta-analysis, a basic search on ABI/Inform Global, EBSCO Academic Search Premier and Sage full text was conducted using the search terms: “teams and procedural justice”; “teams and organizational justice”; “groups and procedural justice” and “groups and organizational justice”. Articles that were published between the years of 1975-2006 were given special attention. Articles published prior to 1975 were not included for two reasons: this is the year Thibaut & Walker operationalized the notion of procedural justice and studies prior to 1975 would not likely report the necessary statistics for the meta-analysis (Colquitt et al., 2001).

Following this preliminary search, author names that appeared prominent in the field were searched individually. Journals identified as hosting many organizational justice articles were also searched manually. Finally, reference lists of certain studies that appeared to fit the criteria for inclusion were searched. This was done to identify seminal works which may have been published as book chapters and therefore not identified on the library search. The search for studies yielded a total of 127 articles.

### Inclusion Criteria and Coding Studies

Studies chosen for inclusion in the meta-analysis had to report correlations for at least one of the presence factors of the team variable and procedural justice. For a study to be included, procedural justice needed to be operationalized

according to Leventhal (1980) and Lind and Tyler (1988) criteria and teams needed to refer to groups whose members were interdependent in their work tasks while including the presence of at least one team factor above mentioned. Studies not reporting the needed statistics or operationalizing the examined variables differently could not be included in the study. Of the 127 articles found, 16 articles were included in the meta-analysis (these are indicated with a \* in the references). Articles that met the inclusion criteria were reviewed and coded according to the team factors present. Studies were coded for the following information: year of publication, sample size, presence of team factor (independent variable: this included process control, commitment, collectivism and voice), and procedural justice (dependent variable).

### Results

To assist in the computation of the meta-analysis, a software package which is based on Hunt and Schmidt guidelines for conducting meta-analysis was downloaded from the internet ([www.meta-analysis.com](http://www.meta-analysis.com)). Each study was reviewed and sample sizes as well as the correlation (r) reported in the study looking at the specified relationship was noted. To enable a comparison across studies, the correlations were corrected for effect sizes.

In total, five separate meta-analyses were run. This was done to focus in on particular relationships within the literature that would otherwise be subsumed under other variables but could potentially offer insights. Results of the meta-analysis were analyzed using Cohen’s (1977) guidelines and are listed in table 1.

**Table 1: Results from the Meta-Analysis**

<i>Presence of a Team Factor</i>	<i>r</i>	<i>k</i>	<i>n</i>
<i>Process Control</i>	<i>0.316</i>	<i>2</i>	<i>538</i>
<i>Commitment</i>	<i>0.421</i>	<i>8</i>	<i>1,982</i>
<i>Collectivism</i>	<i>0.272</i>	<i>5</i>	<i>3,428</i>
<i>Voice</i>	<i>0.305</i>	<i>5</i>	<i>1,215</i>
<i>All Studies</i>	<i>0.324</i>	<i>20</i>	<i>7,163</i>

Cohen (1977) guidelines: .10 small; .10 to .25 medium; .25 to .45 large

The results from this meta-analysis show substantial support for every hypothesis tested. Hypothesis 1 theorized that there would be a positive correlation between work teams and procedural justice. This hypothesis was supported with a large effect size of  $r = 0.324$ . Hypothesis 2 which looked at the relationship between process control in teams and procedural justice was supported with a reported  $r = 0.316$ , which according to Cohen (1977) is a large effect size. The third hypothesis looking at the relationship between commitment and procedural justice reported the most substantial effect size in the meta-analysis,  $r = 0.421$  which according to Cohen’s guidelines (1977) is considered a large effect size. Hypothesis 4 looking at the relationship between team collectivism and procedural justice also reported a large effect size,  $r = 0.272$ . Finally, hypothesis 5 which predicted a positive correlation between voice in teams and procedural justice was also supported with a large effect size,  $r = 0.305$ .

### Discussion

The results from the meta-analysis strongly support the predictions of each hypothesis listed in the study. The most notable relationships was that of commitment and procedural justice which suggests that teams members who are committed to their work teams will be influential to one and other in their formulation of procedural justice perceptions. Another relationship worthy of mention was that of team and procedural justice. This relationship proved strong which should alarm organizational justice researchers of its need for further investigation. Finally the factors of process control, voice and collectivism also proved to be strongly related to procedural justice. This highlights without a doubt the fertility

of this area for future research.

As the limited work on the nature of teams and procedural justice suggests, there is a strong and uncontested relationship between the two variables. With the rise of work teams within organizations, it is perhaps time for organizational justice scholars to focus on both instrumental models of procedural justice and relational models of procedural justice. As has been previously indicated, the organizational justice literature has privileged an instrumental view of procedural justice conducted at the individual unit of analysis. The results of this meta-analysis clearly show that there is a strong relationship between teams and procedural justice. Whereas instrumental models of procedural justice focus at the individual level of analysis and assume that individuals at work are motivated by instrumental outcomes, the group value model of procedural justice hints to the dynamics within teams and socialization processes that take an individuals focus away from self instrumentality and shift it to the well being of their team members. In a work environment dominated by team work, perhaps the instrumental model of procedural justice is ill equipped on its own to explain these unique features of teams which influence the collective formulation of procedural justice perceptions. Teams that experience voice, process control, commitment and a degree of collectivism have been shown to experience high levels of procedural justice. Notions of procedural justice at the team level's previous neglect should be of extreme alarm to organizational justice researchers concerned with providing a holistic view of procedural justice formulations within a team work environment.

This meta-analysis highlights and voices a previously silent argument. In 1988, Lind and Tyler noted that procedural justice be studied as a two tier model consisting of the self-interest and group value model while making specific predictions for each model. Whilst the predominance of the relationship under question was hinted to by Lind and Tyler, it is thus surprising that in relation to instrumental notions of procedural justice, relational models have either been subsumed with instrumental models or neglected completely in the literature. Given the strength of the reported relationship, this area is fruitful for future researchers.

### **Limitations of the Study**

The main limitation of this study and for this matter any study using a meta-analytic approach is that by drawing on previous studies to populate it's sample, it is limited to the quality of those studies. Many studies looking at procedural justice use students as subjects in the research design and most if not all studies rely on self reported data. The use of students can be said to be problematic in that findings may not be generalizable to other contexts. Relying on self-reported data is also problematic as it always introduces a potential for faking or inflating of the truth. Since the meta-analysis relies on a large number of studies to understand relationships between variables, the limitations of all studies affect the meta-analysis but on the other hand there is a potential that the small errors be drowned out (Hunter and Schmidt, 1982; Rosenthal, 1991).

### **Conclusions**

This study has looked at the relationship between teams and procedural justice based on a 1988 prediction by Lind and Tyler that this relationship would be of relevancy to organizational scholar researchers. Upon researching this relationship, it was realized that the current research on organizational justice and specifically procedural justice had neglected studying this relationship in favor of an instrumental approach to procedural justice. This meta-analysis has provided a literature review of the relationship of teams and procedural justice and using suggested and accepted meta-analytic technique has cumulated the results across studies. The results from the cumulation suggest that there is a strong relationship between teams and procedural justice. In an effort to extend and support Lind and Tyler's 1988 predictions, this paper suggests that organizational justice scholars interested in procedural justice begin incorporating notions of Lind and Tyler's group value model in the research for its potential in explaining the special nature of teams and team dynamics in formulation procedural justice perceptions.

## References

- Bias, R., "Beyond "Voice": The Influence of Decision-Maker Justification and Sincerity on Procedural Fairness Judgments," *Representative Research in Social Psychology*, 17(1), (1987), 3-14.
- Bowes-Sperry, L., Kidder, D.L., Foley, S. & Chelte, A. F., "The Effect of Peer Evaluations on student reports of learning in a team environment: Procedural Justice Perspective," *Journal of Behavioral and Applied Management*, 7(1), (2005), 4-24.\*
- Cohen, J., *Statistical Power Analysis for the Behavioral Sciences*, New York: Academic Press, 1977.
- Cohen-Charash, Y. & Spector, P., "The role of justice in organizations: A meta-analysis," *Organizational Behavior and Human Decision Processes*, 88(2), (2001), 278-321.
- Colquitt, J., Conlon, D., Wesson, M., Porter, C. & Ng, Y., "Justice at the millennium: A meta-analytic view review of 25 years of organizational justice research," *Journal of Applied Psychology*, 86(3), (2001), 425-445.
- Colquitt, J., Noe, R. & Jackson, C., "Justice in teams: antecedents and consequences of procedural justice climate," *Personnel Psychology*, 55, (2002), 83-109.
- Colquitt, J. A., "On the dimensionality of organizational justice: A construct validation of a measure," *Journal of Applied Psychology*, 86, (2001), 386-400. \*
- Colquitt, J., "Does the justice of the one interact with the justice of the many? Reactions to procedural justice in teams," *Journal of Applied Psychology*, 89(4), (2004), 633-646.\*
- Conlon, D. E., "Some tests of the self-interest and group-value models of procedural justice: Evidence from an organizational appeal procedure," *Academy of Management Journal*, 36, (1993), 1109-1124.\*
- Dulebohn, J. H. & Ferris, G. R., "The role of influence tactics in perceptions of performance evaluations fairness," *Academy of Management Journal*, 42, (1999), 288-303.\*
- Giacobbe-Miller, J., "A test of the group values and control models of procedural justice from the competing perspectives of labor and management," *Personnel Psychology*, 48(1), (1995), 115-142.\*
- Hauenstein, N. M., McGonigle, T. & Flinder, S., "A meta-analysis of the relationship between procedural justice and distributive justice: Implications for future research," *Employee Responsibilities and Rights Journal*, 13(1), (2001), 39-56.
- Hedges, L. & Olkin, I., "Vote Counting methods in research synthesis," *Psychological Bulletin*, 88(2), (1980), 359-369.
- Hunter, J. & Schmidt, F., *Meta-analysis: cumulating research findings across studies*, California: Sage, 1982.
- Hunter, J. & Schmidt, F., *Methods of Meta-Analysis*, Thousand Oaks: Sage, 2004.
- Konovsky, M., Folger, R. & Cropanzano, R., "Relative Effects of Procedural and Distributive Justice on Employee Attitudes," *Representative Research in Social Psychology*, 17(1), (1987), 15-24.\*
- Korsgaard, M. A., Schweiger, D. M. & Sapienza, H. J., "Building commitment, attachment, and trust in strategic decision-making teams: The role of procedural justice," *Academy of Management Journal*, 38, (1995), 60-84.\*
- Leventhal, G., "The distribution of rewards and resources in groups and organizations," In L. Berkowitz & W. Walster (Eds.), *Advances in experimental social psychology*, New York: Academy Press, (1980), pp. 91-131.
- Lind, E. A. & Tyler, T. R., *The Social Psychology of Procedural Justice*, New York: Plenum Press, 1988.
- Mansour-Cole, D. M. & Scott, S. G., "Hearing it through the grapevine: the influence of source, leader-relations, and legitimacy on survivors' fairness perceptions," *Personnel Psychology*, 51, (1998), 25-54.\*
- Masterson, S.S., Lewis, K., Goldman, B.M. & Taylor, M.S., "Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships," *Academy of Management Journal*, 43(4), (2000), 738-748.\*

- Mills, A.J., Helms Mills, J., Bratton, J. & Forshaw, C., *Organizational Behaviour in a Global Context*, Toronto: Broadview Press, 2007.
- Mossholder, K. W., Bennett, N. & Martin, C.L., "A multi level analysis of procedural justice context," *Journal of Organizational Behavior*, 19, (1998), 131-141.\*
- Murphy, C., Ramamoorthy, N., Flood, P. & MacCurtain, S., "Organizational Justice Perceptions and Employee Attitudes among Irish Blue Collar Employees: An Empirical Test of the Main and Moderating Roles of Individualism/Collectivism," *Management Revue*, 17(3), (2006), 328-343.\*
- Naumann, S. E. & Bennett, N., "A case for procedural justice climate: Development and test of a multi level model," *Academy of Management Journal*, 43, (2000), 881-889.\*
- Nowakowski, J. & Conlon, D., "Organizational Justice: looking back, looking forward," *The International Journal of Conflict Management*, 16(1), (2005), 4-29.
- Phillips, J., "Antecedents and consequences of procedural justice perceptions in hierarchal decision making teams," *Small Group Research*, 33, (2002), 32-64.
- Rosenthal, R., "Combining results of independent studies," *Psychological Bulletin*, 85(1), (1978), 185-193.\*
- Rosenthal, R., *Meta-analytic procedure for social research*, California: Sage, 1991.
- Thibaut, J. & Walker, L., *Procedural Justice: A Psychological Analysis*, NJ: Erlbaum, 1975.

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## **FULFILLING OUR BEST-STATE POTENTIAL: ABRAHAM MASLOW'S INFLUENCE ON POSITIVE PSYCHOLOGY**

Multiple factors have led to a shift from psychology's physiologic and mechanistic beginnings to a more integrative, encompassing bio-psychosocial model in order to explore and explain human behavior: dissatisfaction with the incompleteness of the explanatory powers of the biologically-based, pathology-oriented model; a shift in funding structures; a demand for increased public accountability; and the efforts of a few luminaries. One of the eminent proponents at the heart of this shift was Abraham Maslow, and his work includes perspectives that have informed a wide range of human behavior and human potential. This paper uses a Maslowian lens as its point of departure and surveys his ideas of autonomy, human choice, spontaneity, volition, motivation, excellence, growth, and transformation (Maslow 1965, 1970, 1971, 1987) that have formed many of the precepts of what we now call the positive psychology movement.

Maslow's enthusiasm, knowledge, and far-sightedness touched many blank or partial canvases in the landscape of what has been termed humanistic psychology. Maslow developed far-reaching theories in broad areas including motivation, meta-needs, the 'value life', aesthetics, work and work relationships, intelligence, leadership, and even education (Hoffman 1988; Lowry 1979). In fact, he developed an extensive list of requisite components of strong educational programming (Simons, Irwin, and Drinnien 1987), arguing that spiritual, moral, and ethical values should be the "far goals of psychotherapy, of child care, of marriage, the family, of work, and perhaps of all other social institutions" (Maslow 1970, p. 57). Maslow sought, studied, and created intentionally unrepresentative samples, which is an approach that is generally viewed as both heretical and antithetical to the scientific tradition upon which psychology is predicated. However, this explorational style permitted unfettered data collection and contributed unique perspectives that were not bound by the confines of traditional normatively-based psychology.

Maslow was also one of the first psychologists to study industrial relations, developing his Theory Y based on the relationships people have with their jobs. His theories on job perception were harbingers that have formed the basis of specific work such as doctoral dissertations (Wrzesniewski 1999, 2002), large bodies of work surrounding work motivation, job satisfaction, and that even have helped form the human relations movement as a whole (Kelloway, Gallagher, and Barling 2004). Perhaps most importantly, Maslow made major contributions to the intellectual discussion leading to linkages between "I" and "we", or the 'interiority' (Wilber 1998) of a person, and "it", or the scientific and technological portions of the world. Acknowledging these factors has forged new ways of assessing their respective roles in human nature, culture, values, and ultimately, growth toward fulfilling our best-state potential.

Abraham Maslow developed far-reaching theories in many broad areas. This paper uses a Maslowian lens and surveys many of his ideas regarding autonomy, human volition, spontaneity, motivation, excellence, growth, and transformation (Maslow 1965, 1970, 1971, 1987) that have formed many precepts of what we now call the positive psychology movement.

### **Introduction**

Psychology has been built on positivistic and empirical architecture and has "aspired to be 'soft physics'" (Zimbardo 2004, p. 340) for many decades. Consequently, the machine of psychology has historically been ill-equipped to consider

that which cannot be empirically quantified, tested, and explained. In addition to its focus on models of control, prediction and external regulation, the study of the human mind has traditionally maintained either a negative focus or has described behavior that is encompassed by a continuum spanning the space from ‘negative’ to ‘normal’. In fact, “most research on human behavior has focused on negative or ‘bad’ phenomena” (Baumeister et al. 2001; Cameron, Bright, and Caza 2004, p. 3); an astonishing 99% of psychologically-based research conducted in the last 5 decades has maintained this pattern (Seligman 2002).

More recently, multiple factors have led to a shift from psychology’s physiologic and mechanistic beginnings to a more integrative, encompassing bio-psychosocial model in order to explore and explain human behavior: dissatisfaction with the incompleteness of the explanatory powers of the biologically-based, pathology-oriented model; a shift in funding structures; a demand for increased public accountability; and the efforts of a few luminaries. One of the eminent proponents at the heart of this shift was Abraham Maslow, and his work includes perspectives that have informed a much wider range of human behavior and human potentiality. This paper uses a Maslowian lens as its point of departure and seeks to explicate his ideas of autonomy, human volition, spontaneity, motivation, excellence, growth, and transformation (Maslow 1965, 1970, 1971, 1987) that have formed many of the precepts of what we now call the positive psychology movement.

Maslow’s enthusiasm, knowledge, and far-sightedness touched many blank or partial canvases in the landscape of what has been termed humanistic psychology. Maslow developed far-reaching theories in broad areas including motivation, meta-needs, the ‘value life’, aesthetics, work and work relationships, intelligence, leadership, and even education (Hoffman 1988; Lowry 1979). In fact, he developed an extensive list of requisite components of strong educational programming (Simons, Irwin, and Drinnien 1987), arguing that spiritual, moral, and ethical values should be the “far goals of psychotherapy, of child care, of marriage, the family, of work, and perhaps of all other social institutions” (Maslow 1970, p. 57). He was also one of the first psychologists to study industrial relations, developing his Theory Y based on the relationships people have with their jobs. His theories were harbingers of job perception work that have formed the basis of specific work such as doctoral dissertations (Wrzesniewski 1999, 2002), large bodies of work surrounding work motivation, job satisfaction, and even the human relations movement as a whole.

Although Maslow identified himself as both arrogant and a gifted thinker (Lowry 1979), perhaps even he had no idea how his various conjectures and links would form central theses in long-standing and multi-disciplinary arguments regarding the role and scope of human nature. Maslow “acknowledged his theoretical placement between Freud and Marx” (Dye, Mills, and Weatherbee 2005, p. 1383), and he echoed many of the questions of the ancient Greeks, such as ‘How good a society does human nature permit?’ (Maslow 1971, p. 203). Maslow’s approach was more aligned with the Rousseauian belief that people “are basically good but society and modern civilization corrupt their pure nature” than with Locke’s ‘tabula rasa’ or the Hobbesian notion of core selfishness (Porter 1980, p. 127), but he acknowledged that “where scoundrels, inferiors, and jealous-weak ones get power, or can and do veto the factually superior, then that society is finished” (Lowry 1979, p. 756). However, Maslow also espoused the belief that “a truly free society” with admired, empowered, and rewarded leaders (Lowry 1979 p. 756) is theoretically possible. To this end, Maslow formulated the idea of Eupsychia, or an “ideal social psychology”, to begin to theorize about “moving toward psychological health” (Maslow 1965, p. xi) and ultimately, ‘transcenders’. He believed that “the concept of psychological health is inseparable from human values”, and he “suggested that we accept values, goals, hopes, and aspirations as legitimate psychological components” (Chiang and Maslow 1977, p. v). In short, Maslow asked and began to provide answers for many questions surrounding relationships with oneself and with the role and influence of context within one’s ‘interiority’, environment, culture, and time in history.

### **Maslowian Contributions to the Foundations of Positive Psychology**

Fifty years ahead of what is considered a ‘contemporary’ movement, Maslow invented or adapted linguistic terminology that made space for the conception and explication of what we now call positive psychology (Seligman 1999). Positive psychology focuses on positive emotions, strengths, values, and virtues within individuals, in organizations, and in institutions. Positive psychology has been described as a discipline in which “researchers attempt to explain scientifically

how strengths naturally develop and are maintained and how they can be nurtured to improve people's lives" (Bacon 2005, p. 182). In fact, many historical and contemporary scholars have identified their own typologies or characterizations of areas which would be subsumed by the rubric of positive psychology today; these include processes of mental health (Jahoda 1958), dimensions of well-being (Diener et al. 1999; Ryff and Keyes 1995), developmental trajectories such as psychosocial stages (Erikson 1982), stages of moral development (Kohlberg 1981), and more global constructs such as a sense of meaning, purpose, and engagement (Keyes, Shmotkin, and Ryff 2002, Peterson, 2004 #76; Seligman, Baugher, and Lyubormirsky 2006).

### **First, Second, and Third-Force Psychology**

Maslow's work has provided an extensive range of both ideological and structural scaffolding for empirical work that is just now being undertaken. Finding himself dissatisfied with the language and structure of psychology of the times (Geiger 1971), Maslow refuted many of the strongest elements of the historically distinct and sometimes antithetical precepts of psychodynamic ('first force') and behavioristic ('second force') in favour of humanistic, or 'third force', psychology. Humanistic psychology is predicated on the beliefs that human beings are basically good, that we are governed by a biologic imperative to work toward our inherited potential, and that neurotic behavior is the result of constraints placed on us from our social or cultural environment. Humanistic psychology refutes the fundamental tenet of behaviouralism that denies difference between "mental intentionality" and "its exterior manifestation in specific, observable behavior" (Wilber 1998, pp. 70-71). While Maslow is considered to be one of the founding fathers of the humanistic movement, he also developed "a fourth psychology of transcendence" (Maslow 1971, p. 4) that gave rise to transpersonal psychology, which is rooted in metaphysics and higher levels of consciousness, including parapsychological phenomena (Boeree 2006).

### **Metaphysics, Growing-Tips, and Self-Actualization**

Maslow realized the impossibility of isolating "the pursuit of psychological truth from philosophical questions" (Geiger 1971, p. xx) and embraced the fascinating but amorphous realm of "affirming what he cannot prove" (Maslow 1971, p. 5). In fact, he commented that, "value-free philosophy of science (is) unsuitable for human questions, where personal values, purposes and goals, intentions and plans are absolutely critical for the understanding of any person, and even for the classical goals of science, prediction, and control (Maslow, 1971, p. 5). Rather than setting out to demonstrate the conditions under which something we already know is possible can occur, he posited that interesting and revolutionary growth actually comes far less tangible means, or by testing the boundaries of "personal hunches, intuitions, or affirmations" (Maslow 1971, p. 5). However, the act of bridging the chasmic divide between science and philosophy implies that we are willing and able to suspend all of our logico-deductive tendencies and training and to permit the influences of spirituality and metaphysicality to play a role in validating, rather than just explaining, how we know what we know. In his lifetime, Maslow developed large bodies of work surrounding then avant-garde ideas such as self-actualization, peak experiences, hierarchical and meta-needs, and theories of meta-motivation in order to explore "fully human health, intelligence, and aspiration" (Geiger 1971, p. xvii). Creating this theoretical space opened opportunities to begin empirical exploration of human motivation, human nature, and human opportunity in a manner that did not employ the strict principles of natural science.

Moving away from all-encompassing descriptors that sought to explain every area of the normative distribution, Maslow proposed the concept of "growing tip statistics" (Maslow 1971, p. 6), which is based on the disproportionately high levels of biologic, genetic activity that take place at the tips of plant growth. Flying in the face of traditional statistical analyses that espouse normative distributions and stratified, randomized sampling, Maslow argued that studying the capacities and abilities of a "small and selected superior group" (Maslow 1971, p. 6) had the most power to teach us about "the highest possibilities of human nature" (Maslow 1971, p. 7). One of Maslow's most interesting undertakings thus included biographical analyses of individuals whom he considered to be 'at the growing tip'. He sought to create "a generalizing account of the excellences" (Geiger 1971, p. xvi) by observing a series of behaviors that he subsequently identified as characteristic of self-actualized individuals. Maslow identified what he called growth-needs, being needs, "B-values", and meta-needs; interestingly, he felt that only about 2% of the world's population embodied true self-actualization as brought about by characteristics such as goodness, beauty, unity, transcendence, aliveness, uniqueness, perfection and necessity, justice and order, simplicity, truth, completion, richness, effortlessness, playfulness, self-sufficiency, and meaningfulness (Boeree 2006, Norwood, 2006 #575; Maslow 1987).

## Needs, Well-Being, and Interiority

Many contemporary theories contain seminal elements or represent more finely honed permutations of Maslow's work, but his most widely reproduced work is his hierarchy of needs. Although the specific taxonomy of this hierarchy has been reduced to a triangular parody in most management textbooks and the structural independence of the hierarchy has not borne out under empirical testing (Huitt 2004), the idea that humans have drive-based needs that expand beyond the realm of the purely physiologic and externally-driven was, in the context of his time (Dye, Mills, and Weatherbee 2005), a revolutionary idea. Maslow believed that the human capacity for choice and decision-making makes us "self-evolvers" (Maslow 1971, p. 10), and his needs hierarchy theory viewed self-actualization as the highest realm of being. Interestingly, self-actualization is actually a term that was invented by Kurt Goldstein (Maslow 1987) and was later popularized by Carl Rogers (Norwood 2006). Although Maslow used the term "in a much more specific and limited fashion" (Maslow 1987, p. 46), Maslowian self-actualization is "characterized by integrity, responsibility, magnanimity, simplicity, and naturalness" {Accel-Team, 2005 #576}.

Fundamental precepts of this theory are that humans have "needs" beyond mere physiologic comforts, that these motivations occur simultaneously across different levels of needs, and that higher-level needs continue to be sought until they are attained. Maslow contrasted B-values or B-needs, which are growth-based, with D-needs, or deficit needs, arguing that deficit needs must be satisfied before higher-order needs can be addressed (Norwood 2006). Theoretically, once these 'needs' are met, a person's focus shifts to the particular elemental characteristics or behaviors that can then best help them meet the highest 'need' level that they have attained. His observations led him to conclude that self-actualized individuals are reality-oriented, solution-centered, and process (rather than outcome) focused. Self-actualized people embrace solitude, share a few deep personal relationships, maintain autonomy, resist enculturation, engage in non-judgmental humor, have strong levels of self- and other-acceptance, demonstrate humility and respect toward other people, enjoy 'gemeinschaftsgefühl', or human kinship, maintain strong ethical perspectives, have a freshness of appreciation, are creative, and enjoy peak experiences (Boeree 2006; Maslow 1970).

Several other currently influential theories include foundational tenets that shadow Maslow's work. The primary human goods model (Ward and Brown 2004) is a model of risk-need relationships that maintains the core idea that "all meaningful human actions reflect attempts to achieve primary human goods", defined as life, knowledge, excellence in basic life activities such as work and play, agentic excellence (e.g.: autonomy), inner peace, relatedness, and spirituality, which includes meaning and purpose, happiness, and creativity (Ward and Brown 2004, p. 247). Ward posits that these primary human goods, which have been distilled from diverse fields such as psychology, the social sciences, evolutionary theory, ethics, and philosophical anthropology (for a review of these literatures, please see Ward and Brown, 2004), then facilitate "the actualization of potentialities" (Ward and Brown 2004, p. 246). This model posits that there is diverse but overlapping evidence from a variety of disciplines indicating that humans both seek primary human goods and that higher levels of these 'goods' leads to better well-being.

In an impressive attempt to formulate a fully commensurable paradigm, Ken Wilber's Great Chain of Being (1998) synthesizes several hundred extant hierarchies/holonarchies, which are "wholes that are simultaneously parts of other wholes" (Koestler, as reported in Wilber, 1998, p. 67). His analysis of these holonarchies concludes that they "simply deal with the interior and the exterior of the individual and the collective" (p. 66). Although a full discussion of this model is beyond the parameters of this paper, his idea of 'interiority' is one that was foreshadowed by Maslow's work and is an integral part of current theories of motivation.

## Human Motivation

Despite a lack of specific empirical support, elements of Maslow's ideas on why people would seek self-actualization continue to be represented by more contemporary theories of human motivation; these include the existence, relatedness, and growth theory (ERG) (Alderfer 1972), drive-based theories that emphasize acquisition, bonding, learning, and defending (Lawrence and Nohria 2002), socially-constructed, learning-based theories that address achievement, affiliation, and power

(McClelland 1985), and models of well-being that emphasize autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff and Keyes 1995). Despite some contradictions or mutually exclusive elements (e.g.: drive satisfaction is generally considered to be unrelated to intrinsic motivation) (Deci, Koestner, and Ryan 1999), drive-based, reward-contingent, expectancy-valence, and content-based goal theories (Deci, Koestner, and Ryan 1999) all support the Maslowian legacy of the possibility that individuals are motivated to engage in behavior that focuses ‘on our highest needs and aspirations’ (Hoffman 1988, p. 275) and that leads us closer to fulfilling our best-state potential.

Two well-known contemporary theories contain distinct seeds of Maslow’s work; Self-Determination Theory (Deci and Ryan 2000) and the Self-Concordance Model (Judge et al. 2005). Both assume that motivation is contextualized and fueled through perceived needs satisfaction, and both contend that this motivation extends far beyond the zero or midpoint of a traditional bell curve. The idea of representing intentional behavior on a continuum was introduced nearly twenty years ago (Deci and Ryan 1987), and Self-Determination Theory refines the extreme poles of controlled and autonomous motivation through its recognition of six gradient levels ranging from external (controlled) to internal (autonomous) motivation (Deci, Connell, and Ryan 1989; Deci and Ryan 1987, 2000; Gagné and Deci 2005; Ryan and Deci 2000).

Self-Concordance Theory uses a model based on external, introjected, identified, and intrinsic rewards and is based on a chain of events whereby goal self-concordance leads to sustained effort, sustained effort leads to goal attainment, goal attainment leads to need-satisfying experiences, and these, in turn, lead to positive changes in well-being (Sheldon and Elliot 1999, p. 483). On the whole, Self-Concordance Theory “predicts that individuals are happiest when stated goals match enduring interests and values” (Judge et al. 2005, p. 258), and it relies on one of the major precepts of goal-setting theory whereby goals should be specific and challenging (Locke and Latham 1990). Judge, et al. concluded that, “it appears that autonomous (intrinsic and identified) motives underlying goal pursuit are the motives most correlated with job satisfaction” (Judge et al. 2005, p. 264). Interestingly, this is quite akin to Maslow’s Theory Y and his belief that meaningful work makes a fundamental and critical contribution to a person’s quality of life and banishes Voltaire’s trilogy of evils; vice, poverty, and boredom (Accel-Team 2005).

### **Values, Virtues, and Eupsychia**

Many scholars have posited assemblages of both global constellations and more specific characteristics that illustrate the Aristotelian concept of eudemonia, or ‘the good life’. Maslow argued that the “highest spiritual values...(of)...goodness, altruism, virtue, and love” (Maslow 1970, p. 36) represent relief from “anomie, anhedonia, rootlessness, value pathology, meaninglessness, existential boredom, spiritual starvation, other-directedness, (and) the neurosis of success” (Maslow, 1970, p. 37) inherent to a materialistically affluent culture. He argued that the antidote of these states rested in ‘peak experiences’, which result from spiritual, religious, highest values, or “eternal verities” (Maslow, 1970, p. 65). From this perspective, Eupsychia, well-being, self-actualization, flourishing, transformative growth, flow, and other optimal human experiences common to the language of positive psychology and that address the fulfillment of best-state potential are well within the grasp of the mortal being. Maslow’s Eupsychia incorporates one set of values, and there are several other comparative models that receive current discussion. For example, critical consciousness (CC) is one frame that is gathering a wider audience and is closely related to virtues and values. It is a perspective that focuses on the human capacities of knowledge, love, and will as guided by responsibility and choice. In this model, critically conscious “people can be distinguished by the way they use their powers to know, to love, and to will. Mature CC, or optimal consciousness, exhibits a general orientation toward genuine self-knowledge, growth, and responsibility, a deepening appreciation of the oneness of people, the need for unity, and a commitment to service, along with an awareness of mortality, history, and transcendence” (Mustakova-Possardt 2003, p. 5).

It has been suggested that “the possibility of constructing and translating conceptions of good lives into actions and concrete ways of living depends crucially on the possession of internal (skills and capabilities) and external conditions (opportunities and supports)” (Ward and Brown 2004, p. 247), and this debate involves discussion about whether there are thresholds of personal circumstance that are required to enact behaviour that can then fulfill the potential for our best-state. Maslow’s own somewhat unflattering perspective was that not every person is capable of behaving in a virtuous, self-actualized, or best-state manner due to his contention that some people are, quite literally, ‘inferior’. Perhaps

the reconciliation of these disparate views occurs at the ‘tipping point’ intersection of latent and demonstrable virtue, and this discussion represents interesting fodder for further theoretical and empirical inquiry.

### From Past to Present

Maslow’s collective ideologies are not delivered without caveats. In his *Eupsychian Management Journal* (1965), Maslow notes that many of his work-related, organizational “principles hold *primarily for good conditions, rather than for stormy weather*” (Maslow 1965, p. xii) (emphasis in original). However, he also recognized “the beauties and the benefits of frustration” (Frick 1971, p. 47) and acknowledged that pain, hardship and trauma can help a person to learn, grow, and strengthen. Maslow also noted that “interesting theoretical extrapolation” (Maslow 1965, p. xii) from individual to organizational levels may be possible for flexibility, reasonableness, and fluid shifts between defensive and growth motivations. From the perspective of growth motivations, this parallels the notion that virtuous behaviors in and by organizations may indeed help the organization to ‘stockpile’ a sort of positive credit for times of turbulence (Cameron 2003). Over 40 years later, budding empirical evidence for his theories of values and virtues has turned out to be encouraging at both individual and organizational levels (Bright, Cameron, and Caza 2006; Cameron 2003; Dutton 2003).

Maslow sought, studied, and created intentionally unrepresentative samples, which is an approach that is generally viewed as both heretical and antithetical to the scientific tradition upon which psychology is predicated. However, this explorational style permitted unfettered data collection that was not bound by the confines of traditional normatively-based psychology. Perhaps most importantly, Maslow was a huge force in joining “I” and “we”, or the ‘interiority’ of a person, to “it”, or the scientific and technological portions of the world. Further, he assisted the acknowledgement of their equal power and equal credibility within the formative bastions of human nature, culture, values, and growth.

The ‘new’ field of positive psychology has some challenges ahead of it such as including synthesizing good and bad, building on historic precedents, analytical integration, stakeholder-building, and describing versus prescribing (Linley et al. 2006). However, ample empirical evidence has been collectively assembled that supports many of Maslow’s theoretical hunches. Twenty-first century researchers within the field of positive psychology are churning out new findings that support his seminal works in a broad variety of areas including humanist psychology, culture, leadership, meaning of work, organizational change, and ‘theorizing the other’ (Dye, Mills, and Weatherbee 2005, p. 1389) at a truly unprecedented rate.

Although it is not surprising that a substantial portion of human behavior is well within the voluntary realm, it is encouraging and thought-provoking that human beings have the capacity (and, in some theorists’ opinions, a biological urge driven by survival) to develop and sustain behavior that is actualizing, virtuous, and that represents the fulfillment of our best-state potential. We now know that the historic nature/nurture debate is resolved by viewing contributions of biology and environment as ‘synergistic’ (Zimbardo 2004) and that the total picture demands the consideration of environmental factors, individual characteristics and goals, and the influence of group and cultural pressures and rewards on an individual’s behavior. Maslow’s work left a foundation for voluminous later work. Through social learning theory (Bandura 1977), which post-dated Maslow by less than a decade, we have empirical evidence that positive behavior can be modeled, taught, and learned. We also have evidence that there is perceived value in acquiring and displaying behaviour that has been alternately termed actualized (Maslow 1987), growth-promoting (Alderfer 1972), learning-based (Lawrence and Nohria 2002), affiliation-seeking (McClelland 1985), reflectively self-aware (McKinnon 1999), affect-hunger satisfying (Goldschmidt 2006), critically conscious (Mustakova-Possardt 2003), or intrinsically rewarding (Gagné and Deci 2005; Ryan and Deci 2000).

In his own words, Maslow stated, “insofar as my own effort is concerned, it has in any case always been an ethical one, an attempt to wed science with humanistic and ethical goals, with efforts to improve individual people and the society as a whole” (Maslow 1965, p. 3). Were Abraham Maslow alive today, I think he could proudly say that he contributed multiple links in many ‘epistemological chains’ (Dye, Mills, and Weatherbee 2005, p. 1390).

## References

- Accel-Team. 2005. *The theorists and their theories*. Accessed April 4, 2006. Available from [http://www.accel-team.com/motivation/theory\\_01.html](http://www.accel-team.com/motivation/theory_01.html).
- Alderfer, C.P. 1972. *Existence, relatedness, and growth*. New York: The Free Press.
- Bacon, Steven F. 2005. Positive psychology's two cultures. *Review of General Psychology* 9, no. 2: 181-192.
- Bandura, Albert. 1977. *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Baumeister, Roy F, E. Bratslavsky, C. Finkenauer, and Kathleen D. Vohs. 2001. Bad is stronger than good. *Review of General Psychology*, no. 5: 323-370.
- Boeree, C. George. 2006. *Personality theories: Abraham maslow*. Accessed April 2, 2006. Available from <http://www.ship.edu/~cgboeree/maslow.html>.
- Bright, David S., Kim S. Cameron, and Arran Caza. 2006. The amplifying and buffering effects of virtuousness in downsized organizations. *Journal of Business Ethics* 6: 249-269.
- Cameron, Kim S. 2003. Organizational virtuousness and performance. In *Positive organizational scholarship*, ed. Kim Cameron, Jane Dutton and Robert Quinn:48-65. San Francisco: Berrett-Koehler.
- Cameron, Kim S., David Bright, and Arran Caza. 2004. Exploring the relationships between organizational virtuousness and performance. *The American Behavioral Scientist* 47, no. 6: 766-790.
- Chiang, Hung-Min and Abraham Maslow. 1977. *The healthy personality readings*. New York, NY: D. Van Nostrand Company.
- Deci, Edward L., James P. Connell, and Richard M. Ryan. 1989. Self-determination in a work organization. *Journal of Applied Psychology* 74, no. 4: 580.
- Deci, Edward L., Richard Koestner, and Richard M. Ryan. 1999. The undermining effect is a reality after all--extrinsic rewards, task interest, and self-determination: Reply to Eisenberger, Pierce, and Cameron (1999) and Lepper, Henderlong. *Psychological Bulletin* 125, no. 6: 692-700.
- Deci, Edward L. and Richard M. Ryan. 1987. The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology* 53, no. 6: 1024.
- \_\_\_\_\_. 2000. The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry* 11: 227-268.
- Diener, Ed, Eunkook M. Suh, Richard E. Lucas, and Heidi L. Smith. 1999. Subjective well-being: Three decades of progress. *Psychological Bulletin* 125, no. 2: 276-302.
- Dutton, Jane. 2003. Breathing life into organizational studies. *Journal of Management Inquiry* 12, no. 1: 5.
- Dye, Kelly, Albert Mills, and Terrance Weatherbee. 2005. Maslow: Man interrupted: Reading management theory in context. *Management Decision* 43, no. 10: 1375-1395.
- Erikson, Eric. 1982. *The life cycle completed*. New York: Norton.
- Frick, Willard B. 1971. *Humanistic psychology: Interviews with maslow, murphy, and rogers*. Columbus, OH: Charles E. Merrill Publishing Company.
- Gagné, Marylène and Edward L. Deci. 2005. Self-determination theory and work motivation. *Journal of Organizational Behavior* 26, no. 4: 331-362.
- Geiger, Henry. 1971. Introduction. In *The farther reaches of human nature*, ed. Abraham Maslow. New York, NY: Penguin Books.
- Goldschmidt, Walter. 2006. *The bridge to humanity*. New York, NY: Oxford University Press.
- Hoffman, E. 1988. *The right to be human: A biography of abraham maslow*. New York, NY: St. Martin's Press.
- Huitt, W. 2004. *Maslow's hierarchy of needs*. Educational Psychology Interactive. Accessed April 5, 2005 2006. Available from <http://chiron.valdosta.edu/whuitt/col/regsys/maslow.html>.
- Jahoda, Marie. 1958. *Current concepts of positive mental health*. New York: Basic Books.
- Judge, Timothy A., Joyce E. Bono, Amir Erez, and Edwin A. Locke. 2005. Core self-evaluations and job and life satisfaction: The role of self-concordance and goal attainment. *Journal of Applied Psychology* 90, no. 2: 257-268.
- Kelloway, E. Kevin, Daniel G. Gallagher, and Julian Barling. 2004. Work, employment, and the individual. In *Theoretical*

- perspectives on work and the employment relationship*, ed. Bruce E. Kaufman. Champaign, IL: Industrial Relations Research Association.
- Keyes, Corey L. M., Dov Shmotkin, and Carol D. Ryff. 2002. Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology* 82, no. 6: 1007-1022.
- Kohlberg, Lawrence. 1981. *The meaning and measurement of moral development*. Worcester, MA: Clark University Press.
- Lawrence, Paul and Nitin Nohria. 2002. *Driven: How human nature shapes our choices*. San Francisco: Jossey-Bass.
- Linley, P. Alex, Stephen Joseph, Susan Harrington, and Alex M. Wood. 2006. Positive psychology: Past, present, and (possible) future. *The Journal of Positive Psychology* 1, no. 1: 3-16.
- Locke, Edwin A. and Gary P. Latham. 1990. *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Lowry, Richard J., ed. 1979. *The journals of a. H. Maslow*. Monterey, CA: Brooks/Cole Publishing Company.
- Maslow, Abraham. 1965. *Eupsychian management: A journal*. Homewood, IL: The Dorsey Press.
- \_\_\_\_\_. 1970. *Religions, values, and peak experiences*. New York, NY: Viking Press.
- \_\_\_\_\_. 1971. *The farthest reaches of human nature*. New York, NY: Penguin Books.
- \_\_\_\_\_. 1987. *Motivation and personality*. New York, NY: Harper and Row.
- McClelland, D.C. 1985. *Human motivation*. Glenview, IL: Scott Foresman.
- McKinnon, Christine. 1999. *Character, virtue theories, and the vices*. Peterborough, Ontario: Broadview Press.
- Mustakova-Possardt, Elena. 2003. Critical consciousness: A study of morality in global, historical context. 218.
- Norwood, George. 2006. *Deeper mind: Maslow*. Accessed March 30, 2006. Available from <http://www.deepermind.com/20maslow.htm>.
- Porter, Burton F. 1980. *The good life*. New York, NY: MacMillan.
- Ryan, Richard M. and Edward L. Deci. 2000. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist* 55: 68-78.
- Ryff, Carol D. and Corey L. M. Keyes. 1995. The structure of psychological well-being revisited. *Journal of Personality and Social Psychology* 69, no. 4: 719.
- Seligman, Martin E. 1999. *Positive psychology network concept paper*. University of Pennsylvania. Accessed September 4, 2005. Available from <http://www.ppc.sas.upenn.edu/ppgrant.htm>.
- \_\_\_\_\_. 2002. Positive psychology, positive prevention, and positive therapy. In *Handbook of positive psychology*, ed. C. Rick Snyder and S.J. Lopez: 3-9. New York, NY: Oxford University Press.
- Seligman, Martin E., Glynn Baugher, and Sonja Lyubormirsky. 2006. The mail. *New Yorker* 82, no. 5.
- Sheldon, Kennon M. and Andrew J. Elliot. 1999. Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology* 76, no. 5: 482-497.
- Simons, Janet A., Donald B. Irwin, and Beverly A. Drinnien. 1987. *Psychology-the search for understanding*. New York, NY: West Publishing Company.
- Ward, Tony and Mark Brown. 2004. The good lives model and conceptual issues in offender rehabilitation. *Psychology, Crime, and Law* 10, no. 3: 243-257.
- Wilber, Ken. 1998. *The marriage of sense and soul*. New York, New York: Broadway Books.
- Wrzesniewski, Amy. 1999. Jobs, careers, and callings: Work orientation and job transitions. doctoral dissertation, University of Michigan.
- \_\_\_\_\_. 2002. "it's not just a job": Shifting meanings of work in the wake of 9/11. *Journal of Management Inquiry* 11, no. 3: 230.
- Zimbardo, Philip G. 2004. Does psychology make a significant difference in our lives? *American Psychologist* 59, no. 5: 339-351.

# MANAGEMENT OF INFORMATION SYSTEMS

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## MOBILE PHONE: WHO WANTS TO BUY IT, AND WHY?

*Individual adoption of technology has been studied extensively in the workplace (Brown and Venkatesh 2005). Far less attention has been paid to adoption of technology in the household (Brown and Venkatesh 2005). Obviously, mobile phone is now integrated into our daily life. Indeed, according to the more recent forecast of Gartner Research, 986 millions of mobile phones have been sold throughout the world in 2006 (Ouellet 2006). And, as the tendency is showing up, mobile phone use will be continuously increasing in the future. The purpose of this study is then to investigate who has the intention to adopt a mobile phone, and why? In other words, we try to identify who really wants to buy a mobile phone and what are the determining factors who will make such that he/she will buy it? On the basis of the theoretical foundations developed by Brown and Venkatesh (2005) to verify the determining factors in intention to adopt a computer in household by American people, this study examines the determining factors in intention to buy a mobile phone in household by Canadian people. Data were gathered from 307 Atlantic Canadian people who do not yet own a mobile phone. Data analysis was performed using the structural equation modeling software Partial Least Squares (PLS). The results revealed that only one third of the variables examined in the study showed to be determining factors in intention to buy a mobile phone for household use.*

### Introduction

Since numerous years, mobile phone is used for different professional purposes, particularly by senior managers in the workplace. And this technology is more and more used in the workplace since mobile applications have been integrated to actual enterprise business strategies. Individual adoption of technology has been studied extensively in the workplace (Brown and Venkatesh 2005). Far less attention has been paid to adoption of technology in the household (Brown and Venkatesh 2005). Obviously, mobile phone is now integrated into our daily life. According to the more recent forecast of Gartner Research, 986 millions of mobile phones have been sold throughout the world in 2006 (Ouellet 2006). And, as the tendency is showing up, mobile phone use will be continuously increasing in the future. The purpose of this study is then to investigate who has the intention to adopt a mobile phone, and why? In other words, we try to identify who really wants to buy a mobile phone and what are the determining factors who make such that he/she will buy it?

Few studies have been conducted until now which investigate the intention to adopt a mobile phone by people in household (in the case of those who do not yet own a mobile phone) or the use of mobile phone in the daily life of people in household (in the case of those who own a mobile phone). Yet we can easily see that mobile phone is actually completely transforming the ways of communication of people around the world. It is therefore crucial to more deeply examine the determining factors in intention to buy a mobile phone by people in household. This is the aim of the present study. The related literature on the actual research area of mobile phone is summarized in Table 1.

**Table 1. Related Literature Survey**  
(adapted from Isiklar and B y k zhan 2007 p. 267)

<i>Research Area</i>	<i>References</i>
<i>Mobile phone diffusion and its impacts on people's daily life.</i>	<i>LaRose (1989) Kwon and Chidambaram (2000) Botelho and Costa Pinto (2004) Funk (2005) Andonova (2006)</i>
<i>Mobile phone ownership and usage.</i>	<i>LaRose (1989) Kwon and Chidambaram (2000) Palen et al. (2000) Aoki and Downes (2003) Selwyn (2003) Davie et al. (2004)</i>
<i>Mobile phone ownership and usage from a behavioral and psychological perspective.</i>	<i>Karjaluoto et al. (2003) Wilska (2003) Davie et al. (2004)</i>
<i>Effects on human health and daily activities.</i>	<i>Repacholi (2001) Salvucci and Macuga (2002) Weinberger and Richter (2002) Sullman and Baas (2004) Treffner and Barrett (2004) Westerman and Hocking (2004) Balik et al. (2005) Balikci et al. (2005) Eby et al. (2006) Rosenbloom (2006) Törnros and Bolling (2006)</i>
<i>Evaluation and design of mobile phone features for user interface and user satisfaction.</i>	<i>Chuang et al. (2001) Chen et al. (2003) Han and Wong (2003) Chae and Kim (2004) Han et al. (2004) Lee et al. (2006)</i>
<i>Analytical evaluations of mobile phone-related observations.</i>	<i>Tam and Tummala (2001) Campbell and Russo (2003) Han and Wong (2003) Wang and Sung (2003) Lai et al. (2006)</i>

In addition to the summary of literature on the actual research area of mobile phone presented in Table 1, other researchers have identified some factors which might increase the intention to adopt a mobile phone by people in household. For example, in a large study carried out in 43 countries of the world, Kauffman and Techatassanasoontorn (2005) noted a

faster increase in the use of mobile phone in countries having a more developed telecommunications infrastructure, being more competitive on the wireless market, and having lower wireless network access costs and less standards regarding the wireless technology. And a study involving 208 users by Wei (in press) showed that different motivations predict diverse uses of mobile phone. According to the Wei's findings, mobile phone establishes a bridge between interpersonal communication and mass communication.

As we can see in the summary of literature related to mobile phone presented above, few studies until now examined the determining factors in intention to adopt a mobile phone by people in household. Thus, the present study brings an important contribution to fill this gap as it allows a better understanding of the impacts of mobile phone use in people's daily life. It focuses on the following two research questions: (1) Who are the potential buyers of a mobile phone for household use? and (2) What are the determining factors in intention to buy a mobile phone for household use?

The paper builds on a framework suggested by Fillion (2004) in the conduct of hypothetico-deductive scientific research in organizational sciences, and it is structured as follows: first, the theoretical approach which guides the study is developed; second, the methodology followed to conduct the study is described; finally, the results of the study are reported and discussed.

### **Theoretical Approach**

This study is based on the theoretical foundations developed by Venkatesh and Brown (2001) to investigate the factors driving personal computer adoption in American homes as well as those developed by Brown and Venkatesh (2005) to verify the determining factors in intention to adopt a personal computer in household by American people. In fact, Brown and Venkatesh (2005) performed the first quantitative test of the recently developed model of adoption of technology in households (MATH) and they proposed and tested a theoretical extension of MATH integrating some demographic characteristics varying across different life cycle stages as moderating variables. With the exception of marital status (we included sex instead), all the variables proposed and tested by Brown and Venkatesh (2005) are used in this study, but none of them is tested as moderating variable. And we added two new variables in order to verify whether people are thinking that mobile phone might be used for security and mobility. The resulting theoretical research model is depicted in Figure 1.

Figure 1. Theoretical Research Model

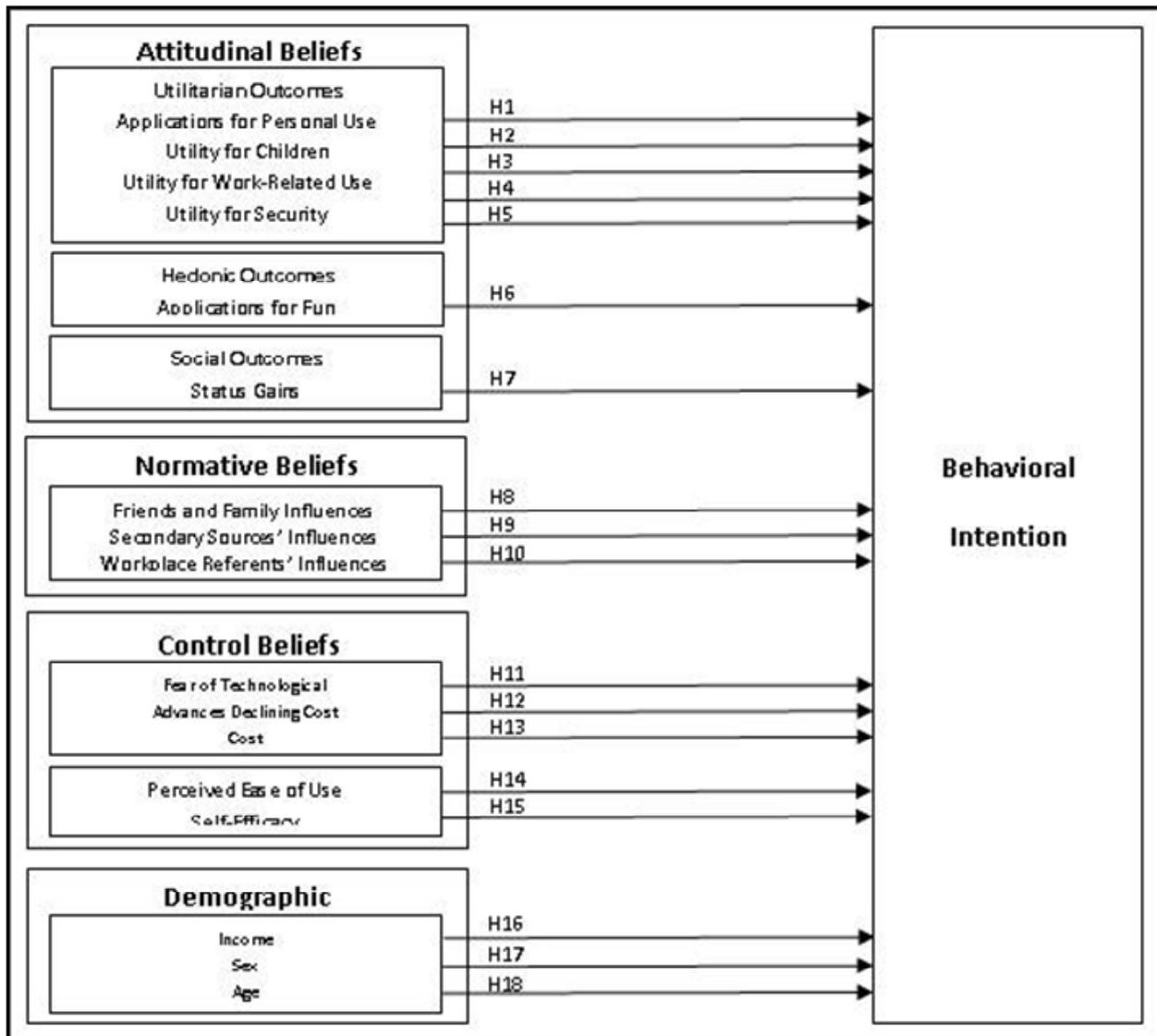


Figure 1 shows that Brown and Venkatesh (2005) integrated MATH and Household Life Cycle in the following way. MATH presents five attitudinal beliefs grouped into three sets of outcomes: *utilitarian*, *hedonic*, and *social*. Utilitarian beliefs are most consistent with those found in the workplace and can be divided into beliefs related to *personal use*, *children*, and *work* (we added beliefs related to *security* and *mobility*). The extension of MATH suggested and tested by Brown and Venkatesh (2005) presents three normative beliefs: *influence of friends and family*, *secondary sources*, and *workplace referents*. As for control beliefs, they are represented in MATH by five factors: *fear of technological advances*, *declining cost*, *cost*, *perceived ease of use*, and *self-efficacy*. And, according to Brown and Venkatesh (2005), integrating MATH with a life cycle view including *income*, *sex*, *age*, and *marital status* allows to provide a richer explanation of household personal computer adoption (household mobile phone adoption in the present study) than those provided by MATH alone. Finally, as shown in Figure 1, the dependant variable of the theoretical research model developed is related to *behavioral intention* (the intention to buy a mobile phone by people in household). On the basis of this model, eighteen research hypotheses (H1-H18) are formulated.

*H1: Applications for personal use increase the intention to buy a mobile phone for household use.*

- H2: Utility for children increases the intention to buy a mobile phone for household use.*
- H3: Utility for work increases the intention to buy a mobile phone for household use.*
- H4: Utility for security increases the intention to buy a mobile phone for household use.*
- H5: Mobility increases the intention to buy a mobile phone for household use.*
- H6: Applications for fun increase the intention to buy a mobile phone for household use.*
- H7: Status gains increase the intention to buy a mobile phone for household use.*
- H8: Friends and family influences increase the intention to buy a mobile phone for household use.*
- H9: Secondary sources' influences increase the intention to buy a mobile phone for household use.*
- H10: Workplace referents' influences increase the intention to buy a mobile phone for household use.*
- H11: Fear of technological advances decreases the intention to buy a mobile phone for household use.*
- H12: Declining cost increases the intention to buy a mobile phone for household use.*
- H13: Cost decreases the intention to buy a mobile phone for household use.*
- H14: Perceived ease of use increases the intention to buy a mobile phone for household use.*
- H15: Self-efficacy increases the intention to buy a mobile phone for household use.*
- H16: Income decreases the intention to buy a mobile phone for household use.*
- H17: Sex (male vs. female) increases the intention to buy a mobile phone for household use.*
- H18: Age decreases the intention to buy a mobile phone for household use.*

In the next section of the paper, the methodology followed to conduct the study is described.

## **Methodology**

The study was designed to gather information concerning mobile phone adoption decisions in Atlantic Canadian households. The focus of the study is on individuals who do not yet own a mobile phone. We conducted a telephone survey research among individuals of a large area in Atlantic Canada. In this section, we describe the instrument development and validation, the sample and data collection, as well as the data analysis process.

### **Instrument Development and Validation**

To conduct the study, we used the survey instrument developed and validated by Brown and Venkatesh (2005) to which we added two new scales measuring other dimensions in intention to buy a mobile phone by people in household, that is, utility for security and mobility. The survey instrument was then translated in French (a large part of the population in Atlantic Canada is speaking French) and both the French and English versions were evaluated by peers. This review assessed face and content validity (see Straub 1989). As a result, changes were made to reword items and, in some cases, to drop items that were possibly ambiguous, consistent with Moore and Benbasat's (1991) as well as DeVellis's (2003) recommendations for scale development. Subsequent to this, we distributed the instrument to a group of 25 MBA students for evaluation. Once again, minor wording changes were made. Finally, we performed some adjustments to the format and appearance of the survey instrument, as suggested by both peers and MBA students, though these minor changes had not a great importance here given the survey was administered using the telephone. As the instrument was already validated by Brown and Venkatesh (2005) and showed to be of a great reliability, and that we added only few items to measure two new variables, then we have not performed a pilot-test with a small sample. The evaluations by both peers and MBA students

were giving us some confidence that we could proceed with a large-scale data collection.

### **Sample and Data Collection**

First, in this study, we chose to survey people in household over 18 years taken from a large area in Atlantic Canada who do not yet own a mobile phone. To do that, undergraduate and graduate students studying at our faculty were hired to collect data using the telephone. A telephone was then installed in an office of the faculty, and students, one at a time over a 3 to 4-hour period, were asking people over the telephone to answer our survey. And in order to get a diversified sample (e.g., students, retired people, people not working, people working at home, and people working in enterprises), data were collected from 9 a.m. to 9 p.m. Monday through Friday over a 5-week period. Using the telephone directory of the large area in Atlantic Canada chosen for the study, students were randomly selecting people and asking them over the telephone to answer our survey. The sample in the present study is therefore a randomized sample, which is largely valued in the scientific world given the high level of generalization of the results got from such a sample. Once an individual had the necessary characteristics to answer the survey and was accepting to answer it, the student was there to guide him/her to rate each item of the survey on a seven points Likert-type scale (1: strongly disagree ... 7: strongly agree). In addition, the respondent was asked to answer some demographic questions. Finally, to further increase the response rate of the study, each respondent completing the survey had the possibility to win one of the 30 Tim Hortons \$10 gift certificates which were drawn at the end of the data collection. To that end, the phone number of each respondent was put in a box for the drawing. Following this process, 307 people in household answered our survey over a 5-week period.

### **Data Analysis Process**

The data analysis of the study was performed using a structural equation modeling software, that is, Partial Least Squares (PLS-Graph 3.0). Using PLS, data have no need to follow a normal distribution and it can easily deal with small samples. In addition, PLS is appropriate when the objective is a causal predictive test instead of the test of a whole theory (Barclay, Higgins, and Thompson 1995; Chin 1998) as it is the case in this study. To ensure the stability of the model developed to test the research hypotheses, we used the PLS bootstrap resampling procedure (the interested reader is referred to a more detailed exposition of bootstrapping (see Chin 1998; Efron and Tibshirani 1993)) with an iteration of 100 sub-sample extracted from the initial sample (307 Atlantic Canadian people). Some analyses were also performed using the Statistical Package for the Social Sciences software (SPSS 13.5). The results follow.

## **Results**

In this section of the paper, the results of the study are reported. We begin to present some characteristics of the participants. Then we validate the PLS model developed to test the research hypotheses. Finally, we describe the results got from PLS analysis to test the research hypotheses.

### **Participants**

The participants in this study were either relatively aged or relatively young, with a mean of 44.7 years and a very large standard deviation of 18.2 years. These statistics on the age of the participants are, in fact, consistent with the growing old population phenomenon. More than half of the participants were female (57%). Near from 80% of the participants were married (43.8%) or single (34%). The gross yearly income of the respondents in the study was in the range of \$0 to \$40,000, which is relatively low according to the relatively high life cost that we have to face actually. Indeed, 70.6% of the respondents were winning between \$0 and \$40,000, and, from this percentage, only 18.9% were winning between \$30,000 and \$40,000. Only 1.1% of the respondents were winning \$100,000 or over. Concerning the level of education, 28.8% of the participants in the study got a high-school diploma, 30.4% got a college degree, and 24.5% completed a baccalaureate. Only 1.6% of the participants got a doctorate, which is consistent with the whole population in general. Finally, the respondents in our study were mainly full-time employees (38.9%), retired people (20.6%), self employed (11.8%), part-time employees (11.4%), and students (7.2%). These last statistics on the respondents' occupation help to explain the very large standard deviation on their age reported above. Indeed, 7.2% of the respondents were young students, while 20.6% were retired

people. So the difference in age between the two groups is very large.

### Validation of the PLS Model to Test Hypotheses

First, to ensure the reliability of a construct or a variable using PLS, one must verify the three following properties: individual item reliability, internal consistency, and discriminant validity (Yoo and Alavi 2001; see the paper for more details).

To verify individual item reliability, a confirmatory factor analysis (CFA) was performed on independent and dependent variables of the theoretical research model. A single iteration of the CFA was necessary given all loadings of the variables were superior to 0.50 and then none item was withdrawn nor transferred in another variable in which the loading would have been higher. Indeed, in the whole, items had high loadings, which suppose a high level of internal consistency of their corresponding variables. In addition, loadings of each variable were superior to cross-loadings with other variables of the model. Hence the first criterion of discriminant validity was satisfied.

And to get composite reliability indexes and average variance extracted (AVE) in order to satisfy the second criterion of discriminant validity and to verify internal consistency of the variables, we used PLS bootstrap resampling procedure with an iteration of 100 sub-sample extracted from the initial sample (307 Atlantic Canadian people). The results are partially (for a matter of space) presented in Table 2.

**Table 2. Means, Standard Deviations, and Composite Reliability Indexes of Variables**

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Reliability Index</i>
<i>Applications for Personal Use</i>	3.52	2.04	0.92
<i>Utility for Children</i>	3.50	2.19	0.96
<i>Utility for Work-Related Use</i>	3.28	2.24	0.95
<i>Utility for Security</i>	5.58	1.89	0.91
<i>Mobility</i>	3.40	2.19	0.92
<i>Applications for Fun</i>	3.20	2.07	0.93
<i>Status Gains</i>	2.43	1.82	0.91
<i>Friends and Family Influences</i>	3.55	2.10	0.94
<i>Secondary Sources' Influences</i>	3.95	2.21	0.92
<i>Workplace Referents' Influences</i>	3.24	2.70	0.98
<i>Fear of Technological Advances</i>	3.25	2.23	0.86
<i>Declining Cost</i>	4.23	2.00	0.90
<i>Cost</i>	4.47	2.00	0.98
<i>Perceived Ease of Use</i>	4.88	1.99	0.93
<i>Self-Efficacy</i>	5.41	1.98	0.98
<i>Income<sup>a</sup></i>	NA	NA	NA
<i>Sex<sup>a</sup></i>	NA	NA	NA
<i>Age<sup>b</sup></i>	44.73	18.15	NA
<i>Behavioral Intention</i>	3.17	2.25	0.97

<sup>a</sup>This variable was coded as a nominal variable. It was measured in terms of non quantified distinct categories.

<sup>b</sup>This variable was coded as a continuous variable. It was measured using the respondents' birth date.

PLS analysis indicated that all square roots of AVE were higher than the correlations with other variables of the model. In other words, each variable shares more variance with its measures than it shares with other variables of the model.

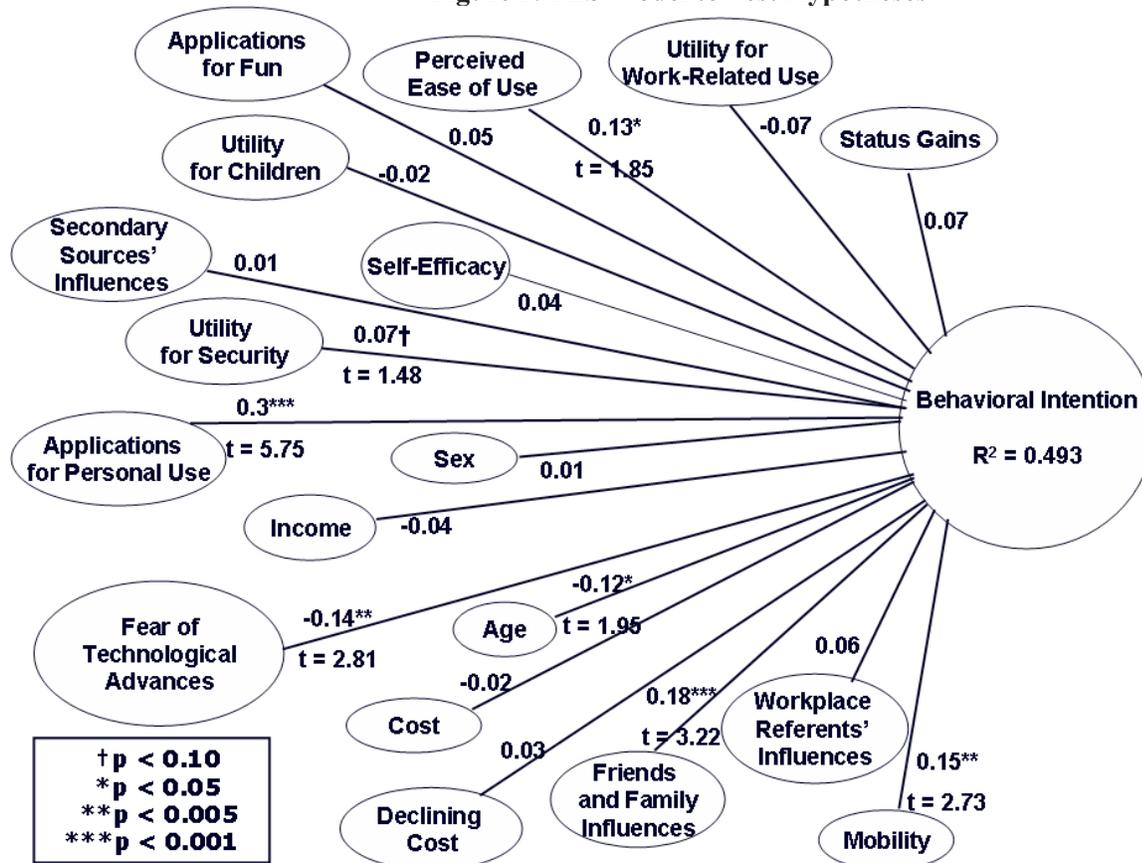
Consequently, discriminant validity is verified. Finally, as supposed previously, we can see in Table 2 that PLS analysis showed high composite reliability indexes for all variables of the theoretical research model. The variables have therefore a high internal consistency, with composite reliability indexes ranging from 0.86 to 0.98.

### Hypothesis Testing

To test the research hypotheses, we developed a PLS model similar to those of Fillion (2005), Limayem and DeSanctis (2000), Limayem et al. (2002), and Yoo and Alavi (2001). The PLS model is depicted in Figure 2.

As we can see in Figure 2, the high t-value (5.75) and beta coefficient (0.30) got in the PLS structural equation model indicate that the path from applications for personal use to behavioral intention is very significant ( $p < 0.001$ ). In short, as we expected, in this study, applications for personal use increased the intention to buy a mobile phone for household use. As a result, hypothesis 1 is supported. Figure 2 shows that the path from mobility to behavioral intention is significant ( $t = 2.73$ ,  $\beta = 0.15$ ,  $p < 0.005$ ). In other words, as we anticipated, the new variable mobility that we added in this study to the model suggested by Brown and Venkatesh (2005) increased the intention to buy a mobile phone for household use. Thus, hypothesis 5 is supported. The high t-value (3.22) and beta coefficient (0.18) got in the PLS structural equation model presented in Figure 2 indicate that the path from friends and family influences to behavioral intention is very significant ( $p < 0.001$ ). Therefore, as we expected, in this study, friends and family influences increased the intention to buy a mobile phone for household use. As a result, hypothesis 8 is supported.

Figure 2. PLS Model to Test Hypotheses



We can see in Figure 2 that the path from fear of technological advances to behavioral intention is significant ( $t = 2.81$ ,  $\beta = -0.14$ ,  $p < 0.005$ ). Therefore, as we expected, in this study, fear of technological advances decreased the intention to buy a mobile phone for household use. And hypothesis 11 is supported. As shown in Figure 2, the  $t$ -value (1.85) and beta coefficient (0.13) got in the PLS structural equation model indicate that the path from perceived ease of use to behavioral intention is significant ( $p < 0.05$ ). In this study, we expected that this largely used variable, originating from Davis's (1989) technology acceptance model (TAM), would increase the intention to buy a mobile phone for household use. So our expectations revealed to be exact. As a result, hypothesis 14 is supported. Figure 2 shows that the path from age to behavioral intention is significant ( $t = 1.95$ ,  $\beta = -0.12$ ,  $p < 0.05$ ). Thus, as we anticipated, in this study, age decreased the intention to buy a mobile phone for household use. Consequently, hypothesis 18 is supported. As shown in Figure 2, the  $t$ -value (1.48) and beta coefficient (0.07) got in the PLS structural equation model indicate that the path from utility for security to behavioral intention is significant ( $p < 0.10$ ). As we expected, the new variable utility for security that we added in this study to the research model proposed by Brown and Venkatesh (2005) increased the intention to buy a mobile phone for household use. But the level of significance is 0.10, while the level of significance accepted in the study is 0.05. As a result, hypothesis 4 is not supported. Finally, Figure 2 shows that the  $t$ -values and beta coefficients related to all the other variables in the model are too low to be significant. Consequently, hypotheses 2, 3, 6, 7, 9, 10, 12, 13, 15, 16, and 17 are not supported.

### Discussion and Conclusions

The last section of the paper is devoted to a discussion about the results of the study and some conclusions. And to support our discussion and conclusions, we provide the reader with a more detailed view of the PLS structural equation model developed to test the research hypotheses, including the percentages of variance explained of variables (see Table 3).

**Table 3. Beta Path Coefficients, T-Values, and Percentages of Variance Explained of Variables**

<i>Variable</i>	<i>Beta</i>	<i>t</i>	<i>R<sup>2</sup></i>
<i>Applications for Personal Use</i>	0.30***	5.75	0.243
<i>Utility for Children</i>	-0.02	0.35	0.000
<i>Utility for Work-Related Use</i>	-0.07	1.08	0.002
<i>Utility for Security</i>	0.07†	1.48	0.002
<i>Mobility</i>	0.15**	2.73	0.054
<i>Applications for Fun</i>	0.05	0.73	0.001
<i>Status Gains</i>	0.07	1.19	0.005
<i>Friends and Family Influences</i>	0.18***	3.22	0.037
<i>Secondary Sources' Influences</i>	0.01	0.16	0.007
<i>Workplace Referents' Influences</i>	0.06	0.91	0.001
<i>Fear of Technological Advances</i>	-0.14**	2.81	0.030
<i>Declining Cost</i>	0.03	0.62	0.005
<i>Cost</i>	-0.02	0.47	0.002
<i>Perceived Ease of Use</i>	0.13*	1.85	0.066
<i>Self-Efficacy</i>	0.04	0.57	0.001
<i>Income</i>	-0.04	0.82	0.005
<i>Sex</i>	0.01	0.22	0.001
<i>Age</i>	-0.12*	1.95	0.031

† $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.005$ ; \*\*\* $p < 0.001$ .

As shown in Table 3 (and Figure 2), the eighteen independent variables examined in the study explained 50 percent

( $R^2 = 0.493$ ) of the variance in intention to buy a mobile phone for home use. And we can see in Table 3 that the six variables who showed to be significant (see also the significant beta path coefficients in Figure 2), that is, applications for personal use, perceived ease of use, mobility, friends and family influences, age and fear of technological advances, explained alone 46.1 percent of the variance in intention to buy a mobile phone for household use, which is very high. Thus, these six variables are assuredly very important factors to take into account in future studies on the mobile phone and on the part of mobile phone providers, and more particularly applications for personal use which explained alone 24.3 percent of this variance (see Table 3). It is very interesting to see that one of the two variables that we added to the Brown and Venkatesh's (2005) theoretical research model, that is mobility, showed to be very significant ( $p < 0.005$ ; see Table 3) in intention to buy a mobile phone for household use. Here is then another new variable which we might add to the integrated research model of MATH and household life cycle characteristics suggested by Brown and Venkatesh (2005). On the other hand, we are really surprised that our second variable utility for security not showed to be significant in the intention to buy a mobile phone for household use at least to the level of significance 0.05 required in the study. We were quite assured that this variable would be very significant. But this one is significant at the level of significance 0.10 (see Table 3), which means, in our view, that it might also be added to the integrated research model of MATH and household life cycle characteristics proposed by Brown and Venkatesh (2005) to test in future studies. Indeed, the present study showed that people have, to some extent, the intention to buy a mobile phone for a matter of security.

In the large-scale study in which Brown and Venkatesh (2005) integrated MATH and some household life cycle characteristics (as moderating variables), the integrated model explained 74 percent of the variance in intention to adopt a personal computer for home use, a substantial increase of 24 percent over baseline MATH that explained 50 percent of the variance. In the present study, we used the integrated model proposed by Brown and Venkatesh (2005), with the exception of the household life cycle variable marital status (we added sex instead), and we added two new independent variables to the model, namely, mobility and utility for security. But we used the other household life cycle variables as independent variables in our research model instead of moderating variables as did Brown and Venkatesh (2005). And the model explained 50 percent of the variance in intention to buy a mobile phone for household use (see Table 3 and Figure 2). Consequently, we returned to the same percentage of variance explained by MATH alone. So the result of our test seems, at first, not to be very conclusive. But, on the contrary, in this study, we found several interesting things to advance knowledge in this new and exciting field of adoption of technology in households.

First, we found six very important variables in the intention to buy a mobile phone by people, particularly one of the two new variables that we added to the Brown and Venkatesh's (2005) model, that is mobility, which showed to be very significant (see Table 3). These six variables are also very important to take into account by mobile phone providers to design new mobile phones still better adapted to people's needs and to do their sales marketing. Second, we found that people have, to some extent, the intention to buy a mobile phone for a matter of security, given our new variable utility for security showed to be significant at the level of significance 0.10, and practically at the level of significance 0.05 (see Table 3). Finally, the results of this study provided the evidence that it is probably better to use the household life cycle variables as moderating variables in the model, as did Brown and Venkatesh (2005), given the percentage of variance explained in intention to adopt a new technology in household by the model tested by these authors was significantly higher. We can then anticipate here that if we would be using the household life cycle variables as moderating variables in our theoretical research model instead of independent variables, the percentage of variance explained by the model in intention to adopt a mobile phone for household use would be probably a little bit higher than those explained in intention to adopt a personal computer for household use by the model developed and tested by Brown and Venkatesh (2005), since the new variable mobility, which we added to the model proposed by these authors, explained alone 5.4 percent of the variance.

It would be interesting in future studies to add some other new variables to the actual theoretical research model (those suggested by Brown and Venkatesh (2005) augmented with the two new variables that we tested in the present study, depending on the technology examined naturally) in order to try to explain yet more variance in intention to adopt a new technology in household. For example, the variable *lack of attention* might be added in social outcomes (a lot of people, particularly young and old people, are feeling to be alone in the actual stressing world, in which both men and women are working and get very busy, so the mobile phone might be a good way to communicate with other people everytime and

everywhere to get the feeling to be less alone), the variable *social norm* might also be added in social outcomes (who knows, people might have the intention to buy a mobile phone just to do as everybody!), and the variable *control* might be added in utilitarian outcomes (some people might have the intention to adopt a mobile phone to control other people in their family or others; maybe another kind of Big Brother!). It would be also interesting to test the actual model in other situations and with other populations. For example, in a subsequent study, we tested the actual model with Atlantic Canadian people who own a mobile phone. We have then just changed the dependent variable behavioral intention for those of user satisfaction, given the respondents were already using a mobile phone at home. The results of the study will follow in a subsequent paper. It will be interesting to see whether the results remain the same as those got from people who do not yet own a mobile phone.

Regarding the limitations of this study, as pointed out by Brown and Venkatesh (2005), the primary limitation is the reliance on a single informant. It is possible that other members of the household would have provided different responses concerning the motivations to buy (or not) a mobile phone for household use. Future research in household adoption of technology should incorporate responses from multiple members of the household to truly assess the nature of household adoption. A second limitation of the study is that it was conducted in only one area in Atlantic Canada. If the study would have been carried out in the whole Atlantic Canada, its results would be of a higher level of generalization. But the fact that the sample of the study was a randomized sample allows a high level of generalization of its results. Another limitation of the study is the administration of the survey instrument over the telephone. Some respondents might have not very well understood some items of the survey instrument over the telephone and then provided more or less precise ratings on these items, introducing the possibility of some response bias. But the method we privileged in this study to administer the survey instrument is not an exception to the rule. Each method has its own limitations.

To conclude, much more research will be needed on the adoption of technology in households in order to better understand its impacts on people's daily life. The research will allow, among others, at least to minimize, if not to remove, some negative impacts of technology in people's daily life in the future and to develop new technologies still better adapted to people's needs. We will continue to inquire into this new and exciting field.

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### References

- Andonova, V. (2006). "Mobile Phones, the Internet and the Institutional Environment", *Telecommunications Policy*, 30, 29-45.
- Aoki, K. & Downes, E. J. (2003). "An Analysis of Young People's Use Of and Attitudes Toward Cell Phones", *Telematics and Informatics*, 20(4), 349-364.
- Balik, H. H., Turgut-Balik, D., Balicki, K. & Özcan, I. C. (2005). "Some Ocular Symptoms and Sensations Experienced by Long Term Users of Mobile Phones", *Pathologie Biologie*, 53, 88-91.
- Balikci, K., Ozcan, I. C., Turgut-Balik, D. & Balik, H. H. (2005). "A Survey Study on Some Neurological Symptoms and Sensations Experienced by Long Term Users of Mobile Phones", *Pathologie Biologie*, 53, 30-34.
- Barclay, D., Higgins, C. & Thompson, R. (1995). "The Partial Least Squares (PLS) Approach to Causal Modeling, Personal Computer Adoption and Use as an Illustration", *Technology Studies*, 2(2), 285-309.
- Botelho, A. & Costa Pinto, L. (2004). "The Diffusion of Cellular Phones in Portugal", *Telecommunications Policy*, 28, 427-437.
- Brown, S. A. & Venkatesh, V. (2005). "Model of Adoption of Technology in Households: A Baseline Model Test and Extension Incorporating Household Life Cycle", *MIS Quarterly*, 29(3), 399-426.
- Campbell, S. W. & Russo, T. C. (2003). "The Social Construction of Mobile Telephony: An Application of the Social

- Influence Model to Perceptions and Uses of Mobile Phones within Personal Communication Networks”, *Communication Monographs*, 70(4), 317-334.
- Chae, M. & Kim, J. (2004). “Do Size and Structure Matter to Mobile Users? An Empirical Study of the Effects of Screen Size, Information Structure, and Task Complexity on User Activities with Standard Web Phones”, *Behaviour & Information Technology*, 23(3), 165-181.
- Chen, C. H., Khoo, L. P. & Wan, W. (2003). “Evaluation of Multicultural Factors from Elicited Customer Requirements for New Product Development”, *Research in Engineering Design*, 14, 119-130.
- Chin, W. W. (1998). “The Partial Least Squares Approach to Structural Equation Modeling”, In G. A. Marcoulides (Ed.), *Modern Methods for Business Research* (pp. 295-336), Mahwah, NJ: Lawrence Erlbaum Associates.
- Chuang, M. C., Chang, C. C. & Hsu, S. H. (2001). “Perceptual Factors Underlying User Preferences Toward Product Form of Mobile Phones”, *International Journal of Industrial Ergonomics*, 27, 247-258.
- Davie, R., Panting, C. & Charlton, T. (2004). “Mobile Phone Ownership and Usage Among Pre-Adolescents”, *Telematics and Informatics*, 21(4), 359-373.
- Davis, F. D. (1989). “Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology”, *MIS Quarterly*, 13(3), 319-340.
- DeVellis, R. F. (2003). *Scale Development: Theory and Applications* (2<sup>nd</sup> ed.), Thousand Oaks, CA: Sage Publications.
- Eby, D. W., Vivoda, J. M. & St-Louis, R. M. (2006). “Driver Hand-Held Cellular Phone Use: A Four-Year Analysis”, *Journal of Safety Research*, 37, 261-265.
- Efron, B. & Tibshirani, R. J. (1993). *An Introduction to the Bootstrap*, New York: Chapman and Hall.
- Fillion, G. (2004). “Publishing in the Organizational Sciences: An Extended Literature Review on the Dimensions and Elements of an Hypothetico-Deductive Scientific Research, and Some Guidelines on “How” and “When” They Should Be Integrated”, *Academy of Information and Management Sciences Journal*, 7(1), 81-114.
- Fillion, G. (2005). *L'intégration des TIC dans la formation universitaire : une étude des résultats éducationnels des étudiants dans les contextes de présence et de non présence en classe*, Doctoral Thesis (Ph.D.), Faculty of Administration, Laval University, Quebec.
- Funk, J. (2005). “The Future of the Mobile Phone Internet: An Analysis of Technological Trajectories and Lead Users in the Japanese Market”, *Technology in Society*, 27, 69-83.
- Han, S. H. & Wong, S. W. (2003). “A Systematic Approach for Coupling User Satisfaction with Product Design”, *Ergonomics*, 46(13/14), 1441-1461.
- Han, S. H., Kim, K. J., Yun, M. H., Hong, S. W. & Kim, J. (2004). “Identifying Mobile Phone Design Features Critical to User Satisfaction”, *Human Factors and Ergonomics in Manufacturing*, 14(1), 15-29.
- Isiklar, G & Büyüközhan, G. (2007). “Using Multi-Criteria Decision Making Approach to Evaluate Mobile Phone Alternatives”, *Computer Standards & Interfaces*, 29(2), 265-274.
- Karjaluoto, H., Pakola, J., Pietilä, M. & Svento, R. (2003). “An Exploratory Study of Antecedents and Consequences of Mobile Phone Usage in Finland”, *Proceedings of the AMA Conference* (pp. 170-178), Chicago, August 15-18.
- Kauffman, R. J. & Techatassanasoontorn, A. A. (2005). “Is There a Global Digital for Digital Wireless Phone Technologies?”, *Journal of the Association for Information Systems*, 6(12), 338-382.
- Kwon, H. S. & Chidambaram, L. (2000). “A Test of the Technology Acceptance Model: The Case of Cellular Telephone Adoption”, *Proceedings of HICSS-34*, Hawaii, January 3-6.
- Lai, H. H., Lin, Y. C., Yeh, C. H. & Wei, C. H. (2006). “User-Oriented Design for the Optimal Combination on Product Design”, *International Journal of Production Economics*, 100(2), 253-267.
- LaRose, R. (1989). “Advances in Telecommunications”, In H. Sawhney & G. Barnett (Eds.), *Understanding Personal Telephone Behavior*, *Progress in Communication Science*, 15.
- Lee, Y. S., Hong, S. W., Smith-Jackson, T. L., Nussbaum, M. A. & Tomioka, K. (2006). “Systematic Evaluation Methodology for Cell Phone User Interfaces”, *Interacting with Computers*, 18, 304-325.
- Limayem, M. & DeSanctis, G. (2000). “Providing Decisional Guidance for Multicriteria Decision Making in Groups”, *Information Systems Research*, 11(4), 386-401.
- Limayem, M., Banerjee, P. & Ma, L. (2002). “Impact of GDSS: Opening the Black Box”, *Proceedings of the 6th Pacific Asia Conference on Information Systems (PACIS 2002)*, Tokyo, Japan, September 2-4.
- Moore, G. C. & Benbasat, I. (1991). “Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation”, *Information Systems Research*, 2(3), 192-222.

- Ouellet, O. (2006). "L'utilisation d'applications mobiles en entreprise stimulée par le téléphone évolué", *Direction Informatique*, 29 november, <http://www.directioninformatique.com/DI/client/fr/Directions.Strategiques/Nouvelles.asp?id=41272&bSearch=True>. [Accessed 6 July 2007]
- Palen, L., Salzman, M. & Youngs, E. (2000). "Going Wireless: Behavior & Practice of New Mobile Phone Users", *Proceedings of ACM CSCW* (pp. 201-210), Philadelphia, December 2-6.
- Repacholi, M. H. (2001). "Health Risks from the Use of Mobile Phones", *Toxicology Letters*, 120, 323-331.
- Rosenbloom, T. (2006). "Driving Performance while Using Cell Phones: An Observational Study", *Journal of Safety Research*, 37, 207-212.
- Salvucci, D. D. & Macuga, K. L. (2002). "Predicting the Effects of Cellular Phone Dialing on Driver Performance", *Cognitive Systems Research*, 3, 95-102.
- Selwyn, N. (2003). "Schooling the Mobile Generation: The Future for Schools in the Mobile-Networked Society", *British Journal of Sociology and Education*, 24(2), 131-142.
- Straub, D. W. (1989). "Validating Instruments in MIS Research", *MIS Quarterly*, 13(2), 147-169.
- Sullman, M. J. M. & Baas, P. H. (2004). "Mobile Phone Use Amongst New Zealand Drivers", *Transportation Research Part F*, 7, 95-105.
- Tam, M. C. Y. & Tummala, V. M. R. (2001). "An Application of the AHP in Vendor Selection of a Telecommunications System", *Omega*, 29, 171-182.
- Törnros, J. & Bolling, A. (2006). "Mobile Phone Use--Effects of Conversation on Mental Workload and Driving Speed in Rural and Urban Environments", *Transportation Research Part F*, 9, 298-306.
- Treffner, P. J. & Barrett, R. (2004). "Hands-Free Mobile Phone Speech while Driving Degrades Coordination and Control", *Transportation Research Part F*, 7, 229-246.
- Venkatesh, V. & Brown, S. A. (2001). "A Longitudinal Investigation of Personal Computers in Homes: Adoption Determinants and Emerging Challenges", *MIS Quarterly*, 25(1), 71-102.
- Wang, S. E. & Sung, Y. C. (2003). "Mobile Phone Consumption Behavior Analysis", *Proceedings of the Asia Pacific Management Conference* (pp. 1-11), China, April 23-25.
- Wei, R. (in press). "Motivations for Using the Mobile Phone for Mass Communications and Entertainment", *Telematics and Informatics*.
- Weinberger, Z. & Richter, E. D. (2002). "Cellular Phones and Effects on the Brain: The Head as an Antenna and Brain Tissue as a Radio Receiver", *Medical Hypotheses*, 59(6), 703-705.
- Westerman, R. & Hocking, B. (2004). "Diseases of Modern Living: Neurological Changes Associated with Mobile Phones and Radiofrequency Radiation in Humans", *Neuroscience Letters*, 361, 13-16.
- Wilksa, T. (2003). "The Role of M-Services in the Well-Being of Young People", *Journal of Consumer Policy*, 26(4), 441-463.
- Yoo, Y. & Alavi, M. (2001). "Media and Group Cohesion: Relative Influences on Social Presence, Task Participation, and Group Consensus", *MIS Quarterly*, 25(3), 371-390.

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## ACQUIRING KNOWLEDGE USED IN INFORMATION SYSTEM DEVELOPMENT

*Nowadays, knowledge is viewed as a significant asset for organizations. Consequently, knowledge management has become an important factor to take into account within and between organizations. This paper proposes an approach for acquiring knowledge used in information system (IS) development. It is argued that an IS development process may include several IS development and maintenance projects, which could be carried out in parallel, and each project may use its own software process and development method. In order to support the different activities of the IS development process, it is suggested that the development process itself needs an IS to manage its knowledge. We called this type of IS: Information System upon Information Systems (ISIS). An ISIS is considered as a new infrastructure which coexists with other IS infrastructures. It aims at managing the knowledge used in IS development. Knowledge management involves activities such as acquiring, analyzing, preserving, and using knowledge. In this paper, we suggest an approach for acquiring knowledge used in the IS development process, including its identification and organization.*

### Introduction

Nowadays, knowledge is viewed as a significant asset for organizations. Consequently, knowledge management has become an important factor to take into account within and between organizations. Activities of knowledge management include acquisition, analysis, preservation, and application of knowledge. Knowledge management allows an organization to leverage its information resources and knowledge assets by remembering and applying experience (Jetter et al. 2006; Watson 2003).

On the other hand, the information systems (IS) development process is becoming more and more complex. It may include several IS development and maintenance projects that are at different stages of the life cycle, it may be carried out in parallel and in a distributed environment, and it may employ different software processes, methods, and tools. This tendency offers numerous potential advantages, but also leads to certain challenges as regards the capacity to manage and coordinate effectively such environments.

In our research, we address the challenge of managing the IS development process using knowledge about IS. We propose an IS that supports the management of knowledge used in IS development. This type of IS is called *Information System upon Information Systems (ISIS)*. An ISIS can be viewed as a new knowledge-based infrastructure that coexists with other IS infrastructures. The ISIS will help an organization to handle its knowledge, including acquiring, analyzing, preserving, and using knowledge.

Furthermore, conceptual specifications of the business domains are tied to play an important role in the deliverables consumed or produced in the IS development process. These conceptual specifications can be found in requirement and design documents, the implemented system, as well as the IS user manuals. In fact, we consider that conceptual specifications, which represent the semantic content of information at the conceptual level, are the key information resources used in the IS development process. Consequently, our approach considers conceptual specifications as essential knowledge about the IS development process. This knowledge could be employed to manage IS information resources.

The paper focuses on acquiring knowledge used in IS development. By acquiring knowledge, we mean to control knowledge by its identification and organization. The remaining of the paper is structured as follows: first, we proceed to the identification of different categories of knowledge; second, we discuss the organization of this knowledge; and we end the paper with

some conclusions and future directions.

### Identification of Knowledge

This section addresses the challenge of identifying different categories of knowledge. As mentioned earlier, it is argued that conceptual specifications are considered as essential knowledge. Therefore, the challenge has to do with the ways to identify categories of conceptual specifications without regards to the constraints under which an IS has been developed. In fact, despite the diversity of IS development methods, there are some categories of conceptual specifications that are invariant. For instance, the specifications of a class in various object-oriented methods are almost the same. The challenge here is then to find ways to identify those categories of conceptual specifications.

The IS development is actually related to modeling, specifying, as well as realizing the concepts from the business domain, which are called *Informational concepts*. Informational concepts may represent: *Structure of information*, such as the “Invoice” informational concept; or *Transformation of information*, such as the “Paying an invoice” informational concept; or *Coherence of information*, such as a business rule concept that states: “the total amount of all the payments of an invoice must not exceed the amount of that invoice”. In other words, an information concept from the business domain may be represented by an IS concept from the IS domain. An IS concept could belong to the *Static aspect* (structure of information), the *Dynamic aspect* (transformation of information), or the *Integrity rule aspect* (coherence of information) of an IS.

Despite the diversity in IS development methods and methodologies, there are some IS concepts that are invariant (for example, the class). These concepts are called IS *key concepts*. Each IS concept may correspond to a certain type of conceptual specifications. In the following, we present the IS *key concepts* corresponding to the Static, Dynamic, and Integrity rule aspects. The major part of these concepts could be found in object-oriented methods, such as Object-Oriented Analysis (OOA) (Coad and Yourdon 1990), Object-Oriented Design (OOD) (Coad and Yourdon 1991), Grady Booch (Booch 1991), Object Modeling Technique (OMT) (Rumbaugh et al. 1991), Shlaer and Mellor (Shlaer and Mellor 1989, 1992), Object-Oriented Software Engineering (OOSE) (Jacobson 1992), and Unified Modeling Language (UML) (Booch 1998; Rumbaugh et al. 1998).

#### Concepts of the Static Aspect

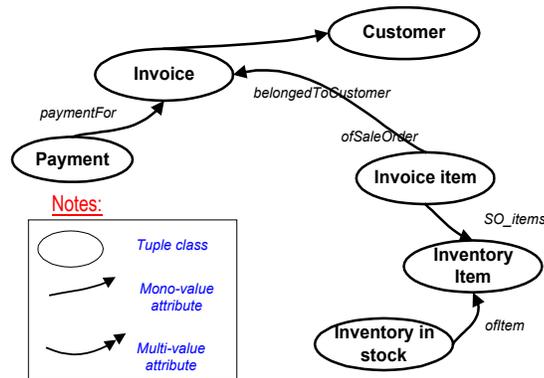
The concepts of the Static aspect describe what types of information exist, their structures, as well as their interrelations. They include *Atomic-class*, *Tuple-class*, *Hyperclass*, *Attributes*, *Key*, and *Subclass*.

An object type and a set of objects of this type define a class. In our approach, there are three kinds of classes: An **atomic-class**, which is defined as a primitive class. It is indecomposable. Objects of an atomic-class have a particular characteristic: their identifier is also their value. A **tuple-class**, which contains objects having the same structure and the same behavior. A structure of a tuple-class is characterized by a set of attributes. The behavior of a tuple-class is represented by a set of methods. And a **hyperclass**, which is a subset of classes that are all connected without ambiguity by navigation links to a *root class* (Andany et al. 1991; Turki 2002).

The interrelations between the classes concepts lead to other concepts such as *Attribute*, *Key*, and *Subclass*. An **attribute** of a class is a function corresponding to every object of this class and to a set of objects of other classes. A **key** of a class is defined by a set of special attributes which can be used to distinguish one object from other objects in the same class. A class can define its **subclasses**. The interpretation of a subclass is the set of all identifiers of the interpretation of its superclass for which the specialisation condition is evaluated to “true”.

Example: Let us discuss a typical IS named MATIS used in small enterprises. This example focuses on the Sale/Collection process, particularly the direct sale activities of the enterprise. The information related to this process can be represented by the following tuple-classes: *Customer*, *Inventory item*, *Inventory in stock*, *Invoice*, *Invoice items*, and *Payment*. Figure 1 introduces these tuple-classes and their relations.

**Figure 1. Tuple-Classes Related to Sale/Collection Process**



### Concepts of the Dynamic Aspect

The concepts of the Dynamic aspect are present in the two levels of behavior: **Local behavior**, defined as the behavior of objects of a class, including the concepts of *Dynamic states* and *Method*. And **Global behavior**, defined as the behavior of the IS, including the concepts of *Event* and *Process*.

#### *Concepts of the Local Behavior*

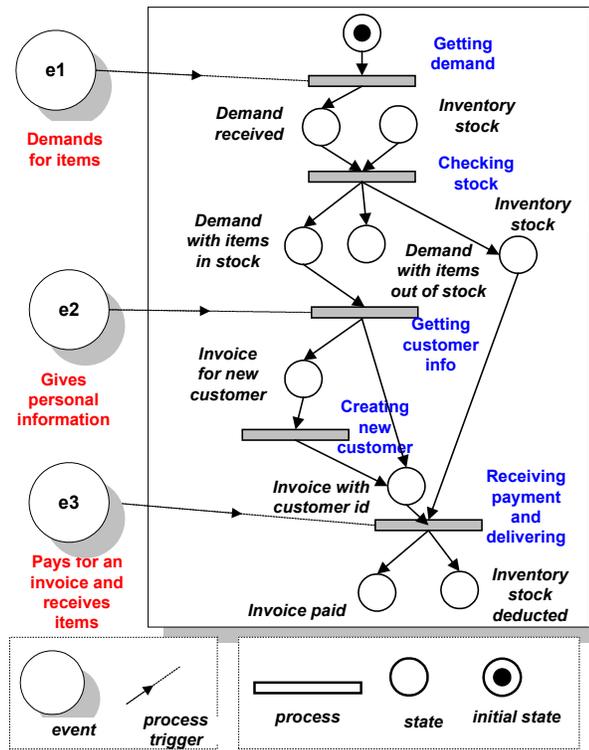
The local behavior is represented by the concepts of *Dynamic State* and *Method*. **Dynamic states** of an object are modes or situations during which certain methods are “enabled” and other methods are “disabled”. A **method** of a class is used to transit between the dynamic states of the objects of this class. In other words, a method transfers a set of dynamic states to another set of dynamic states of a class.

#### *Concepts of the Global Behavior*

The global behavior is represented by the concepts of *Event* and *Process*. **Event** is a remarkable phenomenon outside of the IS that may provoke a change of its dynamic states. In fact, the event structure helps to define the interface of the IS with its environments. A **Process** is a feedback of the IS to the occurrence of an event. In fact, a process performs a transformation of a set of dynamic states of the IS.

Example: The global behavior of a sale has been introduced in Figure 2 by a *Life-cycle diagram* based on *Petri-Net* (see Peterson 1981). As shown in Figure 2, three events may occur: when a customer *demands for items* ( $e_1$ ); when a customer *gives personal information* ( $e_2$ ); and when a customer *pays for an invoice and receives items* ( $e_3$ ). These events may trigger their corresponding processes such as *Getting-demand*, *Checking-stock*, *Getting-customer-info*, *Creating-new-customer* and *Receiving-payment-and-Delivering*.

Figure 2. Global Behavior of a Sale



### Concepts of the Integrity Rules Aspect

The Integrity rule aspect includes the concepts of its main components such as *Integrity Rule* and *Primitive*, as well as about their interrelations such as *Scope* and *Risk* (Léonard 2003; Luu and Léonard 2002). **Integrity rules** (IR) represent the business rules of an organization. An IR is actually a logical condition defined over tuple-classes that can be formally specified and verified by processes or methods. A **Primitive** is a basic operation on a tuple-class such as *create*, *update*, and *delete*. The execution of a primitive may violate the validation of an IR. **Scopes** of an IR represent the context of an IR, including a set of tuple-classes on which the IR has been defined. **Risks** are the possibilities of suffering the incoherence of information. In general, a risk is defined on a scope and a primitive. In particular, especially in the case of the *Update* primitive, it is indispensable to specify the related attribute of a risk.

Example: This example is related to an integrity rule  $IR_1$  described as: “the quantity of each item of an invoice must not exceed the quantity in stock of this item”. The *scopes* of  $IR_1$  are the *Invoice Item* and *Inventory in stock* classes. The IR can be verified by *Checking-stock* process. Its *risks* are the methods for insertion and modification of *Invoice Item*, as well as deletion and modification of *Inventory in stock* classes.

In the next section of the paper, we discuss the organization of this knowledge identified by the means described in the first section.

### Organization of Knowledge

Once knowledge is acquired, the next step is to apply experience or to apply knowledge based on the context of application. This section is then related to explain how to work with a semantic context, particularly a unique and coherent set of IS concepts.

The challenge is how to modularize the IS development process. In other words, our approach must allow to work with a

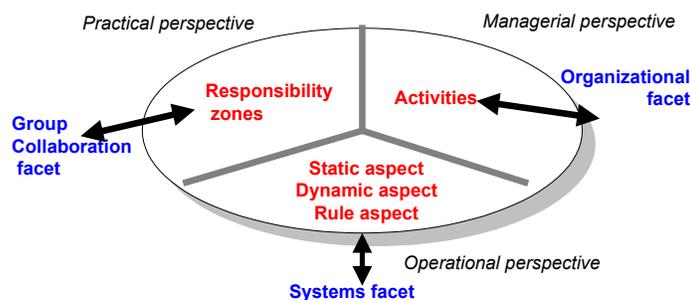
part of an IS, in particular a set of conceptual specifications as a semantic unit. We propose the concept of *IS component* that can be used to represent a semantic unit. Each IS component has a particular purpose. Since even the smallest enterprise has multiple purposes with different areas of concerns, it will potentially have many different IS components. On the other hand, it is obvious that the Component-Based Development approaches have been considered as a common solution for IS implementation and deployment. Consequently, many research and industrial works have tried to evolve the component paradigm for enterprise-wide IS development (Arsanjani 2002; Herzum and Sims 2000; Stojanovic et al. 2001). For the same reason, the concept of IS component allows to work with a part of an IS (Le Dinh and Léonard 2002; Léonard et al. 2001) as a component. An IS component can be considered an autonomous unit that will be developed from analysis to deployment levels. In the following, we present the definition of an IS component and then point out how to specify this IS component.

### Definition of an IS Component

One of the main challenges for the IS community today is how to manage the development of different IS in parallel, while at the same time being able to adapt rapidly to the evolutions of these systems caused by technology, business, and organizational environment changes. Historically, there was a well-known “Divide and Conquer” solution based on *modularization* and *separation of concerns*, which authorized working in parallel, decentralizing, and making decision (Arsanjani 2002; Parnas 1972). In our view, components for enterprise-wide IS require the addition of another dimension related to the separation of concerns. This new dimension could allow data and its metadata, such as structural and behavioral specifications, to be used to modify the contextual behavior of components and their implementations at design-time, build-time, and run-time.

An **IS component** is a reusable artifact of an IS part that represents adequate characteristics of an autonomous system (Le Dinh and Léonard 2002). From the external view, an IS component can be considered as an autonomous IS that can be developed and delivered independently from the others. However, autonomy does not mean isolation. An IS component can be easily cooperating with other IS components to provide more valuable functionalities. From the internal view, an IS component is composed of a set of elements corresponding to the three facets of an IS and their transformations at different levels of abstraction. Figure 3 provides an overview of the different elements of an IS component in accordance with the three facets of an IS.

**Figure 3. Overview of an IS Component**



As shown in Figure 3, there are three standpoints for viewing the work within an organization: the *Operational perspective* as executions of operations on a system; the *Practical perspective* as events in the history of group practice; or the *Managerial perspective* as performances intended to fulfill organizational objectives in accordance with organizational rules (De Michelis et al. 1998). In our approach, the Practical perspective, which is reflected by the Group Collaboration facet, contains the *Responsibility zone* element. The Managerial perspective, which is reflected by the Organizational facet, contains the *Business activities* element. And the Operational perspective, which is reflected by the System facet, contains the elements of the *Static*, *Dynamic*, and *Integrity rule aspects* of an IS.

## Description of an IS Component

To specify an IS component, we use the *3C model* of reusable software components that was originally proposed by Tracz (see Edwards 1992) and widely accepted by the computing community. The *3C* stands for the three distinct views of a component: concept, content, and context. *Concept* focuses on the abstraction captured in a component; *content* is the implementation of that abstraction; and *context* deals with the environment in which the component is designed to interact.

### Concept of an IS Component

An IS component itself is an autonomous IS and therefore mostly takes part in the System facet. As a result, the concept of an IS component must be constituted by all fundamental aspects of an IS such as the static, the dynamic, and the integrity rule aspects.

### Content of an IS Component

Definition:

*Content of an IS component is a tuple*

$\langle Hcl, Cl_1, A_j, S_k, M_l, E_m, P_m, Ir_o \rangle$  where:

$Hcl$  is a Hyperclass;

$Cl_1, Cl_2, \dots, Cl_n$  is a set of  $n$  classes that constitutes the hyperclass  $Hcl$ ;

$\{A_j\}$ : attribute from class  $Cl_p$  to  $Cl_q$  and  $p, q \in [1, n]$  is a set of attributes;

$\{S_k\}$ : state  $k$  of objects of class  $Cl_i$  and  $i \in [1, n]$  is a set of dynamic states;

$\{M_l\}$ : method  $l$  of class  $Cl_i$  and  $i \in [1, n]$  is a set of methods;

$E_m$  is a set of events that may occur to the component  $ISc$  and their corresponding processes  $P_m$  that can access the set of classes of the hyperclass  $Hcl$ ; and

$Ir_o$  is a set of integrity rules defined on classes  $Cl_1, Cl_2, \dots, Cl_n$ .

As an implementation of the context of an IS component, the content of an IS component must include the detailed descriptions of all the elements of the three fundamental aspects of an IS. In brief, an IS component, defined on a unique hyperclass (and its constituents), is a set of processes (and their constituents) defined on that hyperclass and a set of integrity rules (and their constituents) whose the scope is in that hyperclass.

### Context of an IS Component

Definition:

*Context of an IS component is a tuple*

$\langle RZ, A_j, O.S_j, O.P_k \rangle$  where:

$RZ$  is a corresponding responsibility zone;

$A_1, A_2, \dots, A_n$  is a set of corresponding business activities;

$O.S_j$  is a set of overlap situations between this IS component and other IS components; and

$O.P_k$  is a set of overlap protocols to coordinate these overlap situations.

The context of an IS component is formed of two types of interactions: *i*) the interactions of an IS component with the organizational environment, including the Organizational and the Group collaboration facets; and *ii*) the interactions between IS components. To represent the interactions of an IS component with the organizational environment, we define the concepts of *Activities* and *Responsibility zones*. **Activities** represent the organizational standpoint of a business process, whereas the corresponding processes of an IS component represent the computerized part of this process. A **Responsibility zone** (RZ) is a part of an organization-working environment. In our approach, it is defined by its corresponding IS components and its activities. On the other hand, information overlap plays the decisive role of the interactions among IS components. Information overlap among components is indispensable when several components share a common subset of information

(Léonard 1999). In our approach, information overlap can be managed both as *overlap situations* and *overlap protocols*. An **overlap situation** occurs when there is at least one class or one process in common to several IS components. There are possibly three types of overlap situations: i) *Distinct*: there is no common class and no common process between IS components; ii) *With borders*: there are common classes but no common process; and iii) *With overlaps*: there are common classes and common processes.

Depending on the levels of abstraction and the nature of information overlapped, there are two *overlap layers*: i) *Metadata overlap layer* is related to overlaps of the *metadata* of IS components; and ii) *Data overlap layer* concerns overlaps of the *data* of IS components. It is important to take into account the semantic heterogeneities that may happen to metadata overlap layer and the data redundancies that may happen to data overlap layer. Various approaches can be used to resolve the semantic mismatch and data redundancy problems (e.g., Batini et al. 1986, Hammer and McLeod 1993, Hull 1997, Mirbel 1997, as well as Parent and Spaccapietra 1998). An **overlap protocol** is a protocol that allows each RZ to perform its own processes locally. Meanwhile, this protocol also helps the RZ to take into account the processes in other RZs that can influence its own processes. The protocol must therefore allow the different RZs to process their own activities, while at the same time being aware of proceedings in the other RZs, especially when such proceedings may influence their own activities. In fact, an overlap protocol includes a set of semantics, rules, and formats managing the cooperation between IS components. It is possible to combine several overlap protocols in a coherent way to coordinate the interactions among RZs.

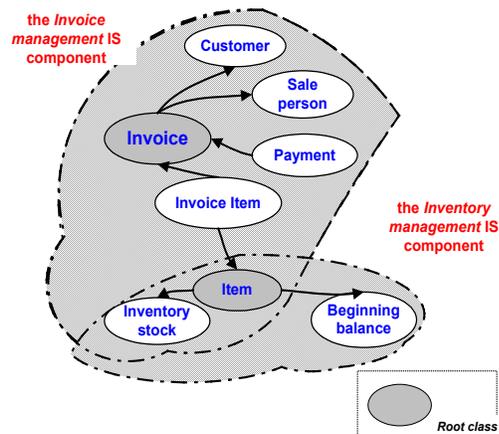
A generic overlap protocol has been proposed by Léonard and Parchet (1999): *Shade projection* overlap protocol. This overlap protocol authorize a RZ of an IS component to use *shade processes*, which are overlapped with other RZs (of other IS components). With these shade processes, one RZ can take into account the fact that some important activities occur in another RZ and vice versa. Actually, **third techniques can be used to implement overlap protocols**. First, the *Ownership-based overlap technique* appoints which one RZ will play the role of the *custodian* for each common element. The custodian of an element takes the responsibility for defining, developing, and maintaining it. The other RZs may communicate to the custodian to obtain information about this element. Second, the *Alert-based overlap technique* allows a RZ to send an *alert* to other RZs after performing a process which is overlapped between them. Finally, the *Service-based overlap technique* allows a RZ to send a *request* to perform a process to another RZ who is the *provider* of this process. Normally, the *provider* RZ will perform the requested process and return the result to the requested RZ. The first overlap technique can apply to the “With borders” overlap situations. Meanwhile, the second and the third overlap techniques, which can be used to implement *shade processes*, apply to the “With overlaps” overlap situations.

Example: This example illustrates how to describe IS components and information overlap.

### *IS components*

Let us return to the example about a retail-trading store presented earlier. We define the *Invoice management* IS component aiming to support the direct sale activities, which are responsible by the *Sale section*. The static aspect of this IS component is defined on the hyperclass that has the *Invoice* tuple-class as its root class. From the *Invoice* tuple-class, one can navigate to other related tuple-classes such as *Customer*, *Inventory item*, *Inventory in stock*, *Invoice items*, and *Payment* without any ambiguity (see Figure 4). The dynamic aspect of this IS component can be referred to the global life cycle of a sale presented in Figure 2. Besides, there is another IS component: the *Inventory management* IS component, which has the *Item* tuple-class as its root class. Its other constituents are the *Inventory stock* and *Beginning balance* tuple-classes.

**Figure 4. The information Overlap Between the Invoice Management and Inventory Management IS components**



*Overlap situations*

There are two overlap situations related to these two IS components:  $os_1$  and  $os_2$ .  $os_1$  is a “With border” overlap situation concerning the *Item* class, which is shared between these two IS components; and  $os_2$  is a “With overlaps” overlap situation regarding the *Inventory stock* class, which is shared by the two IS components and both of them may need to perform the same processes on it.

*Overlap protocol*

In this example, we only focus on the metadata overlap layer. For  $os_1$ , we propose to apply the Ownership-based overlap technique for the metadata overlap layer. It is assumed that the RZ of the *Inventory management* IS component is the custodian of the *Item* class. As a result, the RZ of this IS component is responsible for creation, modification, and deletion of conceptual specification of this class. As for the metadata overlap layer of  $os_2$ , we propose to apply the Alert-based overlap technique. Consequently, both the RZs of *Invoice management* and *Inventory management* IS components can perform the shade processes. However, the RZ of each IS component has to send an alert to the other RZ after performing a shade process (such as creation, modification, or deletion of the specifications) belonged to the overlap zone.

**Conclusion**

In this paper, we have shown the importance of a new infrastructure based on an *Information System upon Information Systems* (ISIS), which supports the management of knowledge used in IS development. Knowledge management involves the acquisition, analysis, preservation, and application of knowledge. We also consider that conceptual specifications, which represent the semantic content of information at the conceptual level, are the essential knowledge used in IS development process.

The contribution of our work is to provide a unique and coherent framework for acquiring knowledge, including its identification and organization based on the IS key concepts. The concepts proposed can be classified according to the aspects of an IS such as: Static aspect: *Atomic-class, Tuple-class, Hyperclass, Attributes, Key, and Subclass*; Dynamic aspect: *Dynamic states, Method, Event, and Process*; Integrity rule aspect: *Integrity Rule, Primitive, Scope, and Risk*. With regard to the Group Collaboration facet, there are the concepts of *Information system component, Responsibility zone, Overlap situation, and Overlap protocol*.

The perspective of this work is to provide an effective knowledge-based architecture that would be best suited for the management and coordination of IS development and maintenance projects in a complex and distributed environment. We

are actually working on analyzing, preserving, and using knowledge. We are also to develop a first prototype (in the web-based environment). The purpose of this prototype is to support knowledge management based on conceptual specifications. The prototype will allow to guarantee the completeness and the coherence of knowledge of IS projects at different levels of abstraction, to monitor overlap situations, and to realize overlap protocols. In addition, we also have foreseen to extend our prototype to cooperate with external environments, particularly the development tools and systems such as Computer-Aided Software Engineering (CASE) and DataBase Management System (DBMS).

## References

- Andany, J., Léonard, M. & Palisser, C. (1991). "Management of Schema Evolution in Databases", *Proceedings of I/LDB91*, Morgan-Kaufman.
- Arsanjani, A. (2002). "Developing and Integrating Enterprise Components and Services", *Communications of the ACM*, October.
- Batini, C., Lenzerini, M. & Navathe, S. (1986). "A Comparative Analysis of Methodologies for Database Schema Integration", *ACM Computing Surveys*.
- Booch, G. (1998). *The Unified Modeling Language User Guide*, Addison Wesley.
- Booch, G. (1991). *Object Oriented Design with Applications*, Benjamin/Cummings.
- Coad, P. & Yourdon, E. (1990). *Object-Oriented Analysis*, Prentice-Hall.
- Coad, P. & Yourdon, E. (1991). *Object-Oriented Design*, Yourdon Press.
- De Michelis, G., Dubois, E., Jarke, M., Matthes, F., Mylopoulos, J., Schmidt, J. W., Woo, C. & Yu, E. (1998). "A Three-Faceted View of Information Systems", *Communications of the ACM*, December.
- Edwards, S. H. (1992). "Toward a Model of Reusable Software Subsystems", 5<sup>th</sup> Annual Workshop on Software Reuse.
- Hammer, J. & McLeod, D. (1993). "An Approach to Resolving Semantic Heterogeneity in a Federation of Autonomous, Heterogeneous Database Systems", *International Journal of Intelligent and Cooperative Information Systems*.
- Herzum, P. & Sims, O. (2000). *Business Component Factory: A Comprehensive Overview of Component-Based Development for the Enterprise*, OMG Press.
- Hull, R. (1997). "Managing Semantic Heterogeneity in Databases: A Theoretical Perspective".
- Jacobson, I. (1992). *Object-Oriented Software Engineering*.
- Jetter, A., Kraaijenbrink, J., Schröder, H.-H. & Wijnhoven, F. (2006). *Knowledge Integration: The Practice of Knowledge Management in Small and Medium Enterprises*, Physica-Verlag.
- Le Dinh, T. & Léonard, M. (2002). "Defining Information System Components", *Proceedings of Confederated International Conferences CoopIS, DOA, ODBASE 2002*, Springer, California, October.
- Léonard, M., Grasset, A., Le Dinh, T. & Santos, C. (2001). "Information Kernel: An Evolutionary Approach to Integrate of Enterprise Information Assets", Conference of Open Enterprise Solutions: Systems, Experiences, and Organizations, Rome, September.
- Léonard, M. (2003). "Information System Engineering Getting Out of Classical System Engineering", Keynote lecture, 5th International Conference On Enterprise Information Systems, Angers – France, April.
- Léonard, M. & Parchet, O. (1999). "Information Overlap", IEEE International Symposium on Database Applications in Non-Traditional Environments (DANTE'99).
- Luu, H. & Léonard, M. (2002). "Towards An Integrity Rules Management System", Internal report, Database group, University of Geneva.
- Mirbel, I. (1997). "Semantic Integration of Conceptual Schemas", *Data Knowledge Engineering* 21.
- Parent, C. & Spaccapietra, S. (1998). "Issues and Approaches of Database Integration", *Communications of ACM*, 41, May.
- Parnas, D. L. (1972). "On the Criteria to Be Used in Decomposing Systems into Modules", *Communications of the ACM*, 15(12), December.
- Peterson, J. L. (1981). "Petri Net Theory and the Modeling of Systems", Prentice Hall.
- Rumbaugh, J., Blaha, M., Premerlani, W., Eddy, F. & Lorensen, W. (1991). *Object-Oriented Modeling and Design*, Prentice-Hall.
- Rumbaugh, J., Jacobson, I. & Booch, G. (1998). *The Unified Modeling Language Reference Manual*, Addison-Wesley.
- Shlaer, S. & Mellor, S. J. (1989). *Object-Oriented System Analysis: Modeling the World in Data*, Yourdon Press.
- Shlaer, S. & Mellor, S. J. (1992). *Object Lifecycles - Modeling the World in States*, Prentice Hall.
- Stojanovic, Z., Dahanayake, A. & Sol, H. (2001). "A Methodology Framework for Component-Based System Development Support", EMMSAD'01, Interlaken, Switzerland, June 4-5.
- Turki, S. (2002). "Hyperclasses: Towards a New Kind of Independence of the Methods from the Schema", *Proceedings of 4th International Conference On Enterprise Information Systems*, Spain, April.
- Watson, I. (2003). *Applying Knowledge Management: Techniques for Building Corporate Memories*, Morgan Kaufmann Publishers.

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## WHO SHOULD REALLY ANSWER THE CALL: REGULATION OF TELECOMMUNICATIONS

To ensure the provision of telecommunications services to citizens, the legislated regulator (CRTC), federal government and local governments must ensure that telecommunications companies have appropriate back-up and disaster recovery systems.

### Introduction

In October, 2006 Bell Aliant, the primary provider of telephone and internet services in the province of Newfoundland and Labrador, Canada, experienced a small fire in a building which housed both its main system and back-up system. As a result, both systems were disabled. The capital city, St. John's was left without telephone, cellular telephone, internet service and most incredibly without '911' emergency service. This presented a potentially dangerous situation whereby over 150,000 citizens were unable to call the fire department or ambulance service for a six-hour time period (Furey and Rixon, 2007).

The seventy-eight telecommunication companies in Canada are regulated by the Canadian Radio-television and Telecommunications Commission (CRTC), an agency of the federal government. In addition to regulating telecommunications, the CRTC regulates over 2,000 broadcasters, including television, radio and satellite systems. The CRTC's regulatory powers are derived from the Broadcast Act (1991) and the Telecommunications Act (Department of Justice, 1993). The CRTC's mandate with respect to telecommunications is to ensure that Canadians have access to reasonably priced, reliable communications services (Canadian Radio-television and Telecommunications Commission, 2007c). The CRTC reports to Parliament through the Minister of Canadian Heritage. The Canadian Heritage Department is a large, diverse department that is responsible for five departmental agencies, nine crown corporations, the Public Service Commission, the Public Service Labour Relations Board and the Public Service Staffing Tribunal (Appendix 1).

Municipal and provincial governments have contracted with Bell Aliant for their telecommunications services in the St. John's region; as such, they are responsible to provide 911 emergency fire and ambulance services to citizens. The provision of these emergency services is dependent on the availability of reliable telecommunication systems provided by telecommunications companies. In St. John's, 911 calls are answered by the regional fire department. If an ambulance is required, a call is forwarded to the city's main hospital, the Health Sciences Centre. The hospital's ambulance department dispatches an ambulance (Health Care Corporation of St. John's, 2007). In other regions of the province responsibility is similarly shared for fire and ambulance service. Hospitals are funded by the provincial government while fire departments are the financial responsibility of municipalities.

As depicted in Appendix 2, several key stakeholder groups were impacted by Bell Aliant's service outage. This paper presents the second phase of a case study of this communications service outage. The first phase, which focused on how Bell Aliant and local governments responded to the service outage, was introduced in a previous paper by Furey and Rixon (2007). The third phase will examine stakeholder views regarding Bell Aliant's accountability to its stakeholders.

This paper focuses primarily on the oversight role of the regulatory agency (CRTC) to ensure that telecommunications companies such as Bell Aliant are held to account for the provision of essential telecommunications services to citizens. In addition, this study explores the responsibility of the federal government of Canada in ensuring the CRTC fulfills its mandated oversight role. Finally, this research also examines the role of local governments in contracting such services and ensuring the vendors have appropriate backup systems and adequate disaster recovery plans.

**Literature Review**

This section provides a review of the relevant literature on accountability, regulatory agencies and protocols for telecommunications systems back-up and disaster recovery.

**Accountability**

Accountability is defined in a number of ways by various authors. It is defined by Rosenfield (1974: p. 125) as the “justifiable holding of one to account for personal actions where justifiability is conferred by an authority relationship between the persons involved”. Kearns (2003) defines accountability as providing an account of one’s activities, typically with respect to agreed upon performance standards or outcomes. When defining accountability, it is important to distinguish between the terms ‘accountability’ and ‘responsibility’. Throughout the literature, accountability is often used interchangeably with responsibility. However, these concepts do not necessarily have the same meaning. Hoskin (in Munro and Mouritsen, 1996) differentiates between accountability and responsibility. Under Hoskin’s definition, responsibility is considered to be encompassed within accountability.

In its most restrictive definition, accountability is viewed as the provision of an account or information (Stewart, 1984). His definition is based not only on the provision of information, but also on the judgment of that information: the “holding to account involves both evaluation and consequence” (Stewart, 1984: p. 15). He maintains that accountability is contingent on the existence of a capacity for action by those who hold others to account. The whole process of providing the account and the holding others to account can be described as a relationship or a bond since “only the person to whom the account is given has the power to hold to account the person who gives the account” (Stewart, 1984: p. 16).

To summarize, Stewart’s framework (1984: p. 18) includes the following components:

- 1) the account
- 2) the holding to account (evaluation and consequence)
- 3) the bond of accountability (which is the relationship of power between the accountant and the accountee)
- 4) the link of account (where there is no bond of accountability; rather, there is an obligation or custom to account)
- 5) the field of accountability (activities for which the account is given)
- 6) the ladder of accountability (sets out the bases of accountability)

Stewart describes the accountability relationship in terms of a ladder of accountability. As illustrated in the following table, this ladder has considerable application for regulatory agencies. Regulatory agencies can be expected to adhere to the first four rungs, while the policy rung is the responsibility of government.

**Table 1: Ladder of Accountability and Regulatory Agencies**

Bases of Accountability	Description	Regulatory Agencies' Accountability
1. <i>Probity and legality</i>	<i>Probity ensures that the funds are used properly and in the manner authorized; fiscal accountability is concerned with whether the funds were expended appropriately. Legality ensures that the powers given by the law are not exceeded.</i>	<i>Financial Statements Annual Report</i>
2. <i>Process</i>	<i>Encompasses whether the procedures used were adequate in terms of time and effort; considers efficiency to ensure there is no waste in the use of resources and administration to ensure that there is no maladministration</i>	<i>Performance Indicators</i>
3. <i>Performance</i>	<i>Considers whether the performance achieved meets required standards – output data must be added to financial data</i>	<i>Performance Indicators</i>
4. <i>Programme</i>	<i>Concerns whether the work carried out met the goals; is the agency achieving its objectives.</i>	<i>Strategic Plan</i>
5. <i>Policy</i>	<i>There are no set standards used in the formulation of policy; government is ultimately accountable to the electorate for its policies</i>	

Source: Adapted from Stewart (1984: pp. 17 – 18)

### Regulatory Agencies

Regulation is achieved through the establishment of regulatory agencies which are typically at arm's length from government. Independent regulatory agencies are perceived as a method of enhancing credibility and reducing political uncertainty (Gilardi, 2004, p. 15). Regulation may apply to public and private sector organizations and is often established to correct market failures and to protect the rights of individuals, which can be regarded as social regulation. Regulation may be defined by some scholars from a narrow perspective, while others take a broad approach (Christensen and Laegreid, 2006). According to Christensen and Laegreid, the narrow definition of regulation is based on formulating rules and setting up autonomous public agencies to monitor, scrutinize, and promote compliance with rules. A second and broader definition includes all types of state intervention in the economy to achieve public goals. A third, and even broader definition is based on regulation as social control.

Regulation is often implemented by governments to address the public interest needs of citizens. This viewpoint is shared by Selznick (1985: p. 363) who defines regulation as sustained and focused control exercised by a public agency over activities that are valued by a community. Similarly, Mitnick (1980: p. 7) describes regulation as “the public administrative

policing of a private activity with respect to a rule prescribed in the public interest”. Social regulation extends to protection of public interests in health, safety and the environment (McGowan and Wallace, 1996). Public interest theory emphasizes the interest of individuals in a free market economy (James, 2000). Public interest theory is applicable to the regulation of telecommunications, particularly the provision of 911 emergency services.

While the Canadian government is responsible for the telecommunications regulatory agency, Christensen and Laegreid (2006) note that it is generally accepted that departmental Ministers give general guidance to these agencies, not direction for specific cases. The authors also discuss the difficulty in making regulatory agencies independent while holding them accountable to politicians, other agencies, consumers, and regulatees. The CRTC is an example of a regulatory agency established by the federal government to ensure public access to telecommunications. Although regulatory agencies are established by government to ensure the public interest of citizens, there is concern about the oversight of the regulatory agencies. In other words, who regulates the regulator?

### **Back-up and Disaster Recovery**

According to Maiwald and Sieglein (2002) data backup and recovery are sometimes considered technical security controls related to system availability and integrity. ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization of information technology security. This section of the paper references international information technology security techniques or codes of practice for information security management that are relevant to Bell Aliant’s technology design.

ISO/IEC (17799) references several sections (9.1.4, 9.2.1, and 9.2.3) which are applicable to cabling, location of equipment and backup devices. Section 9.1.4 offers guidelines for protecting against external and environmental threats such as a fire. This section of the standard states that fallback equipment and back-up media should be sited at a safe distance to avoid damage from a disaster affecting the main site. Equipment siting and protection is referenced under section 9.2.1. The section states that controls should be adopted to minimize the risk of potential physical threats, e.g. theft ...fire. Cabling security is referenced under section 9.2.3. The section states that sensitive or critical systems should consider several items including use of alternative routings and/or transmission media providing appropriate security as well as the use of fiber optic cabling.

Information security is difficult and many information systems have not been designed to be secure consequently disruption or disaster may occur. According to Maiwald and Sieglein (2002) the key tasks of the recovery stage include identifying alternative locations for employees, restoring voice and data communication services, restoring non-critical business functions and replacing lost assets and employees. Most disaster recovery plans identify restoring voice and data communication services as one of the top key tasks. Thus the adherence to and review of ISO/IEE standards is imperative to the increasingly interconnected business environment.

### **Methodology**

The methodology employed in this research is comprised of a case study involving a documentary review and face-to-face in-depth interviews with the three key players in the provision of 911 emergency services in St. John’s, Newfoundland. Yin (1994) defines case studies as a multi-faceted research strategy which typically involves an in-depth examination of one organization, situation or community. Case studies can be described as holistic investigations which generate both quantitative and qualitative data from archival material, interviews, surveys and observations (Hill, 1993). Face-to-face interviews, associated with case studies, provide an opportunity to probe stakeholders for additional information and result in richer and more in-depth information than could be derived solely from a survey of a statistical sample of the population at large. The face-to-face interview process enables the researcher to control the line of questioning, particularly in situations where it may become apparent that some of the questions need to be amended to ensure clarity or when the responses may

generate additional questions. This flexibility contributes to the level of understanding of the issues.

Although case studies yield greater realism than quantitative methodologies, it must be recognized that they are time consuming, their findings cannot be generalized and their lack of rigorous control compromises validity (Bennett, 1991; Hill, 1993). While all the disadvantages cannot be mitigated, the case study is the most appropriate due to the complex nature of the research questions and the need to solicit in-depth feedback from a small number of respondents.

This case study was conducted through a documentary review combined with semi-structured interviews with key stakeholders and a Bell Aliant official. A listing of respondents is provided in Appendix 3. The semi-structured interviews commenced with a broad, open-ended question, in a storytelling format, allowing respondents to recount their recollection of the evening the telephone system was out of service due to the fire. As a form of communication, a narrative approach using storytelling is utilized to acquire knowledge from the interviewees by examining the stories they tell in an attempt to describe the past event and failures (Boje 1991b; Jones 1990) of the communications outage. In addition to gathering the respondents' version of this situation through storytelling, the authors also posed a number of specific questions designed to gather key information which did not emerge through the respondents' storytelling. The interview questions are provided in Appendix 4. It should be noted that the responses to all interview questions are not analyzed in this paper. Rather, only those responses relevant to the oversight role of governments are discussed in detail. Responses to the remaining questions will be analyzed in the next phase of this study.

### **Discussion and Analysis**

This section presents a discussion and analysis of the documentary review and the results of the semi-structured interviews. The oversight roles of the CRTC, federal government and local governments are examined and accountability gaps are identified.

#### **CRTC's Accountability**

The CRTC has the power through its legislative authority to hold telecommunications companies to account and uses this power as illustrated by its requirement for Quality of Service Standard exception reporting. The CRTC has established 13 Quality of Service Standards for retail customers (with separate standards for rural and urban markets) and 22 Quality of Service Standards for commercial customers (Appendix 5). This fits with Stewart's bond of accountability which is based on a relationship of power between the accountant and accountee.

The telecommunications companies are required to gather monthly statistics and report exceptions to these standards to the CRTC on a quarterly basis. These reports are posted on the CRTC's website. Furthermore, the telecommunications companies are charged a penalty when they do not meet these standards. This penalty is subsequently paid to customers as credits. The reliability and validity of the account is verified through the CRTC's requirement that the telecommunications companies engage external auditors to review the calculation and reporting of the Quality of Service Standards (Canadian Radio-television Telecommunications Commission, 1995).

Although the CRTC exercises its power and holds telecommunications companies to account, as illustrated in Table 2, there are a number of weaknesses in the content of the account.

**Table 2: CRTC Oversight and Accountability**

Stewart’s Framework	CRTC Oversight	Accountability Gaps
<i>The Account</i>	<ul style="list-style-type: none"> <li>• <i>CRTC’s Quality of Service Standards</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Lack of standards for systems back-up and disaster recovery</i></li> <li>• <i>No specific standard for 911 service continuity</i></li> <li>• <i>24-hour standard for all categories of service outages</i></li> </ul>
<i>Holding to Account</i>	<ul style="list-style-type: none"> <li>• <i>CRTC requirement for telecommunications companies to report exceptions</i></li> <li>• <i>CRTC levying of fines for non-compliance with the Quality of Service Standards</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>No gaps identified</i></li> </ul>

Source: adapted from Stewart (1984)

The axiom ‘what gets measured, gets managed’ appears to apply to the telecommunications industry. The CRTC does not have a standard which measures backup and disaster recovery plans. Furthermore, the service standard of 24 hours to clear out-of-service reports (Indicator 2.1, Appendix 5) appears too generous a timeframe in terms of meeting the public interest of a safe environment. While the 24-hour standard may be appropriate for certain services, it does not appear to be reasonable for 911 emergency services. Consequently, Bell Aliant was well within the CRTC’s standard when all customers in St. John’s experienced a six-hour service outage. Critics may argue that the CRTC’s Quality of Service Standards are not sufficiently stringent and, therefore, do not ensure telecommunications companies are providing an adequate level of service to citizens. It is possible that a shorter time period may have encouraged or motivated Bell Aliant to minimize service interruptions. Furthermore, perhaps the CRTC should consider acceptable repair timeframes to respond to various controllable (systems recovery) and non-controllable (adverse weather) service interruptions. In its oversight role, the CRTC is accountable to the citizens to ensure telecommunications companies provide an adequate level of service. As it relates particularly to 911 services, this definition of adequate service is debatable.

As evidenced from this service outage, there appear to be three major gaps in the content of the account:

- 1) Lack of a Quality of Service Standard for telecommunications companies to have back-up and disaster recovery mechanisms in place.
- 2) Lack of Quality of Service Standard for telecommunications companies to have protocols surrounding provision of essential 911 services.
- 3) The Quality of Service Standard of 24 hours to restore service may not be appropriate for all services.

Stewart’s framework includes a category, field of accountability, which refers to the activities for which the account is given. As illustrated in Appendix 5, there are a wide range of activities for which the CRTC requires a report (an account) by the telecommunications companies. Since this paper is focused on the setting and enforcement of only two elements of the account, standards for systems backup and disaster recovery, other activities for which telecommunications companies must provide an account to the CRTC are outside the scope of this study.

In addition to the Quality of Service Standards, the CRTC has established a three-year workplan for the period 2007-2010 which focuses on deregulation along with establishment of a consumer protection agency, a review of the regulatory framework for wholesale services, and the definition of essential services (CRTC, 2007a). Although the specific frame of reference has not been identified for these initiatives, it is possible that they might prove beneficial in addressing concerns related to citizens’ access to 911 emergency services.

The following table depicts the CRTC’s reporting along Stewart’s Ladder of Accountability.

**Table 3: Ladder of Accountability and CRTC**

<i>Bases of Accountability</i>	<i>CRTC’s Accountability Report</i>
<i>1. Probity and legality</i>	<i>Performance Reports (CRTC Accomplishments 2006-2007) Workplan 2007-2010</i>
<i>2. Process</i>	
<i>3. Performance</i>	<i>Quality of Service Standards</i>
<i>4. Programme</i>	<i>Status of Competition in Canadian Telecommunications Markets</i>
<i>5. Policy</i>	

Source: Adapted from Stewart (1984: pp. 17 – 18)

The probity/legality rung is addressed through the CRTC’s Performance Reports and Workplan (CRTC, 2007a and b). These reports are comprised of financial results, with comparison of actual to budgeted performance along with progress on achieving the various objectives contained in the accomplishments report (CRTC, 2007b).

The documentary review did not reveal any statistics which would fit the criteria of process information. The CRTC’s Quality of Service Standards could best be characterized as fitting on the performance rung of Stewart’s Ladder of Accountability. As depicted in Table 3, none of the Quality of Service Standards would fit Stewart’s criteria for programme data, but its report on the Status of Competition in Canadian Telecommunications Markets could fulfill the programme accountability rung. According to the CRTC’s Report on Plans and Priorities, its strategic objective is to ensure broadcasting and telecommunications industries contribute to Canada’s cultural, economic and social prosperity, and this is considered to be its programme mandate (CRTC, 2007b).

When examining the accountability role of the CRTC, the Bell Aliant respondent explained that in service disruption situations the CRTC ensures that status reports are completed until the situation concludes but the main focus is on ensuring quick restoration of service. The CRTC’s first priority is to ensure that emergency services are restored as quickly as humanly possible and to ensure that the interruption is as limited as possible (TC1). When discussing the role of the CRTC in ensuring continuity of essential services, the Bell Aliant respondent claimed that the CRTC’s approach was appropriate and the service quality indicator bar was set high enough:

“The Quality of Service measures are based on normal working conditions; the CRTC recognizes that it is not possible or economically practical to provide all aspects of service 100% of the time. The Quality of Service measures are enforceable by the CRTC through the imposition of financial penalties. In my view, the CRTC’s approach is appropriate and the bar is set sufficiently high” (TC1).

Not surprisingly, Bell Aliant considers the CRTC’s existing standards to be appropriate. Introducing new standards

for systems backup, disaster recovery and reduced time to repair service outages would likely result in increased costs for Bell Aliant.

**Accountability of the Federal Government**

As depicted in Appendix 1, the Department of Canadian Heritage is responsible for many diverse areas. This broad scope of responsibility may contribute to the department’s lack of focus on the telecommunications aspect of the CRTC. Indeed, the department’s 2007-2008 Report on Plans and Priorities (CRTC, 2007b) does not contain any specific references to the CRTC’s telecommunications objectives or plans. Rather, the department’s primary concern with the CRTC relates to the broadcasting aspect of its mandate. Overall, the focus of the department seems to be on cultural issues, as illustrated through its vision and mission.

According to the documentary review, there appears to be an accountability gap in the Department of Canadian Heritage’s oversight role for the telecommunications aspect of the CRTC. There does not seem to be a linkage between the department’s strategic plan and that of the CRTC. Arguably, the Department of Heritage should strength its oversight role for the CRTC to ensure it is accountable in meeting the telecommunication needs of citizens particularly in the provision of 911 emergency services for citizens.

**Accountability of Local Governments**

While it is the responsibility of the CRTC to establish acceptable service standards, local governments have a role to play directly with the telecommunications companies from a procurement perspective and through representation to the CRTC. For example, the provision of 911 emergency services is the responsibility of local governments. Arguably, when contracting for telecommunications services, the onus is on local governments to ensure that their service contracts include a requirement for the vendor to provide appropriate systems back-up and disaster recovery protocols, along with periodic reporting on verification of these protocols (Table 3). This is a service standard where local governments need to demonstrate accountability to citizens.

The link of account in Stewart’s framework can be used to describe the accountability relationship between the telecommunications companies and local governments (provincial and municipal). Stewart describes the link of accountability as a situation where there is no bond of accountability, but rather there is an obligation or custom to account. Currently, there is no obligation or custom for Bell Aliant to provide an account to the provincial and municipal governments regarding its back-up and disaster recovery protocols. This is an area where local governments may wish to play a greater role, albeit non-legislative, in ensuring telecommunications companies are accountable to citizens.

**Table 4: Local Governments’ Oversight**

<i>Stewart’s Framework</i>	<b>Local Governments’ Oversight</b>	<b>Accountability Gaps</b>
<i>Link of Account</i>	<ul style="list-style-type: none"> <li><i>Provincial and municipal governments responsibility for provision of essential service to citizens</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Provincial and municipal governments contract with Bell Aliant did not include provisions for systems back-up and disaster recovery</i></li> </ul>

Source: adapted from Stewart’s (1984) framework

Local municipal and provincial governments were equally unprepared for such an extensive service outage. The provincial government respondent (GV1) indicated he was not prepared for such an event. He stated that it was quite serious

for the police and emergency ambulance services.

“...Clearly, if you have a heart attack or you have a sick child and you need to call an ambulance or hospital...that’s actually a risk to life.” (GV1).

Arguably, local governments also have a responsibility to ensure the continuity of essential services for citizens. Both the provincial and municipal governments have emergency preparedness plans which they test on a periodic basis, but these plans did not include a scenario where all telecommunications links would be out of service.

When considering responsibility for 911 services, the telecommunications company’s respondent did not see a major role for the provincial government in ensuring the continuity of essential telecommunications services. This respondent indicated that the provincial government had no legal power regarding telecommunications since this is a federal responsibility:

“Any provincial legislative would be unconstitutional. Having said that, provincial and municipal governments have a natural interest in the integrity of telecommunications in the region, and we are pleased to work with them” (TC1).

When asked to describe the provincial government’s role with respect to telecommunications this respondent stated:

“Under the Telecommunications Act the provincial governments have a very limited role in telecommunications – their rights are to provide input to the federal Minister on policy directives and appeals to cabinet. The provinces can, and have, appeared as a party in CRTC proceedings affecting the telecommunications industry” (TC1).

Evidently, the telecommunications company respondent disagreed with the provincial government being held to account for 911 services. While local government does not have legislative responsibility for telecommunications, a government respondent claimed that local government is ultimately accountable for the provision of 911 services to citizens. Government also appears to recognize this accountability since the respondent indicated that back-up redundancy would be addressed in the next telecommunications public tender and contract. He conceded that although the CRTC regulates the telecommunications industry, once government enters into an agreement with a provider such as Bell Aliant, the company is then accountable to government from a procurement perspective (GV1). Therefore, the telecommunications company becomes accountable to local government, from a vendor perspective rather than from a legislative regulatory perspective.

In reflecting on this incident, the government respondent acknowledged that neither government nor Bell Aliant was fully prepared to respond or react to such an event:

“...When we did a postmortem on this whole thing...there was a lot of blame to be shared around...nobody was pristine...nobody was without guilt or without fault. Government did not react as well as we should have....Aliant should have had a plan and didn’t respond particularly well as to who they told. They didn’t have a plan to do that. So there’s a lesson to be learned here for everybody...instead of pointing fingers...that’s nothing to be gained by that”. (GV1).

## Conclusions

This case study has highlighted weaknesses in Canada’s regulatory standards for telecommunications companies with respect to back-up and disaster recovery. The Canadian telecommunications industry is regulated by the federal government through its agency, the CRTC. This research study has shown that despite the CRTC’s regulation and its Quality of Service Standards, there are opportunities for all levels of government to improve their oversight roles. The CRTC exercises its legislative power to hold telecommunications companies accountable to meet certain minimum Quality of Service Standards. However, as illustrated through this study of the service outage, the CRTC’s standards did not require

telecommunications companies to have appropriate systems back-up and disaster recovery mechanisms in place. Ideally, the CRTC should have additional standards requiring telecommunications companies to provide an account of:

- 1) Systems back-up located at a separate physical locations
- 2) Disaster recovery mechanisms
- 3) Results of periodic testing of systems back-up and disaster recovery

As illustrated through the semi-structured interviews, Bell Aliant is not likely to voluntarily implement more stringent standards since the company is currently in compliance with the CRTC standards. Instead, it is the responsibility of the CRTC to improve the standards and introduce new standards where they are warranted.

In addition to the CRTC's oversight role, the local provincial and municipal governments also have a role to play in ensuring the telecommunications companies with whom they contract have adequate back-up and disaster recovery mechanisms. Although the local governments do not have an oversight role from a regulatory perspective, they are accountable from a procurement perspective to ensure the continuity of essential 911 services to citizens. The interviews revealed that the key provincial government respondent acknowledges their role in this regard.

In the absence of a sufficiently stringent oversight role by governments, it could be argued that Bell Aliant is giving priority to the profitability interests of its shareholders at the expense of the service delivery expectations of its customers. Alternatively, it could be argued that since there are other telecommunications service providers, it would be in Bell Aliant's shareholders' interests to meet the needs of customers to avoid losing them to competitors. Citizens are dependent on Bell Aliant for their 911 service. Even if Bell Aliant's retail customers switched to another telecommunications company, this would not avoid future problems since competitors are commercial customers of Bell Aliant. Bell Aliant owns the infrastructure which they are required by law to lease to their competitors.

While most of this discussion has centered around the responsibility of the CRTC and local governments to hold telecommunications companies accountable for the provision of essential 911 emergency services, consideration should also be given to the ministerial responsibility for the CRTC. Critics could argue that there is insufficient ministerial oversight over the CRTC. Ultimately, the Minister of Heritage is responsible for the CRTC achieving its mandate to ensure that citizens have access to telecommunications services. Indeed, this service outage incident illustrates the lack of CRTC standards for back-up and disaster recovery. Perhaps the Minister, through the Department of Heritage, should examine the standards set by the CRTC to determine if they are appropriate in protecting the public interest. There seems to be a gap in the accountability loop whereby the CRTC may be too far removed from the Minister. Clearly, it is important for parliament to hold the regulatory agency (CRTC) to account. The existing organizational form with the delegation of regulation to an agency, may not be the most effective way of holding the CRTC to account. In a research study of government's oversight role for agencies in Canada and the United Kingdom, Ellwood and Rixon (2006) found that organizational form contributed to stakeholder accountability.

To ensure the provision of telecommunications services to citizens, the legislated regulator (CRTC), federal government and local governments must ensure that telecommunications companies have appropriate back-up and disaster recovery systems. Clearly, Bell Aliant is accountable to its stakeholders (customers, government, employees and shareholders) for timely and adequate service delivery. However, there remains a critical oversight role for all levels of government to ensure that organizations such as telecommunications companies which provide essential services to citizens, are held to account. Moreover, the federal government is accountable to citizens to regulate the regulator. This research has shown that it is not enough to simply hold telecommunications companies to account; rather, it is imperative that the account must be sufficiently stringent and the field of accountability (activities for which the account is given) be appropriate to ensure delivery of essential services.

## Appendix 1

### Department of Heritage Responsibilities

The Department of Heritage portfolio includes the following departments, corporations and agencies:

#### Five Departmental Agencies

- Canadian Radio-television and Telecommunications Commission
- Library and Archives Canada
- National Battlefields Commission
- National Film Board of Canada
- Status of Women Canada

#### Nine Crown Corporations

- Canada Council for the Arts
- Canada Science and Technology Museum Corporation
- Canadian Broadcasting Corporation
- Canadian Museum of Civilization Corporation
- Canadian Museum of Nature
- Canadian Race Relations Foundation
- National Arts Centre
- National Gallery of Canada
- Telefilm Canada

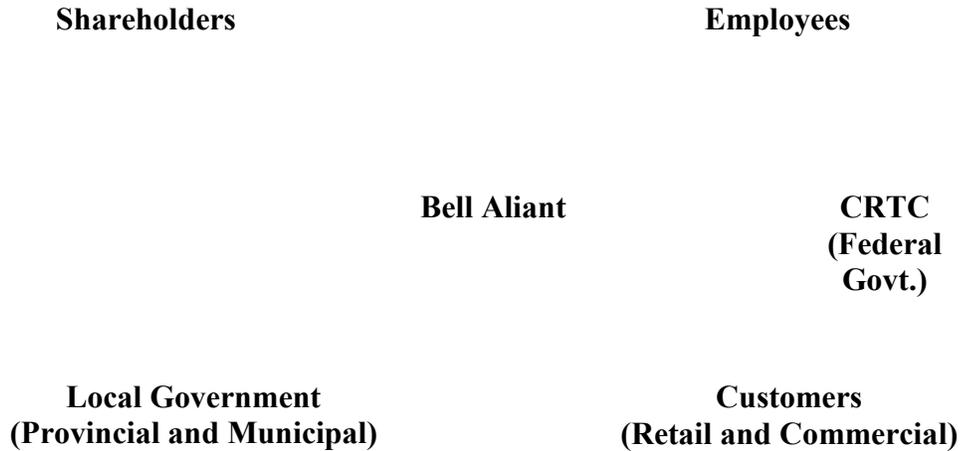
#### Other Responsibilities

- Public Service Commission
- Public Service Labour Relations Board
- Public Service Staffing Tribunal

Source: [www.canadianheritage.gc.ca/pc-ch/ac-os/index\\_e.cfm](http://www.canadianheritage.gc.ca/pc-ch/ac-os/index_e.cfm) (accessed August 9, 2007)

**Appendix 2**

**Bell Aliant’s Stakeholders**



**Appendix 3**

**Semi-structured Interview Participants**

<b>Organization</b>	<b>Respondent</b>	<b>Stakeholder Category</b>	<b>Code</b>
<i>Government of Newfoundland &amp; Labrador</i>	<i>Chief Information Officer</i>	<i>Local Government</i>	<i>GV1</i>
<i>City of St. John’s</i>		<i>Local Government</i>	<i>GV2</i>
<i>Bell Aliant</i>	<i>Manager of Communications and Public Affairs</i>	<i>Telecommunications Company</i>	<i>TC1</i>

**Appendix 4**

**Open-ended Interview Questions**

**Government of Newfoundland and Labrador**

1. Tell me about what happened on October 20, 2006, the night of the fire at the Bell Aliant building?

*The following questions are posed to the extent these issues are not addressed in the first ‘story telling’ question.*

2. Have there been other close calls? If so, how were they handled?
3. Is Rogers Communications' backup at the same location as Bell Aliant?
4. What is your understanding of the industry standard for back-up and disaster recovery?
5. Was the government fibre optic deal a direct result of this outage or would this have occurred eventually?
6. To whom should Bell Aliant be held accountable? *Prompts: government, citizens, etc.*
7. What role do you see for government in ensuring the continuity of essential telecommunications services? Should there be an oversight role for the provincial government?
8. Is there a role for the CRTC to play in ensuring continuity of essential telecommunications services?

### **Open-ended Interview Questions - Aliant**

Tell me about what happened on October 2006, the night of the fire at the Bell Aliant building?

*The following questions are posed to the extent these issues are not addressed in the first 'story telling' question.*

- 1 Who made the decisions that night...was there a meeting/virtual or face-to-face?
- 2 Have there been other close calls? If so, how were they handled?
- 3 Could this situation have been worse?
- 4 What is your understanding of the industry standard for back-up and disaster recovery?
- 5 Are you satisfied with the checks and balances in place? Are there better protocols in place now?
- 6 To whom is Bell Aliant accountable? *Who are Aliant's stakeholders?*
- 7 What role do you see for the provincial government in ensuring the continuity of essential telecommunications services? Should there be an oversight role for the provincial government/municipal?
- 8 Has the provincial government's role changed and if so how does to the CRTC's role?
- 9 Is there a role for the CRTC to play in ensuring continuity of essential telecommunications services?
- 10 The CRTC has a <24 hour rule-quality of service indicator – is that acceptable or should the aim be higher. Should it be broken down into certain types of outages and rules for each? Are you relying on the CRTC (legally)? Did CRTC set the bar high enough?
- 11 Was the government fibre optic deal a direct result of this outage or would this have occurred eventually? Would this second fiber optic line have prevented the problem?

Appendix 5

Quality of Service Standards – Retail

Indicator Number	Description	Standard
1.1A/B	<i>Provisioning Interval – Urban (5 days) and Rural (10 days)</i>	<i>90% or more</i>
1.2A/B	<i>Installation Appointments Met – Urban and Rural</i>	<i>90% or more</i>
1.3A/B	<i>Held Orders per 100 Inward Movement (Urban and Rural)</i>	<i>3.3% or less</i>
1.5	<i>Access to Business Office</i>	<i>80% or more</i>
1.7	<i>On-Time Activation for Alternate Providers of Long Distance Service</i>	<i>90% or more</i>
2.1A/B	<i>Out-of-Service Trouble Reports Cleared within 24 hours (Urban and Rural)</i>	<i>90% or more</i>
2.2A/B	<i>Repair Appointments Met – Urban and Rural</i>	<i>90% or more</i>
2.3A/B	<i>Initial Customer Trouble Reports – Urban and Rural</i>	<i>90% or more</i>
2.5	<i>Access to Repair Bureau</i>	<i>80% or more</i>
3.1	<i>Dial Tone Delay</i>	<i>98.5% or more</i>
4.1	<i>Directory Accuracy</i>	<i>93.8% or more</i>
4.2	<i>Access to Directory Assistance</i>	<i>80% or more</i>
4.3	<i>Directory Assistance – Accuracy</i>	<i>93.8% or more</i>

Source: CRTC (2005)

Quality of Service Standards – Commercial

Indicator Number	Description	Standard
1.6	Competitor Installation Appointments Met	90% or more
1.8	New Unbundled Type A and B Loop Order Service Intervals Met	90% or more
1.9	Migrated Unbundled Type A and B Loop Order Service Intervals Met	90% or more
1.10	Local Number Portability Service Intervals Met	90% or more
1.10A	Local Number Portability Order Late Completions	90% or more
1.11	Competitor Interconnection Trunk Order Service Interval	90% or more
1.11A	Bill and Keep Interconnection Trunk Order Late Completions	90% or more
1.12	Local Service Request Confirmed Due Dates Met	90% or more
1.13	Unbundled Type A and B Loop Order Late Completions	90% or more
1.14	Unbundled Type A and B Loops Held Orders	.25% or less
1.17	Local Service Request Rejection Rate	5% or less
1.18	Local Service Request Turnaround Time Met	90% or more
1.19	Confirmed Due Date Met	90% or more
1.19A	CDN Services and Type C Loops – Late Completion	90% or more
2.6	Competitor Repair Appointments Met	90% or more
2.7	Competitor Out-of-Service Trouble Reports Cleared within 24 Hours	90% or more
2.7A	Competitor Out-of-Service Trouble Reports – Late Clearances	90% or more
2.8	Migrated Local Loop Completion Notices to Competitors	90% or more
2.8A	New Loop Status provided to Competitors	90% or more
2.9	Competitor Degraded Trouble Reports Cleared Within 48 Hours	90% or more
2.10	Mean Time to Repair CAN Service and Type C Loops	4 hours
2.12	Service Failures within 30 days	N/A

Source: CRTC (2006)

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## REFERENCES

- Bennett, R. (1991) How is management research carried out? In Smith C. and Dainty, P. (ed) *The Management Research Handbook*. Routledge, New York, 85 – 103.
- Boje, D. M. (1991b) Consulting & Change in the Storytelling Organization, *Journal of Organizational Change Management*, Vol. 4, No. 3, 1991: 7-17.
- Christensen, T. and P. Laegreid, (2006) Agencification and Regulatory Forms. In: *Autonomy and Regulation: Coping with Agencies in the Modern State*, Edward Elgar Publishing Limited, Cheltenham, 8-49.
- Canadian Radio-television Telecommunications Commission (1995), Telecom Decision 2005-07.
- Canadian Radio-television Telecommunications Commission (2006), Competition Related Quality of Service Indicators, IV Quarter.
- Canadian Radio-television Telecommunications Commission (2007a), *CRTC 3-Year Work Plan: 2007-2010*, Ottawa.
- Canadian Radio-television Telecommunications Commission (2007b), *Part III – Report on Plans and Priorities: 2007-2008 Estimates*, Ottawa.
- Canadian Radio-television Telecommunications Commission (2007c), *The CRTC*, [www.crtc.gc.ca/eng/BACKGRND/Brochures/B29903.htm](http://www.crtc.gc.ca/eng/BACKGRND/Brochures/B29903.htm), [Accessed August 12, 2007]
- Department of Justice. (1993). *Telecommunications Act* (c38, as amended). Ottawa, ON.
- Ellwood, S. and D. Rixon (2006), Organisational Form and Accountability to Stakeholders: A study of workplace injuries systems in UK and Canada, In E. Lande and J. Scheid (eds.) *Accounting Reform in the Public Sector: Mimicry, Fad or Necessity*, ECM, Paris.
- Furey, M. and D. Rixon (2007), A close call with no call: A crisis management and accountability review after an entire province becomes disconnected, including 911, Proceedings of the Hawaii International Conference on Business, Honolulu.
- Gilardi, F. (2004), Institutional Change in Regulatory Policies: Regulation through Independent Agencies and the Three New Institutionalisms, in J. Jordana and D. Levi-Faur (eds), *The Politics of Regulation*. Edward Elgar, Cheltenham.
- Health Care Corporation of St. Johns, *The Ambulance Department*, [www.hccsj.nl.ca/med\\_services/amb\\_er\\_care/ambulance1.html](http://www.hccsj.nl.ca/med_services/amb_er_care/ambulance1.html) [Accessed August 12, 2007]
- Hill, F. (1993), Research methodology and the management disciplines: The need for heterogeneity, *Irish Business and Administrative Research*, 14 (2), 46-55.
- Kearns, K. (2003), Accountability in a Seamless Economy, in B. Peters and J. Pierre (eds), *Handbook of Public Administration*, Sage, London, 581-589.
- Hoskin, K. (1996), The ‘awful idea of accountability’: inscribing people into the measurement of objects’. In: R. Munro and J. Mouristsen (ed) *Accountability: power, ethos and the technologies of managing*. International Business Press, London, 265-282.

ISO/IEE 17799:2005. Information Technology: Code of practice for Information Security Management.

James, O. (2000), Regulation Inside Government: Public Interest Justification and Regulatory Failures, *Public Administration*, 78 (2), 327-42.

Jones, M. O. 1991. What if stories don't tally with the culture? *Journal of Organizational Change Management*, 4(3): 27-34.

Maiwald, E., and Sieglein, W. (2002). Security planning & disaster recovery. Osborne: McGraw-Hill.

McGowan, F. and H. Wallace (1996), Towards a European Regulatory State, *Journal of European Public Policy*, 3 (4), 560-76.

Mitnick, B. (1980), *The Political Economy of Regulation*. Basic Books, New York.

Rosenfield, J. (1974) *Stewardship in Objectives of Financial Statements*. AICPA, New York.

Selznick, P. (1985), Focusing Organizational Research on Regulation, in R. Noll (ed), *Regulatory Policy and the Social Sciences*, University of California Press, Berkeley.

Stewart, J. (1984) The Role of Information in Public Accountability. In: Hopwood A. and Tomkins C. (eds) *Issues in Public Sector Accounting*. Philip Allan Publishers Limited, Oxford, 13 – 34.

Yin, R.K (1994) *Case Study Research: Design and Methods, 2<sup>nd</sup> Edition*, Applied Social Research Methods, 5, Sage, London.

# Marketing

ASAB 2007  
Acadia University

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## WAITS, DELAYS AND PSYCHOLOGICAL CONTRACTS

This paper investigates psychological contracts inherent in service experiences. Using consumption stories written by consumers, it demonstrates how a breach of the psychological contract as a result of a wait or delay brings forward affective evaluation and potential behaviours. It is argued that the affective state brought forward by a breach of a psychological contract is an important and understudied issue in marketing.

### Introduction

The services marketing literature is ripe with studies that have investigated the nature of service evaluations. We have developed a tremendous body of knowledge on the variables that lead to positive and negative service evaluations. We also know that waits and delays make a significant impact on customer evaluations of the service experience. Thus, understanding the dynamics of the process through which waits and delays make an impact on the customer is important for both the theory and practice of services marketing. This study will attempt to provide a rich understanding of the psychology behind consumers' negative evaluations of the waiting experience. This paper will point to the theory of psychological contracts as a means of explaining the feelings and behaviours that result from a waiting experience.

### Waits and Delays

It is common for customers and marketing practitioners to use the terms wait and delay somewhat interchangeably. However, they are distinct constructs in theory and practice and as a result they have different effects on the customer and have different implications for practitioners in services industries. A wait is any condition in the service experience where the customer is ready for the service to start, but there is a gap between this time and the time that service actually commences (Taylor, 1994). For example, the customer may wait for service while in line at a bank. This being said, waits can also be conceptualized as pre-service waits, in-service waits and post-service waits (Dube-Rioux, Schmidt and Leclerc, 1989; Taylor and Fullerton, 2000). It has been argued that pre-service waits are the most challenging for service managers because they tend to produce the strongest negative reactions (Taylor, 1994). These pre-service waits or those where the customer is ready for the service to start, can be further classified into three distinct categories; queues or lines, pre-schedule waits and delays (Taylor, 1994). A delay is a particular type of pre-service wait when the customer is ready for the service at an appointed or scheduled time and the service is not being performed or is unable to be performed (Taylor, 1994). For example, the customer may wait at the airport for a flight that has been delayed as a result of weather conditions.

The most common view in the services marketing literature is that waits and delays are critical variables that influence a customer's overall evaluation of the service provider (Taylor and Fullerton, 2000). While there are a number of models that explain how the antecedent variables that are part of the service experience determine the overall evaluation

of the service (Parasuraman, Zeithaml and Berry, 1988; Brady and Cronin, 2001), most of them include a variables deal with the reliability of the service. Reliability has to with the service provider being consistent in delivering the service (Parasuraman, Zeithaml and Berry, 1988). In general, it can be said that much of the phenomenon of service quality relates to the making and meeting of promises. One of the critical issues in service reliability is the timeliness of service delivery (Parasuraman, Zeithaml and Berry, 1988). This process has been termed punctuality (Taylor, 1994), which is an important antecedent of service evaluations.

At a broad level, reliability speaks to trust, which is regarded as an important variable in relationship marketing (Morgan and Hunt, 1994; Doney and Cannon, 1997). A condition inherent in a trust-based relationship is that both parties are concerned with the welfare of the other (Doney and Cannon, 1997). In other words, we tend to trust those who we perceive as looking out for our best interests. To this extent, relationships are based on trust when one party perceives that the other will not behave opportunistically.

Another aspect of trust is that one party can rely upon the words of another in a relationship (Morgan and Hunt, 1994). Furthermore there may be predictability in the behaviour of the other party. In everyday language, if the news-carrier delivers the paper every day before 7:00am, we can trust that the paper will be delivered tomorrow by 7:00 am at the latest. Since reliability is central to both service quality and trust based relationships, it useful to consider the extent to which customer evaluations of reliability are rooted in their perceptions about promises that have been made. This necessitates an examination of the theory of psychological contracts. Psychological contracts are relatively understudied concept in a marketing context (Kingshott, 2004). They have the potential to inform out understanding of a number of marketing phenomena.

### **Psychological Contracts**

The organizational behaviour and management literature has a lengthy tradition in the conceptualization and investigation of psychological contracts (Argyris, 1960; Rousseau, 1989). There are applications of the theory to other disciplines of study in the administrative sciences (Thompson and Hart, 2006). The construct is viewed as being critical to the development of employment relationships in the workplace (Robinson, 1996). A psychological contract is defined as “an individual’s beliefs about the terms and conditions of a person’s reciprocal exchange agreement between that person and another party” (Rousseau, 1989). A key issue in the theory of psychological contracts is that only one party to the exchange need perceive that the contract exists in order for it to be in force (Robinson, 1996). In addition, it is not necessary for a “real” breach of the psychological contract to have occurred for the breach to be perceived (Robinson, 1996). In addition, perceptions about the terms of the contract, and the accompanying conditions creating breach, may be unrealistic or there may well be significant bias in the evaluation of events that lead to the perception of breach (Thompson and Hart, 2006). Clearly, these factors make psychological contracts difficult to manage because breach is subjectively defined.

What causes a breach of a psychological contract? Contract breach is more significant than the disconfirmation of expectations; otherwise there would be no conceptual distinction between breach of the psychological contract and mere dissatisfaction (Robinson, 1996). The critical difference is that one party perceives that the other party is obligated to behave in a particular way (Robinson, 1996). It is this perceived obligation that creates the affective response of violation when there is a breach of the contract. Furthermore, these obligations stem from the perception that the other party has either explicitly or implicitly conveyed a promise (Wolfe Morrison and Robinson, 1997). Thus, the contract is a function of one-way perceived promises and one-way perceived obligations.

What are the consequences of a breach of a psychological contract? First, there are affective reactions to a breach of a psychological contract, which may range from disappointment to frustration to anger. These affective responses are stronger than mere dissatisfaction. It has been argued that violation is in itself a strong affective reaction to a breach of a psychological contract (Wolfe Morrison and Robinson, 1997). Second, there is clearly an erosion of trust as a result of a disruption in the belief system about the relational partner that has committed the breach of the psychological contract

(Robinson, 1996). Third, there may well be some behavioural consequences of a breach of contract which may affect the extent to which the afflicted partner wants to maintain the relationship, exhibit extra-role and pro-social behaviours and say good things about the organization (Robinson, 1996). In a marketing context, these behavioral responses might include the expression of switching intentions, switching behaviour or word of mouth communications (Robinson, 1996).

## Research Methods

Qualitative methods have been used to gain an understanding of a number of marketing phenomena, including waits and delays (Taylor and Fullerton, 2000). These methods are employed to gain a deeper understanding of the experiences of the customer and how these experiences translate into evaluations (Arnold and Fischer, 1994; Thompson, 1997). Common to these qualitative techniques is the creation of a text that is to be analyzed (Arnold and Fischer, 1994; Thompson, 1997). Frequently, the text is the transcript of a depth interview (McCracken, 1988), although consumer diaries or other written texts can be the basis for interpretation. Sometimes, these texts are referred to as consumption stories (Fournier, 1998). When the stories are written by consumers about specific incidents they experienced as customers, some researchers have termed the methodology as similar to the critical incident method that is used in other disciplines (Taylor and Fullerton, 2000).

This study reports on the analysis of a number of consumption stories written about dissatisfying experiences. These stories were written by undergraduate, graduate students in business and executives students at a large university in eastern Canada. This was part of a larger study on customer dissatisfaction. The stories are brought forward as a means of explicating some of the theoretical issues involved with the psychological contracts of waiting. While consumption stories written for this broader study dealt with a number of issues relating to customer dissatisfaction, this paper reports only a sample of those involved with wait experiences. In essence, the qualitative methods have been used in this study to aid in the development of theory rather than test theory.

## The Psychological Contracts of Waiting

“It was like that episode of Seinfeld, you know the one where Jerry is at the airport car-rental booth and he has reserved a car, but they tell him that there isn’t one available. That was me! I had made my reservation on-line with Alamo and I was there on time. I had even pre-paid to get a slightly better rate! But, they didn’t have a car for me. They were able to get one for me, but I had to wait for an hour. The guy said they had to get one off of a trailer that was going to a car-auction. What’s the point of taking reservations? I was angry, but it at least I wasn’t on a schedule so it could have been worse”

-Andrea (MBA Student)

The nature of psychological contracts is such that they come into effect when one party perceives that a promise has been made. The act of making a reservation and having it confirmed is clearly a case where the customer perceives that a psychological contract is in force. In this case, the customer expected that the focal service would commence when she arrived at the airport rental office. She may have been prepared to experience a queue wait, although this was not a part of her consumption story, but she clearly expected to be served. In this case there was a delay in the service. We know that anger is frequently an emotion brought forward as a result of delay (Taylor, 1994). In this case, the customer’s affective response is also consistent with the view that violation is felt consequence when the conditions of the psychological contract are not met. (Wolfe Morrison and Robinson, 1997).

The services marketing literature has demonstrated that the provision of information as to the cause of the delay can help ameliorate the negative impact of the delay on the customer's evaluation of the service (Hui and Tse, 1996). Even in a case where there was a feeling of violation emerging as a result of the failure of the service provider to meet the terms of the psychological contract, the customer may hold the provider less accountable if the reason for the violation was not within the locus of control of the service provider.

"I was at the airport the day that security (expletive deleted) and let a guy through without checking his carry-on luggage. The departures level had to be evacuated and everyone had to go back through security and flights were delayed for well over an hour. At least they told us what happened. I was (expletive deleted)! Not at Air Canada because it wasn't their fault, but at security. They let this guy through."  
-Jason (B. Comm. Student)

Service providers frequently try to manage the expectations of their customers. One way in which service providers are managing expectations in terms of the wait experience is to provide waiting time guarantees (Kumar, Kalwani and Dada, 1997). This is consistent with the expectation disconfirmation model of service quality attitude formation (Parasuraman, Zeithaml and Berry, 1988) where the provider establishes the ground rules for the expected waiting duration, which puts the decision to wait or not wait, in the hands of the customer. In fact, if the actual wait is less than the guaranteed wait, the customer may even respond with favorable evaluations because expectations have been surpassed (source).

In terms of psychological contracts, customers will legitimately perceive a waiting time guarantee as an explicit promise. Of course, a failure to meet this promise is a breach of the psychological contract and feelings of anger and violation towards the service provider may emerge. The result is a negative impact on the evaluation of the service.

"I decided to wait for my oil change and vehicle inspection. They told me it would take an hour. I was OK with that because I had brought along something to read and they have a coffee service for their customers. It took two hours and they really didn't tell me much about why it took longer than they promised. I didn't get in their face about it, but I was angry. Why tell me it is going to take an hour when it didn't?"  
-Mary (MBA Student)

Perhaps the most ubiquitous form of waiting occurs when the customer is given appointment time and experiences a pre-service delay because the service provider is not ready for them. This is what service researchers term the post-schedule wait, the classic delay situation (Taylor, 1994). From the service provider's perspective, appointment times allow them to schedule their service work. The appointment time is an implicit psychological agreement by both parties. The service provider agrees to be ready to provide a service at an agreed upon time and the customer agrees to be available for the service at an agreed upon time. Many medical service professionals (such as dentists and optometrists) impose financial penalties on those customers who fail to show for a scheduled appointment, indicating that they perceive this contract to be a legal contract of sorts. Customers do not have the ability to treat the psychological contract as a legal contract. However, customers respond to a breach of this type of psychological contract with feelings of violation towards the service provider.

"I was there for a 9:00 appointment with the doctor. I like to get an early appointment so you can get out of there and get on with your day. You always expect a bit of a wait because you never know how long the person ahead of you is going to take. So, I was waiting and I couldn't believe it when I saw her (the doctor) walk in at 9:15. I had to wait until about 9:45 because there were in fact two people ahead of me. I was not very impressed but what can you do? There's a doctor shortage."  
- Tony (MBA Student)

These feelings are also affected by customer perception about their ability to take steps in response to the breach of

the psychological contract. There is a substantial body of literature on the marketing relationships indicating that consumers react negatively when they perceive that they are stuck in a relationship with a service provider (Bansal, Irving and Taylor, 2004; Fullerton, 2003). In Tony's case above, his perceptions about his abilities to easily switch service providers limited his ability to respond to the breach of the psychological contract. In other situations, the consumer can respond to a breach of the psychological contract by taking action to change their situation by switching service providers or not patronizing a particular service provider.

"I vowed that never again was I going to subject myself to that! There is no reason why a round of golf should take 5 and a half hours to play. At one point, there were 4 groups playing the same hole. Unbelievable!! The starter told us that they expect players to get through the course in 4 and a half hours and that course marshals were there to speed up the pace of play. We saw a marshal once. He had his cart stopped on a path and he was in the in the woods, looking for golf balls. They were doing nothing to speed up the pace of play. We complained at the end, but the kid at the pro-shop just shrugged. I won't be playing there anymore. -Paul (Executive)

Paul's consumption story is also an example of an in-service wait. It is also an example of a wait where a fairly explicit promise about the duration of the service experience was made by the service provider's customer contact representative. From the service provider's perspective, these waits are very difficult to manage so they must take care to make accurate representations. On one hand, the customer is being served, so the wait is not an empty wait (Taylor and Fullerton, 2000; Maister, 1985), but on the other hand these waits are noticeable. The provider can work to manage customer expectations about the length of a service experience, but frequently customers have very concrete expectations about when things ought to take place in a lengthy service interaction, like a round of golf or a meal at a good restaurant. Experienced customers know what should happen in a service experience. When the customer has solid expectation about what should happen a psychological contract of sorts is formed and in many ways it is the classic example of contract formed purely as a result of the perceptions of the customer.

"I eat in a lot of restaurants. We went to this place where we take a lot of our clients. It is a very good restaurant but it is notoriously slow. It takes forever to get a menu and the appetizers take a very long time to arrive. I have to admit that they are good at bringing the main course and desert but they are always outrageously slow at bringing the bill. I've even had to get up and ask for it. I really have to stop going there." - Michelle (Executive)

Michelle's consumption story illustrates the post-service wait phenomenon (Taylor, 1994). Post service waits are empty waits in that there is little opportunity for the service provider to fill the time at this point in the service experience. In this situation the service provider did not provide any specific information about the expected duration of the post serviced delay, yet the customer has a strong sense of what should happen. It is an example of a psychological contract that is formed as a result of a concrete expectation from experience rather than a promise.

It is taken for granted that good relationships are built on trust. Trust takes a long time to develop, but it can be eroded rather quickly (Morgan and Hunt, 1994). Waiting in a situation where a wait was not expected can undermine a long-lasting relationship. The mechanism through which the wait makes such a negative impact on the relationship is through the violation of the psychological contract and the resulting creation of distrust.

"I learned the hard way that airlines overbook. I checked in, but they told me that I was not going to be put on the flight because all the seats were sold out. I was there early, not really early, but certainly more than an hour before the flight was going to take off. I'm a good customer of Air Canada but they said there was nothing they could do. I had to wait until the next flight, which was 2 hours later because they sold more tickets than they had seats on the flight. I don't feel like I can believe anything they tell me now. I'm going to be flying with West-Jet as often as I can from now on." - Wendy (Executive)

## Moving Forward

Breach of the psychological contract as a result of a waiting experience is a complex phenomenon. There are many waits where mere dissatisfaction or disappointment results from the process. While these are not inconsequential affective states and much of the services marketing literature has investigated their causes and consequences, there is some evidence that breach of the psychological contract is a powerful issue in the formation of consumer evaluations. Violation in itself, may be viewed as an affective state that is a consequence of the type of negative service encounters described by the informants in this study.

This small study asked informants to describe a situation where they had to wait for service but it may be the case that psychological contracts exist in many aspects of the service experience. Arguably a good portion of the literature on service recovery relates to the psychological contract and how service providers must cope with feelings of violation that emerge from core service failures. It is important to consider how the theory of psychological contracts may explain what happens to consumers when they experience service failures and also how service providers should respond.

The critical issue is that marketing scholars should consider that psychological contract violation drives affective responses that are stronger and more emotional than dissatisfaction and how they have the potential to be strong drivers of customer behaviours. The consumption stories put forward in this paper illustrate the strength of consumer reaction to waits resulting from breach of a psychological contract. The theoretical issue is to understand how this happens. The practical issue is to understand both how it can be prevented and how it can be managed in the event that it happens.

## References

- Argyris, Chris (1960), *Understanding Organizational Behaviour*, Homewood, IL. Dorsey.
- Arnold, Stephen and Eileen Fischer (1994), "Hermeneutics and Consumer Research," *Journal of Consumer Research*, 21(June), 55-70.
- Bansal, Harvir, Greg Irving and Shirley Taylor (2004), "A three-component model of customer commitment to service providers," *Journal of the Academy of Marketing Science*, 32(3). 234-250.
- Brady, Michael and Joe Cronin (2001), "Some New Thoughts on Conceptualizing Perceived Service Quality: A Hierarchical Approach", *Journal of Marketing*, 65(3), 34-49
- Doney, P and J. Cannon (1997), "An Examination of the Nature of Trust in Buyer-Seller Relationships", *Journal of Marketing*, 51(2), 35-51.
- Dube-Rioux, Laurette, Bernd Schmitt and France LeClerc (1989), "Consumers Reactions to Waiting: When Delays Affect the Perception of Service Quality," *Advances in Consumer Research*, 16, 59-63.
- Fournier, Susan. (1998), Consumers and their brands: Developing relationship theory in consumer research, *Journal of Consumer Research*. 24(4). 343-373.
- Fullerton, Gordon (2003), "When Does Commitment Lead to Loyalty," *Journal of Service Research*, 5(4), 333-334.

Hui, Michel and David Tse (1996), "What to Consumers in Waits of Different Lengths: An Integrative Model of Service Evaluation," *Journal of Marketing*, 60(2), 81-90.

Kingshott, Russell (2006), "The impact of psychological contracts upon trust and commitment within supplier-buyer relationships: A social exchange view," *Industrial Marketing Management*, 35, 724-739.

Kumar, Piyush, M. Kalwani and M. Dada (1997), "The Impact of Waiting Time Guarantees on Customers' Waiting Experiences," *Marketing Science*, 16(4), 295-314.

Maister, David (1985), "The Psychology of Waiting Lines," in J.Czeipel, M.Soloman and C.Suprenant, eds., *The Service Encounter*, Lexington, MA: Lexington Books, 113-123.

McCracken, Grant (1988), *The Long Interview*, Newbury Park, CA: Sage

Morgan, Robert and Shelby Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58(2), 20-38.

Parasuraman, A., Zeithaml, V., Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-37.

Robinson, Sandra (1996), "Trust and Breach of the Psychological Contracts," *Administrative Science Quarterly*, 41(4), 574-599.

Rousseau, Denise (1989), "Psychological and Implied Contracts in Organizations," *Employee Responsibilities and Rights Journal*, 2, 121-139.

Taylor, Shirley and Gordon Fullerton (2000), "Waiting for Service: Perceptions Management of the Wait Experience", in T. Swartz and D. Iacobucci eds, *Handbook of Services Marketing and Management*, Thousand Oaks, Ca: Sage, 171-190.

Taylor, Shirley (1994), "Waiting for Service: The Relationship Between Delays and Evaluations of Service," *Journal of Marketing*, 58(2), 56-69.

Thompson, Craig (1997), "Interpreting Consumers: A Hermeneutical Framework for Deriving Marketing Insights from the Texts of Consumers' Consumption Stories," *Journal of Marketing Research*, 34(November), 438-455.

Thompson, Jeffery and David Hart (2006), "Psychological Contracts: A Nano-Level Perspective on Social Contract Theory," *Journal of Business Ethics*, 68, 229-241.

Wolfe Morrison, Elizabeth and Sandra Robinson (1996). "When Employees Feel Betrayed: A Model of How Psychological Contract Violation Develops", *Academy of Management Review*, 22(1), 226-256.

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## EXPORT SPILLOVERS: AN EXPLORATORY ANALYSIS OF DETERMINANTS

The issue of whether export spillover effects exist is explored. Results suggest that export spillover effects are strongly associated with the nature of the relationship with foreign firms, together with the innovation activity of the firm.

### Introduction

The *direct* effects of foreign direct investment (FDI) are well known. The arrival of foreign firms brings new jobs, often of a highly skilled nature, to a region or country. Similarly, many foreign investors select a location because of its favourable location enabling access to attractive markets. Soon after establishment these firms commence exporting from their new location into these markets. Whilst these direct effects of foreign investment are important, it is increasingly accepted that *indirect* effects may play a more strategic role in the development of an indigenous economy.

The indirect effects of foreign investment are known as *spillover effects* or simply *spillovers*. Spillover effects refer to changes in indigenous firms caused by the arrival of foreign firms. Examples of spillover effects include: i) increases in the productivity of domestic firms; ii) increases in innovative practices of domestic firms, and iii) increases in the exporting activity of domestic firms. These benefits may arise for a variety of reasons, including technology transfer from foreign firms, or the imitation of management practices of foreign firms. The literature on spillover effects tends to concentrate on the effects of productivity spillovers. For example, (Kokko et al, 2001) explored productivity spillovers in Uruguay and (Driffield, 2001) examined UK productivity spillovers. However, the focus of this paper is upon an under researched area of spillover effects, namely export spillovers.

### Research Purpose

The literature on spillovers is ambivalent on whether spillover effects exist. In addition, within the context of productivity spillovers, even if they exist it is unclear if their effects are positive or beneficial. Gorg and Greenaway (2004) examined productivity spillover effects in 40 empirical studies. Although twenty-two of these reported statistically significant *positive* productivity spillover effects, some concerns are highlighted. The critique is twofold. Firstly, most of the studies were cross-sectional studies. Since some spillover effects may take time to mature, such studies may produce biased results if no account is taken of time. If all cross-sectional studies are eliminated from the analysis, it only leaves 8 showing positive spillover effects. The second and perhaps more serious criticism is that the studies are based upon highly aggregated data, being at the industry level. Spillover effects may exist for some firms within the industry, but not others. Studies based upon industry level data may be unable to capture this variation.

The overall purpose of this research is to explore export spillover effects using evidence derived from individual firms. Hence the research addresses two gaps in the extant literature. Firstly, the focus is upon export spillovers rather than productivity or innovation spillovers. Secondly, the research studies spillovers at the level of the individual firm rather than economic sectors. Specifically, the paper pursues the following research questions:

1. Do export spillover effects exist, and, if so, are they beneficial or detrimental to domestic firms?
2. If export spillovers exist, what factors are associated with positive spillover effects?

## Conceptual Foundation

In this section we develop a framework to explain why some firms experience export spillovers and others do not. Two major influences on export spillovers will be explored: i) the nature of the relationship between the domestic firm and a foreign firm; and ii) the effect of different export spillover channels.

Firstly, we shall explore the nature of the business relationship that a domestic firm has with foreign firms. (Hakansson and Johanson, 1992) provide a model of business relationships, whereby a relationship between firms is broken down into three individual layers: i) actor bonds, ii) activity links and iii) resource ties. The model is known as the Actor, Activity, Resource model, or AAR model for short.

In this paper we are concerned with relationships between domestic and foreign firms. Actor bonds represent the bonds between firms or individuals within the firms. According to Hakansson et al, they are based upon aspects such as trust, willingness to assist and flexibility.

Activity links refer to how the functions or processes within a domestic firm are influenced by its relationship with the foreign firm. The value chain provides a broad description of the core activities that take place within organizations. Consequently, activity links may be represented by the degree to which value chain activities in the domestic firm are adapted because of association with a foreign firm, (Ruyter and Semeijn, 2002).

Resource ties are the last element in the Hakansson model and these refer to the organizational ties that develop according to how the resources of each firm are utilized. For example, firms may choose to share certain resources, or the use of certain resources may be influenced by the other firm, (Ruyter and Semeijn, 2002).

The second factor to be considered concerns the potential effect that spillover channels may have upon the incidence of export spillovers. Multinational enterprises invest in host countries because they possess some competitive advantage. It may be impossible to avoid some aspects of these advantages from leaking out to domestic firms. These leakages or spillovers can occur in a variety of ways called spillover channels. (Gorg and Greenaway, 2004) suggest that there are three types of channel through which productivity spillovers occur:

- Imitation;
- skills acquisition;
- competition

While this framework refers to productivity spillover effects, it is relevant to export spillover effects.

## LIMITATION

Foreign affiliates can create awareness and interest in new practices amongst indigenous firms. For example, domestic firms may be exposed to new export markets and also new forms of exporting. As a result, the domestic firm may imitate the export marketing practices used by foreign affiliates. This can happen if the foreign firm enters into some form of relationship with a domestic firm (e.g. a sales; a supplier or a cooperative agreement). Through contact, domestic firms may observe the management practices of the foreign firm and imitate them.

## SKILLS ACQUISITION

All economic sectors are subject to “job churn” due to foreign investment entering and leaving the sector. Personnel may move from foreign affiliates to indigenous firms. More particularly, this labour mobility represents an opportunity for indigenous firms to recruit personnel from foreign affiliates, thus bringing new knowledge of exporting into the firm.

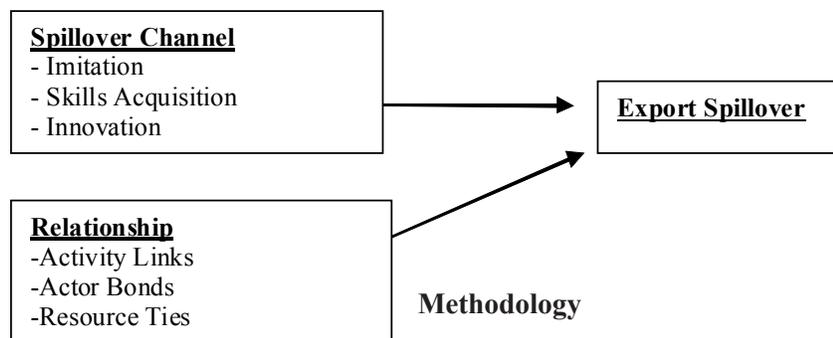
## COMPETITION

While many foreign affiliates locate to gain access to other larger markets, they still sell into the home market. As such, they compete with existing indigenous firms. Competition from foreign affiliates obliges domestic firms to increase their efficiency to protect their share of the domestic market. Even if they are not able to imitate the technology used by foreign firms, they may attempt to increase efficiency by using their existing technology better. In other words, they are obliged to innovate. Both product and process innovation may be increased through awareness of the technology and practices employed by foreign firms. Any increased efficiency gained may open up opportunities to compete in export markets. The above discussion is summarized in the model illustrated in Figure 1.

Most of the literature on export spillover effects is concerned with whether or not they exist. Many of these studies seek for an association between the probability that a firm exports and, either the number of foreign firms in a sector, and/or the level of FDI, (Hanson, Harrison , 1994); (Greenaway, Wakelin, 2000); (Greenaway, Wakelin, 2002). If a significant positive relationship is found between these two variables, it is taken as evidence of the existence of export spillover effects. One problem with this approach is that it is based upon data from economic sectors. Some firms in the sector may experience export spillover effects and others may not. Analysis of sectoral data may miss this and indicate that no export spillover effects exist, or, at best, under-report these effects. Similarly, studies of economic sectors are not particularly sensitive to the effects that a firm’s strategy or business activity may have on creating export spillovers. The approach suggested in Figure 1 is based upon data from individual firms and avoids these pitfalls.

**Figure 1:**

### Conceptual Framework for Export Spillovers



A random sample of indigenous Canadian firms was selected from the Canadian Companies Capabilities (CCC) database, which can be viewed from the Strategis web site, created by Industry Canada. A total of 300 firms were selected, and 57 “clean” responses were obtained through a web-based survey. All firms selected satisfied three criteria:

- All had less than 250 employees;
- were involved in exporting;
- Had some form of relationship with a foreign firm based in Ireland.

The CCC database includes firms from the following economic sectors: Chemical and Pharmaceutical; Manufacturing; and Information and Communication Technologies. The profiles of the firms listed in the database were used to determine whether a particular firm was an exporter or not. A screening question was included at the beginning of the web survey to check if a firm was involved in a business relationship with a foreign firm based in Canada. If it was not, it exited the survey and was not included as one of the 57 responses.

## MEASUREMENT

The three constructs illustrated in Figure 1 were measured as follows.

**Spillover channels.** Export spillovers may be generated via three types of channel: imitation; skills acquisition and innovation. In the previous section it was indicated that domestic firms may observe the management practices of the foreign firm and imitate them. Hence imitation effects were assessed by asking respondents to indicate the degree to which the management skills of the firm were affected through association with a foreign firm operating in Canada. Respondents could indicate either positive or negative influences on a 5-point Stapel scale with the mid-point indicating zero effect.

The effect of the skills acquisition channel was assessed by obtaining the percentage of a domestic firm's managerial staff that had previously worked in a foreign company.

The final channel, innovation records the influence that foreign firms have upon the efficiency of a domestic firm through stimulating innovation. Again 5-point Stapel scales were used to determine the degree of influence that foreign firms had upon the levels of both the product and process innovation of the domestic firm.

**The business relationship.** The second independent factor in Figure 1 was the nature of the business relationship between a Canadian firm and foreign firms located in Canada. Clearly firms can have many relationships. This study focused upon the most important business relationship that the Canadian firm had with a foreign partner.

The AAR model, (Hakansson et al, 1992) referenced earlier breaks relationships into three levels: a) Activity Links; b) Actor Bonds, and c) Resource Ties. Activity links refer to how the functions within a domestic firm are influenced by its relationship with a foreign firm. Essentially this is the degree to which basic tasks, such as those from the value chain, have been adapted due to association with a foreign firm. Six common activities from a firm's value chain were selected and respondents were asked to indicate on a five point scale the extent to which each function had been adapted because of the influence of foreign firms. The value chain activities were:

1. Manufacturing/processing operations.
2. Raw materials and parts procurement.
3. Research and Development.
4. Administrative services.
5. Marketing.
6. Sales activities.

Actor bonds include the degree of trust that exists between the domestic firm and foreign firms. (Sanzo, Santos, Vazquez and Alvarez, 2003) used a 4 item scale to measure trust and this was used in this study.

The final component of the AAR model is resource ties which assess how a domestic firm's usage of its resources is affected by foreign firms. A three item scale was used to assess resource ties, based upon measures used by (Ruyter and Semeijn, 2002), and (Veludo, Macbeth and Purchase, 2004). Space limitations prohibit the inclusion of scale items. These are available from the author on request.

The dependent construct in Figure 1 captures whether a domestic firm has/has not experienced export spillover effects. Since the existence of export spillovers is an empirical issue, it is discussed in the following section.

## Empirical Results

Export spillovers capture the effects that foreign firms have upon the exporting behaviour of indigenous firms. Six aspects of the exporting strategy of domestic firms were examined in this study. These aspects are listed in Table 1.

Firms were asked how much they had learned about each of these aspects from foreign firms located in Canada. Responses were obtained on a 5-point semantic differential scale, with anchors, “Learned Nothing” and “Learned a Substantial Amount”.

The second column of the table shows the percentage of firms that indicated that they had learned a significant amount from their contact with foreign firms, i.e. the total responses in the top two categories of the scale.

**Table 1:**  
**Evidence of Export Spillover Effects**

<i>Aspects of Export Behaviour</i>	<b>% Firms that learned significantly from Foreign Firms</b>
<i>1. Identifying specific Export Markets.</i>	18*
<i>2. Developing an Export Strategy.</i>	14*
<i>3. Knowledge of Regulations, tariffs for market entry.</i>	22*
<i>4. Finding Foreign Agents/Distributors.</i>	11*
<i>5. How to transport product to Export Markets.</i>	27*
<i>6. How to finance an Export Venture.</i>	9*

T-tests were conducted for each percentage displayed in the second column of the table. These tests examined whether each percentage was significantly different from zero. The \* in the table indicates a significant result for the t-test. Given the number of significant results, the table illustrates the presence of export spillover effects. The results for two items stand out. Firstly, twenty-seven percent of respondents indicated that they had learned significantly about the logistics of getting product to market. Secondly, twenty-two percent of respondents indicated that their knowledge of export market entry was influenced by foreign firms.

An overall measure of the degree of export spillover effect was developed by summing the scores from the six items in Table 1 for each firm. Dividing this total by 30 (the maximum total possible) creates a percentage indicator of the overall effect of foreign firms on the export marketing strategy of indigenous enterprises. High values (near to 100%) indicate that the indigenous firm learned significantly from foreign firms across the range of six aspects of export strategy. Table 2 presents the results for the export spillover index.

**Table 2:**

**Distribution of Export Spillover Index**

Measure	Group	Count	Percent.
20	<i>No Effect</i>	16	29
21-50	<i>Some Effect</i>	21	37
> 50	<i>Substantial Effect</i>	19	34
<i>Total</i>		56	100

Twenty is a critical value of the index because it indicates that a firm experienced no export spillover effect at all. Given that each of the six export strategy items used to calculate the index was measured on a 5 –point scale with a 1 indicating that the firm learned nothing through their association with foreign firms, an index of 20 is equivalent to a score of 6 out of 30 --- indicating that no learning has occurred.

Table 2 shows that 71% of the firms had an index greater than 20, indicating the presence of some degree of export spillover effect. About one third (34%) of the firms exhibited substantial export spillover effects.

**MODIFYING THE INDEPENDENT VARIABLES**

Since the sample size, 57 was on the small side, it was necessary to pool some of the measurement variables. Single measures of Activity Links, Actor Bonds and Resource Ties were obtained by summing the individual measures of these constructs.

For example, the measure ACTIVITY was formed by summing the six variables that measured each value chain activity. In similar manner, ACTOR and RESOURCE were created as measures of Actor Bonds and Resource Ties. High values of the new variables indicated the existence of strong bonds; strong activity links, and substantial sharing of resources, respectively.

**ANALYSIS OF VARIANCE**

The second research question in this study concerns the factors that influence export spillover effects. The conceptual model developed earlier needs to be tested using a structural equation approach and packages such as AMOS or LISREL, and this approach is being pursued, but is not reported here.

The following is an exploratory approach to analysis whereby the effects of each of the business relationship and the type of spillover channel are examined separately. Three group ANOVAs were performed to determine the effects (if any) that a) the three aspects of the business relationship, and b) the three types of spillover channel, had upon the degree of spillover effect.

The three groups of export spillover effect were as defined in Table 2. Firms that had an index score of 20 exhibited no spillover effects at all. Firms with indices in the range 21-50 were deemed to have experienced “Some Effect”, whereas index scores above 50 were taken as indicative of “Substantial Effects”. The results of the ANOVAs are presented in Table 3.

**Table 3:**

**Effects of Relationship and Channel**

<i>Independent Variables</i>		<i>Mean</i>	<i>Significance Level</i>
<b>Relationship</b>	<i>no spillover effect</i>	42.50	
1. Actor Bond	<i>minimal spillover effect</i>	58.82	
	<i>substantial spillover effect</i>	63.33	(0.01)
	<i>no spillover effect</i>	36.67	
2. Activity Links	<i>minimal spillover effect</i>	47.08	
	<i>substantial spillover effect</i>	56.39	(0.08)
	<i>no spillover effect</i>	39.05	
3. Resource Ties	<i>minimal spillover effect</i>	58.43	
	<i>substantial spillover effect</i>	65.78	(0.00)
	<i>no spillover effect</i>	2.25	
<b>Channel</b>	<i>no spillover effect</i>	2.25	
1. Acquired Skills	<i>minimal spillover effect</i>	2.24	
	<i>substantial spillover effect</i>	2.11	(0.95)
	<i>no spillover effect</i>	.00	
2. Imitation	<i>minimal spillover effect</i>	.15	
	<i>substantial spillover effect</i>	.68	(0.01)
	<i>no spillover effect</i>	.19	
3. Innovation (Product)	<i>minimal spillover effect</i>	.65	
	<i>substantial spillover effect</i>	1.05	(0.00)
	<i>no spillover effect</i>	.13	
4. Innovation (Process)	<i>minimal spillover effect</i>	.35	
	<i>substantial spillover effect</i>	1.05	(0.00)
	<i>no spillover effect</i>	.13	

The last column in Table 3 contains the significance levels for the ANOVAs. As can be seen, six of the seven ANOVAs are significant indicating that the corresponding variables have an effect upon the degree of export spillover experienced by the firm. All three of the Relationship variables have an effect upon the level of spillover.

Examination of the Means in Table 3 suggests that higher degrees of export spillover were experienced by firms that had:

- stronger actor bonds with a foreign firm;
- adapted much of their value chain as a result of their association with a foreign firm, and

- high levels of resource sharing with a foreign firm.

Table 3 also reveals that the nature of the spillover channel also influences the degree of spillover effect. Imitation rather than skills acquisition appears to be the preferred channel for obtaining export spillover effects. Higher degrees of imitation are associated with stronger export spillover effects.

The same is true for the effects of innovation (both product and process). There is support for this finding in the literature. (Roper and Love, 2001) analysed the link between innovation and export performance. Amongst their findings is that innovation has a systematic effect on both the decision to export and upon the firm's export propensity. Similarly, (Barrios, Gorg and Strobl, 2001) investigated R&D spillovers and while no evidence was found that they affected a firm's decision to export, there was a positive connection to the level of a firm's exports.

### Conclusions

This paper explored the issue of export spillovers. Using firm level data from Canada, it presents clear evidence that export spillovers exist. Secondly, a model to explain differences in export spillover effects at the level of the firm was developed. The model illustrates that export spillovers are associated with two types of channel ---innovation and skills imitation. The former should be particularly pleasing to public policy makers since it illustrates the importance of pursuing an innovation agenda that includes the attraction of FDI. The product and process innovation systems of Canadian firms can benefit through association with foreign firms based in Canada. Policy initiatives aimed at assisting domestic firms in establishing business relationships with foreign affiliates also find support from the initial findings of this study.

As with all research some issues have been addressed but questions remain unanswered. There is a need to validate the results of this study with larger samples and using firm level data from other economies.

### References

- Barrios, S., H. Gorg and E. Strobl (2001), "Explaining Firm's Export Behaviour: The Role of R&D and Spillovers", GEP Research Paper 2001/27, University of Nottingham.
- Driffield, Nigel (2001), "The Impact of Domestic Productivity of Inward Investment in the UK", The Manchester Business School, 69(1), pp103-119
- Gorg, Holger and Greenaway, David,(2004) "*Much Ado about Nothing? Do Domestic Firms Really Benefit from Foreign Direct Investment?*", World Bank Research Observer,
- Greenaway, David, Nuno Sousa, Katherine Wakelin (2002), "Do Domestic Firms learn to export from Multinationals?"
- Hakansson, H. and J. Johanson (1992), "A model of industrial networks", in Axelsson, B. and Easton, G. (eds), *Industrial Networks: A New View of Reality*, 1st Edition, Routledge, London, pp28-36
- Kokko, Ari, Mario Zejan, and Ruben Tansini (2001), "Trade Regimes and Spillover Effects of FDI: Evidence from Uruguay", *Weltwirtschaftliches Archiv*, Vol 137, pp124-149
- Roper, Stephen and James H. Love (2001), "Innovation and Export Performance: Evidence from UK and German Manufacturing Plants", #62, Working Paper Series, NIERC

Ruyter, Ko De and Janjaap Semeijn (2002), “Forging Buyer-Seller Relationships for Total Quality Management in International Business: The Case of the European Cement Industry”, *Total Quality Management*, Vol 13, #3, pp403-417.

Sanzo, Jose, Leticia Santos, Rodolfo Vazquez and Luis Alvarez (2003), “The Role of Market Orientation in Business Dyadic Relationships :Testing an Integrator Model”, *Journal of Marketing Management*, Vol 19, pp73-107

Veludo, Maria de Lurdes, Douglas Macbeth and Sharon Purchase (2004), “Partnering and relationships within an International Network Context”, *International Marketing Review*, Vol 21, #2, pp142-157

# Management Education

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## CHALLENGES ENCOUNTERED ON THE PATH TO COMMERCIALIZATION: THE CASE OF THE ACADIA MANAGEMENT INTERVIEW SERIES VIDEO DATABASE

Optimal resource utilization is a practice every organization should strive for. Conflicts may arise from within organizations or from external stakeholders that prevent the realization of the full value of resources. Such may be the case when academic institutions endeavour to commercialize the outcomes of their research programs. How might organization theories help explain how challenges faced in an academic work environment when seeking to commercialize technology could be overcome? This paper offers the case of Acadia University and its Management Interview Series Video Database as an example.

### Rationale for Technology Development and Commercialization

The Acadia Management Interview Series Video Database (AMISVD) is an educational resource developed at Acadia University as a result of fundamental interests in the use of electronic communication technology to enhance the classroom experience. The impetus to commercialize, or arrange broad distribution of this resource with financial gain, came from several differing objectives, including economic return to the Institution and individual inventor, knowledge translation initiatives in provincial and federal governments and academic administration. Two external factors drove the challenges encountered in the commercialization of the MISVD: the move to a knowledge-based economy and the multimedia revolution in commercial educational resources.

Federal government policy in Canada and other developed economies has been directed toward evolution from a natural resource base to a knowledge base. This has resulted in the establishment of units variously named: Technology Transfer, Research Commercialization, Innovation or Industry Liaison at most Canadian Universities over the past decade. Although the titles differ, the functions are similar. Technologies or resources perceived as economically valuable are protected and developed, by licensing or creation of spin-off companies, to commercial entities. Intellectual property such as know-how and trade secrets may be exploited through collaborative research programs between academic researchers and industry partners. Patents and copyright are more often the subject of licensing for development and distribution or new venture creation. Federal and provincial funds, from agencies with research or economic development mandates, underwrite technology development activities. This external funding often includes the salaries of University-employed commercialization managers. The motivation for pursuing these activities comes from a number of sources. Inventors may have expectations of personal gain as well as a desire to broaden the utility of their invention. Commercialization managers often have deliverables that are specific to 'deal' consummation. University Administrations have goals of enhancing the profile of their institution, enhancing the programs available to students and faculty and attracting investment and support for their institutions.

Technology presents opportunities and challenges to educators. Engaging a generation of students weaned on constant multifocal, multimedia input can only be achieved with instructional programs of the same ilk. Accessible sources of information abound, such as broadband and video on demand. Archived video news broadcasts are readily available online through sources such as the BBC ([www.bbc.co.uk](http://www.bbc.co.uk)) CNN ([www.cnn.com](http://www.cnn.com)), and Yahoo (<http://news.yahoo.com>).

Management educators are increasingly able to incorporate ideas into their classrooms using information sources such as: Fifty Lessons ([www.50lessons.com](http://www.50lessons.com)), a company that claims leadership in providing short story telling online for sharing best practices; the MIT World Video Archive (<http://mitworld.mit.edu>) offers, free on demand video of public events at MIT; Hoover's CEO's on Camera ([www.hoovers.com](http://www.hoovers.com)) provides free video interview of executives from CNBC; and, Thought Center Webcasts, (<http://webcast.ey.com/thoughtcenter>) for Ernst & Young which offers its point of view on important current business. However, there are still relatively few online sources of video content developed for the management education market.

This paper discusses the process developed by a small liberal arts university in its quest to create and commercialize an innovative Web based educational product for use by academic researchers and educators. In doing so, it explores the challenges encountered by borrowing insight from the field of organizational theory and suggests strategies for success based on the Acadia experience.

### **The Acadia Management Interview Series Video Database**

The AMISVD is an interactive database of personal interviews that can be navigated and accessed over the Web. The overall database hosts a series of smaller databases. Customizing the content of each small database by selection of themes allows the databases to meet the needs of a target audience. A typical volume of the database is composed of 10 to 15 video taped interviews of business executives, who address 10 to 20 questions crafted to expose their businesses, industry and professional strategies. A transcription of each question and response accompanies the video clip. The interview series is contained in a web based format, with introductory page, contents page and keyword index. Keywords link to individual questions or individual interviews and are searchable. Users select individual questions from the list to play a segment. None are longer than 5 minutes, adding user friendliness and delivery over the Internet in real time.

In early 2004, access to funds granted to Acadia University from the McConnell Family Foundation for the creation of educational resources allowed one of the inventors to initiate a visiting speaker series. To take advantage of these visits, - optimize the value of this resource -, the inventors decided to video tape interviews of the speakers. In preparation, a web based video hosting platform was conceived, coded and programmed. Its Beta version was launched in September of 2004. Fifteen interviews were conducted over the next six months and loaded onto the database. The interview questions were developed by one of the inventors in collaboration with academic colleagues and crafted to elicit responses with direct relevance to Business School curriculum.

In June of 2005, the feasibility of high quality, rapid production was explored. Ten local entrepreneurs were brought to the campus over the course of two days. Each was interviewed using the same set of questions, developed to learn entrepreneurial concepts. This offered the first interview set that would allow users to truly compare and contrast ideas from a similar set of individuals. The exercise was deemed a success as a result of the relative ease by which a relatively large number of interviews, undertaken to pursue insight into a specific theme, were scheduled, filmed and loaded into the Database.

Executives from the Canadian advertising industry were filmed in Toronto in late August of the same year. Aside from a desire to obtain information and insightful content, this initiative sought to assess the ease by which interviews, again theme-based, could be scheduled and filmed in a location other than the campus of Acadia University. Undertaken with little effort and deemed a success, theme-based interviews then took place throughout the Fall of 2005 and the first few months of 2006 in Ottawa, New York City, Calgary, Bahamas and Bermuda. The Fall of 2005 was important for other reasons as well. Professors and students at Acadia University began using the database for instructional purposes. A presentation of the AMISVD concept was made at the EDUCAUSE 2005 conference in Orlando, Florida. Further, the software underlying the database was updated offering improved functionality and user friendliness. Funding for this was provided by Innovacorp and the Nova Scotia Office of Economic Development.

Following a year of negotiation and internal review, in February of 2006, a co-distribution agreement was signed for the first volume of the video databases between Acadia University and a major publisher. At the time of writing, development of additional volumes of the Database is on-going, as are initiatives for further commercial distribution of these volumes.

### **Commercialization Process of the AMISVD**

In a typical commercialization initiative by an academic institution, the technology is evaluated for its commercial potential. This was hindered by the absence of comparable products for the AMISVD – a benefit from a competitive standpoint. At Acadia, if the inventors choose to assign their Intellectual Property rights to the Institution in exchange for a financial consideration, the Technology Transfer office pursues licensing activities. Interest in the AMISVD was expressed by a major distributor of educational resources. A price was negotiated. Then the work of finalizing the terms of the deal and delivering the product began.

Common terms in a license between an author and a publisher require that the author warrant that the licensed work is free of copyright infringement, libellous material, that the author has all the rights to transfer the material. The author is required to indemnify the publisher in all matters related to these terms. The culture of Acadia University is very collegial and students are encouraged to participate in all University programs. While this provides the students with a unique learning experience, it can lead to discontinuities in knowledge of how processes were performed. Within a university environment, liberal use of ‘freeware’ is made and commercial software is often obtained at a significantly discounted ‘educational’ rate. Educational software is sold with a license that prohibits commercial use and may be watermarked. All of these circumstances made for a prolonged, iterative and frustrating process of ensuring that all of the contributors to the development of the AMISVD were accounted for and their IP rights properly understood, and that all of the software incorporated into the database was saleable.

Academic administrations are traditionally risk adverse. This characteristic posed two hurdles to the license agreement of the AMISVD. Each of the interviewed executives was asked to sign a release related to the video footage of his or her interview, providing the University with the right to commercialize the interview but indemnifying the University from related claims. Some interviewees objected to these terms, leading to lengthy discussions and negotiations. As a result, some of the interviews were used for educational purposes only and others were released with the statement ‘All opinions expressed in the footage are those of the speaker alone’. Similarly, the risk aversion of the University led to discomfort with the standard terms of the license contract expected from the distributor. Following a great deal of internal discussion and expensive consultation with external counsel, the first deal was abandoned in frustration. The resources consumed, including senior management time and legal fees, to bring the second contract to signature might not be justified by the value of the contract. However, the first commercial licensing agreement of its type was consummated by Acadia University. Therefore, it was a valuable exercise for the organization.

There is a significant difference between the state in which a resource can be used by its creators and their colleagues and the expectations of a commercial buyer about a finished product. Acadia was faced with delivering multiple copies of the Database in a user-friendly, completely error-free, professional quality format. Suddenly, quality control, bandwidth and security became issues that had not previously been. There was no one in the organization to whom this task would naturally fall, so the Technology Transfer Director acted as project manager for delivery of the AMISVD product, calling on internal and external resources to develop an understanding of the technical issues.

Although the end result, the fully executed co-distribution agreement, was achieved, the process was certainly hampered by the nature of the organization. Risk aversion, limited resources, low prioritization of technology commercialization, and initiatives outside of the organization’s core competency made commercialization of the AMISVD challenging. Understanding the root causes from an organizational perspective should allow more efficient processes to be developed in the future.

## Relevance of Theories of Organizational Failure to AMISVD

Technology commercialization from an academic environment is a relatively new process and a novel one to Acadia University. Insight can be obtained from Organization Theories which originate in economics, political science, sociology, anthropology and other. This field seeks to understand why organizations look and act as they do and why some succeed while others fail. Useful for this essay is insight from : resource dependence (Pfeffer & Salancik, 1979), institutional theory (Oliver, 1997), the resource based theory of the firm (Barney, 1996, Barney & Airkan, 2001), transaction cost economics (Williamson, 1975) and organization culture (Meyerson & Martin, 1988). Each of these will be used to address the question: Why might it be difficult to commercialize an invention or technology developed in an academic setting?

### Resource Based Theory of the Firm

The resource based theory of the firm would suggest that it might be difficult to commercialize technology it is imitable. “The firm must be concerned not only with profitability in the present and growth in the medium term but also with its future position and source of competitive advantage. ...Competitive advantage can be sustained only if capabilities creating the advantage are supported by resources that are not easily duplicated by competitors. In other words they must contribute to a firm capability that has competitive significance and is not easily accomplished through alternative means.... Strategically important resources must be rare and or specific to the firm. They must not be widely distributed within an industry” (Hart, 1995: 998).

Is the AMISVD imitable? To answer, it is important to understand that imitability is not an absolute – resources might be simple or capital- and resource-intensive to copy. Further, in this case, as in many where there is subjectivity to the quality of the product, the pedagogical value of the questions and content of the interviews will be a characteristic of the user. Questions can be asked of any number of business executives and their responses can be built into a user friendly interface for use in classroom instruction. In this sense, the AMISVD is imitable. However, it is worth noting that due to the resources available to Acadia and the academic culture, the AMISVD was created in a much more cost effective manner that might be achievable in the private sector. In addition, the crafting of the questions asked of the executives and the ability of Acadia to use its social network to recruit executives is less easily imitated, at any cost. In general, it would be difficult to find a buyer for a resource that was perceived to be imitable and of limited sustainable competitive advantage. However, this was not the case with the AMISVD. An interested party was readily identified and was willing to preserve through difficult negotiations. Perhaps this party did not see the resource as easily imitable, or it was a component that satisfied a short term need in a long term strategy.

### The University Culture

A second reason that technologies developed in a University environment might be difficult to commercialize can be found in the work of Meyerson and Martin (1988) who describe culture. This perspective suggests that despite the façade of a unified, well-oiled machine that efficiently accomplishes tasks, organizations such as academic institutions might be accurately described as oceans full of islands each operating of their own accord with their own ideas of what needs to be accomplished and what should occur. This makes it difficult to complete tasks that involve collaboration across organizational boundaries, such as the commercialization of the AMISVD which involved the School of Business Administration, the support unit for technology development, executive administration from various offices and the Technology Transfer office.

Meyerson and Martin (1988) view organizations as cultures which are socially constructed realities. Defined as ‘patterns of meaning, values and behaviour’ they argue that an organization culture can take many forms and suggest three paradigms. Unity describes a situation where consensus reigns and all members interpret news about their firm in the same manner. Differentiation refers to case where consensus exists not at the organization wide level but within subgroups, divisions, departments, empires or networks. Clearings in the jungle aptly describe these sites of agreement which are often in conflict

with other internal groups. Ambiguity refers to a situation where multiple viewpoints dominate. Agreement or disagreement depends upon the topic at hand and changes constantly. Stable common understandings or values are neither held throughout the organization nor within specific subgroups. The culture at Acadia could fairly be characterized as varying from differentiation to ambiguity. This presents challenges in an endeavour such as the commercialization of the AMISVD since cooperation between departments was necessary; however, the prioritization and even acceptance of the project was not uniform within Acadia.

Formal institutional messages promote the pursuit of commercialization initiatives, perhaps motivated by pressures from primary supporters of Universities, namely governments, or from a genuine strategic interest. However, members of the university community do not universally embrace the commercialization. Some consider it to be a conflict of interest with the primary role of university faculty as educators and researchers. Faculty members who devote resources to commercialization efforts often do so at the risk of promotion given the culture of publish or perish that still dominates most academic institutions. Ambiguity may characterize the operating environment of Acadia University's competing definitions of promotion requirements.

### **Lack of Control of Necessary Resources**

Resource dependence theorists (Pfeffer and Salancik, 1978) offer yet another reason for the challenges that might arise when seeking to push a commercially viable innovation out the door of an academic institution. It is because of dependence relationships that exist or are created as a result of the innovation. Powerful entities, upon which the inventor might be dependent, control important resources necessary for the successful completion of the commercialization project. As a result, much of the effort of inventor and the commercialization team may become focused on dependency reduction exercises. From this perspective, organizations will be competitively successful if they can reduce uncertainty in their operating environments. Because they cannot supply all of their needs internally, organizations require resources from their operating environment. This interdependence most often leads to a complex set of relationships where one organization attempts to influence its resources while in return its resources attempt to influence the organization. As such, organizations must attend to the demands of those environmental factors that provide resources necessary for their continued survival (Pfeffer, 1982). Therefore, organizations are somewhat dependent on their resources for stability (Pfeffer and Salancik, 1978).

The influence of federal and provincial governments on universities and their technology transfer offices been alluded to above. In the context of dependence relationships, the commercialization of the AMISVD was pushed by demands of a federal government agency that funded the Technology Transfer office and resisted by the risk adverse university administration. The consent of the University was necessary for commercialization and therefore the inventor and technology transfer manager were dependent on it.

The McConnell Foundation was another external stakeholder in this case. It provided funds to Acadia for developing teaching innovations which the institution distributed to two of its Schools and one of its Faculties. None of the three had any experience managing such a large grant. Due to circumstances outlined below, there was a hesitancy to interpret the funding agreement flexibly and fund projects in a liberal manner. This delayed the development of the AMISVD. The funds were offered during a time characterized by tensions between academic staff and the university administration. Empirical and theoretical evidence provided by Zajac and Olsen (1993), suggests that parties with a history of positive previous collaborative experiences will enter into future relationships with less explicit governance controls and monitoring. In this case, the governance controls and monitoring requirements established were explicit and some times onerous. Organizations require a specific level of operational flexibility in order to carry out day to day operations. Transaction cost theorists argue that excessively detailed contractual safeguards can create inflexible operating environments (Lui & Ngo, 2004).

A final resource-related challenge was the allocation of one manager to create and manage the relationships, legal documents and contracts required for the project to succeed. The manager in question was a temporary employee acting for maternity leave replacement and was the only source of knowledge on technology transfer at the university. To overcome this, strategies consistent with those suggested by Pfeffer & Salancik (1979) included political activism, such as lobbying

of the university senior administration to maintain a high profile for the project, emphasizing the value of the resource to internal and external stakeholders and ensuring that the project remained high in the priorities of the temporary manager.

### **Resistance to Operational Change**

A fourth reason for challenges faced by inventors seeking to commercialize technology is the ingrained nature of the academic operating environment. Institutional theory suggests that stability, not change, is the normal state of affairs. Commercial activities which are not the norm may have to overcome assumptions about what should or should not be supported in such a setting before support is offered. Institutional theory suggests that an “organization’s tendencies toward conformity with the predominant norms, traditions, and social influences in their internal and external environments lead to homogeneity among firms in their structure and activities, and that successful firms are those that gain support and legitimacy by conforming to social pressures” (Oliver 1997, 699) Licensing of the AMISVD to a for-profit distribution partner was the first commercialization event of its type at Acadia University. Therefore, organizational change was required to initiate, accept and complete the transaction.

### **Knowing when to Outsource**

A fifth reason for potential challenges to the commercialization process questions the suitability of the academic institution for hosting this process. Should the inventor and the commercialization team do it themselves or contract it out? This idea fits within the domain of transaction cost economics (Williamson, 1975), a model that seeks to guide managers efforts to organize in an optimal manner. From this perspective, markets and firms are alternative instruments for completing a related set of transactions. Whether a set of transactions ought to be executed across markets or within a firm depends upon the efficiency of each mode. The costs of writing and executing complex contracts across a market vary with the characteristics of the human decision makers who are involved with the transaction on the one hand and the objective properties of the market on the other. Contacting out the licensing of the AMISVD might have increased the efficiency of some parts of the commercialization, particularly those where experience or routine practices would be of benefit (see Resistance to Operational Change and Established Commercialization Processes). However, it would not have eased the navigation of the organizational morass that was necessary to delivery the AMISVD in a complete form and one unencumbered from intellectual property claims, nor would it have vanquished the reluctance of the university administration to take on the risk associated with entering a new and unknown forum, nor have dealt with issues of internal resource allocation.

### **Established Commercialization Processes**

One last reason why challenges might arise is a lack of history or knowledge as to how to commercialize. Normal operating routines simply do not exist. What is a routine? They are “sets of ways of doing things and ways of determining what to do” (Nelson and Winter 1982). They are “predictable behavioural patterns” that can take many forms including technical procedures, rules for hiring and firing, investment or advertising policies, and strategies for mergers and acquisitions. Organizational routines fall under the heading of the evolutionary perspective. In this school of thought, “firms are modeled as having certain capabilities and decision rules (genes) that, over time, are modified by both deliberate problem-solving (search) efforts, entrepreneurial discovery and random events (mutations). Decision rules are the generators and selection is the test. The higher order decision rules of the firm may be interpreted as their strategies. Natural and human selection winnow out firms with comparatively poor decision rules and capabilities” (Mahoney 1992). Developing, marketing and commercializing web-based instructional content involved creating routines in the spirit of learning by doing. This approach was considerably slower than following an established routine. It also involved more reiterations. No steps were taken without careful internal consideration and consultation with those in other similar institutions with experience in the field. Since the institutional culture at Acadia is risk-adverse, the slow, studied approach was used to mitigate the risks of errors as far as possible.

To summarize, perspectives found under the heading of organization theory help to explain why inventors in academic settings might face challenges when seeking to commercialize educational products. The possible explanations

include: incorrect allocation of tasks in-house versus outsourced, organizational culture not conducive to collaborative endeavours, non-existent organizational routines directed toward commercialization activities, unhealthy dependence on powerful suppliers of resources, assumed operating norms and traditions that need to be overcome before commercialization activities could succeed, and non-unique commercial applications that offer the licensee only temporary competitive advantage.

### Summary and Conclusions

From several perspectives, the AMISVD is a success. It is a pedagogical, technological innovation. It is used in more several classrooms at Acadia University. It is a vehicle for community engagement, enabling the school to reach out to the local community and capture insight. It allows fundraising opportunities by allowing the university to engage important external stakeholders. It can enhance institutional reputation by projecting the university and school brand beyond the region. It enhances the organizational culture through faculty collaboration. It has been commercialized and it enabled international collaboration between three academic institutions on three continents.

A number of challenges faced the innovators in the process of developing, internationalizing and commercializing the AMISVD. These included: developing the platform in an institutional environment that had little experience managing commercialization initiatives and was not necessarily structured to do so; the existence of an academic culture not necessarily supportive of commercialization efforts; initial hesitance to appropriately fund the initiative; dependence upon one individual for contract management services, and, knowledge that this innovation could be copied by competing academic institutions. However, given the challenges noted above, why did this project succeed? How did an innovation originating in a small liberal arts institution become such a success? Two reasons in particular stand out. One is the use of power to push the project ahead and a second is the possibility that its success might be the result of unique path dependence.

To understand if the project was pushed ahead through the use of power, the academic institution can be viewed through the lens of a resource dependency theorist (Pfeffer & Salancik, 1978). Scholars from this school of thought might conceive of Acadia University as an organization that functions as both a *coalition* of varying interests as well as a *market* where influence and control is traded. Participants can and do have incompatible goals and interests and an interplay of influences inevitably ensues. The issue of whose interests prevail is most often determined by which organizations and individuals have the most power and how they employ that power. What are the sources of power? How might it be gained? At least four means exist (Pfeffer, 1982; Hickson, Hinings, Lee, Schneck, and Pennings 1991). To begin, authority plays a role. One's formal position within the organization legitimizes power. Second, the more resources an individual can bring into an organization, the more power he or she obtains. Third, individuals that offer something of value that few others can provide make the organization dependent upon themselves. Finally, individuals who are able to absorb uncertainty or provide solutions to vital problems facing the organization become powerful. A second reason for the success of the project is that the creation of the technology was path dependent. Despite the fear that it might be copied, in reality it may have followed a unique path through history that enabled it to obtain unusual and valuable resources that cannot be easily acquired by competitors (Hart 1995, 1998).

A number of shortcomings characterize this paper. It is conceptual. The reasoning is subjective and no empirical evidence is offered to support the ideas. It is a single case study and not comparative. It is however longitudinal in terms of insight. Suggestions for future research include comparing the adoption process of the AMISVD at partnered institutions. Also of interest is understanding the challenges faced by its partners to commercialize the interview content filmed at their respective institutions. Further, individuals associated with the project might be interviewed with their insight forming the basis of a comparative paper. An associated line of investigation is the uptake and pedagogical value of the AMISVD.

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## References

- Barney, J. 1996. *Gaining and Sustaining Competitive Advantage*. Reading MA: Addison Wesley.
- Barney, J.B. and Arian, A.M. 2001. "The resource based view: origins and implications." In *The Blackwell Handbook of Strategic Management*, eds. M.A. Hitt, R.E. Freeman, and J.S. Harrison, Oxford, UK: Blackwell Publishing 124-188.
- Hart, S. 1995. "A Natural - Resource Based View of the Firm." *Academy of Management Review* 20(4): 996-1014.
- Hickson, D.J., Hinings, C. R., Lee, C.A., Schneck, R.E., and Pennings, J.M. 1971. "A Strategic Contingencies Theory of Intra-organizational Power." *Administrative Science Quarterly* 16, no.2: 216-229.
- Lui, S.S., & Ngo, H. The role of trust and contractual safeguards on cooperation in non-equity alliances, *Journal of Management*, 30(4), 2004, 471-485.
- Mahoney, J.T. 1992. "Organizational Economics within the Conversation of Strategic Management," *Advances in Strategic Management* 8: 103-155.
- Meyerson, D. and Martin, J. 1988. "Cultural change: An integration of three different views." *Journal of Management Studies* 24: 623-48.
- Nelson R.R. and Winter, S.G. 1982. *An evolutionary theory of economic change*. Cambridge: MA: Harvard University Press.
- Oliver, C. 1997. "Sustainable Competitive Advantage: Combining Institutional and Resource Based Views." *Strategic Management Journal* 18, no.9: 699.
- Pfeffer, J. 1982. *Organizations and Organization Theory*. Chicago, IL: Pitman.
- Pfeffer, J. and Salancik, G.R. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. Chicago, IL: Harper and Row.
- Williamson, O.E., 1976 *Markets and Hierarchies: Analysis and Anti Trust Implications*. New York: The Free Press.
- Williamson, O.E. 1985. *The Economic Institutions of Capitalism*. New York, NY: The Free Press.
- Zajac, E.J., & Olsen, C.P. From transaction cost to transaction value analysis: Implications for the study of interorganizational strategies, *Journal of Management Studies*, 30(1), 1993, 131-145.

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## MANAGING THE USE OF TACIT KNOWLEDGE: CAN THE CLASSROOM HELP?

Tacit knowledge plays an integral role in the competitive advantage of knowledge-based organizations, yet misunderstanding and confusion exists as to what tacit knowledge is, and how it should be managed. Through analysis of existing definitions of, and debates surrounding, tacit knowledge and the management of its use, this paper makes a case for introducing managers to the construct of tacit knowledge through business schools.

### Introduction

One of the strongest areas of competitive advantage for knowledge-based organizations is the tacit knowledge of their employees (Leonard & Sensiper, 1998; Gertler, 2003). There has been much discussion and debate as to the validity of directly managing tacit knowledge itself, versus indirectly managing it through the management of the individuals who possess it (Nonaka, 1991; Leonard & Sensiper, 1998; Gertler, 2003; Schultze & Stabell, 2004; Gourlay, 2006). It is difficult, however, to find research conducted regarding the benefits of a thorough understanding and appreciation of tacit knowledge for the individuals attempting to manage it. While the effects of directly managing tacit knowledge may be up for debate due to the potential for loss of knowledge when codifying tacit knowledge (Nonaka, 1994; Gourlay, 2006), its indirect management, or the management of its use, is an everyday task for many managers. An understanding of what tacit knowledge is, how it impacts an organization, and how it can be managed can only make the task of managing its use easier.

It is the contention of this paper that providing managers with a thorough understanding of the construct of tacit knowledge, its place in the knowledge-based organization, and emerging ideas on how to manage it will afford them greater success in creating and sustaining competitive advantage for their organizations. A full understanding of the construct of tacit knowledge can be difficult to convey, and few standards or rules exist regarding its management. In this paper, we propose knowledge management courses focused on tacit knowledge, offered by business schools, as an appropriate forum for increasing the understanding of current and potential managers. It is important to note that we are looking at teaching about tacit knowledge and the management of its use, as opposed to teaching specific tacit knowledge or skills. This paper will provide a definition of tacit knowledge and discuss common research and debates surrounding tacit knowledge both as an independent construct and in its role in the knowledge economy. We will explore tacit knowledge from the perspective of the manager, looking at how employees use tacit knowledge in their own work and how managers can facilitate that process. Having made a case for the importance and embedded nature of tacit knowledge throughout the knowledge workplace, we will then look at ways to bring the discussion into the classroom.

### Knowledge

Dividing knowledge into two distinct types is a widely accepted practice, and within the discipline of knowledge management these two types are referred to as tacit and explicit knowledge (Gourlay, 2006). Explicit knowledge is knowledge which can be “formulated, abstracted, and transferred across time and space independently of the knowing subjects” (Lam, 2000, p. 490). The construct of explicit knowledge is relatively simple to grasp and it is the tangible nature and manageable properties of explicit knowledge that lead some organizations to attempt to manage tacit knowledge in a similar way, or to make tacit knowledge explicit.

### Tacit Knowledge

Tacit knowledge is a difficult construct to grasp. It was introduced by Michael Polanyi with his statement “we can

know more than we can tell” (1966, p. 4). Even Polanyi himself acknowledged that while on the surface the statement makes sense, “it is not easy to say exactly what it means” (1966, p. 4). Polanyi described the act of tacit knowing as attending from one thing in order to attend to something else. One of his examples is that of facial recognition, where we recognize a face based on its features, yet we are often unable to specifically describe each distinct feature. Our tacit knowledge of the individual features of a person’s face allows us to recognize the face.

Since Polanyi’s introduction of tacit knowledge, researchers have continued to clarify certain aspects of it. Tacit knowledge is said to have a personal quality based on experience, context, and judgment (Lam, 2000), and to reside in the unconscious (Leonard & Sensiper, 1998). It can be seen when an individual successfully executes a skill, yet cannot fully codify or articulate the reason for his or her success (Smith, 2001; Mooradian, 2005). This inability to effectively articulate the knowledge required can result from the individual not being fully conscious of all of the aspects of the skill, or from insufficiently developed codes of language (Leonard & Sensiper, 1998; Gertler, 2003).

Polanyi’s original assumption was that all knowledge has tacit dimensions (Polanyi, 1966). Leonard and Sensiper (1998) have built on this assumption with their discussion of knowledge existing on a spectrum. Completely tacit and completely explicit knowledge lie at extreme ends, but most knowledge exists somewhere along the spectrum. The majority of knowledge and skills utilized within the knowledge-based workforce possess both tacit and explicit dimensions. Some of the knowledge that, at first glance, may appear to lie further along the tacit dimension may actually be easily articulated if an individual is simply asked why, or how, they do something (Ambrosini & Bowman, 2001). Conversely, knowledge that appears to have found an explicit form may be missing key elements that exist in the tacit dimension.

Unlike explicit knowledge, the management of tacit knowledge has only recently begun to be explored (Leonard & Sensiper, 1998), and has resisted operationalization (Ambrosini & Bowman, 2001). The difficulties associated with the management of tacit knowledge, including its inherent inability to be transformed into explicit knowledge and the fact that it cannot be easily aggregated (Lam, 2000), are paradoxically the reasons why it is such an excellent source of competitive advantage. Whereas explicit knowledge, by definition, is easily copied and transferred, it has been argued that if tacit knowledge is made explicit it loses its competitive advantage (Schultze & Stabell, 2004). The inherent inability of individuals to fully articulate their own tacit knowledge means that any attempts to do so result in a loss of the individual’s wisdom and competence. What was an expert’s knowledge becomes no better than a novice’s (Pfeffer & Viega, 1999), and any value provided by the knowledge in its tacit form is lost.

### **Tacit Knowledge as Competitive Advantage**

Organizations draw their competitive and long-term advantage from those factors that add to their success, are core to the firm, and are difficult to imitate by competitors (Barney, 1991). Tacit knowledge exists in all organizations, but only provides strong competitive advantage in knowledge-based organizations. Organizations that are still functioning in the more traditional manufacturing economy achieve competitive advantage through mechanical capital assets owned by a few, extremely wealthy, men (Drucker, 1993). The benefits of a strong educational background in tacit knowledge and its management are of less value to managers working in these organizations.

In today’s knowledge economy, knowledge is the asset required in order for organizations to achieve and sustain success (Drucker, 1993). Knowledge, particularly that which is tacit, is owned by knowledge workers themselves. Employees bring knowledge with them into an organization, and take that knowledge, along with any that was acquired during their tenure, with them when they leave. Explicit knowledge can often be captured and codified into the organizational knowledge base, but tacit knowledge cannot. The value of tacit knowledge, combined with the fact that an organization cannot appropriate it, has resulted in an organization’s strategic resources and competitive advantage lying mainly in its employees (Drucker, 1993; Pfeffer, 1994; Child & Mcgrath, 2001).

Tacit knowledge has become recognized as critically important in achieving ongoing innovation and value creation (Leonard & Sensiper, 1998; Lam, 2000; Gertler, 2003), due to its inimitability (Bhardwaj & Monin, 2006). An individual

employee can provide great value to an organization through the use of tacit knowledge and skills that are unique to his or her particular educational background and life experiences. The uniqueness of an individual's tacit knowledge can lead that person to unique innovations. When a valuable idea is discovered the fact that it was created with unique tacit knowledge means that it will be difficult to imitate.

### **Managing Tacit Knowledge**

A discussion of the management of tacit knowledge needs to begin with reference to the work of Nonaka and Takeuchi. Their model for knowledge creation within an organization, which has achieved paradigmatic status (Gourlay, 2006), involves the continuous social interaction of tacit and explicit knowledge (Nonaka, 1994; Nonaka & Takeuchi, 1995). They have also outlined a process detailing how knowledge-creating companies can make tacit knowledge explicit (Nonaka, 1991). While there is still a strong school of thought that the key to knowledge dissemination and organizational innovation involves finding, capturing, and appropriating the tacit knowledge of employees (Smith, 2001; Gertler, 2003; Mooradian, 2005), current critiques are beginning to challenge some of this work (Bhardwaj & Monin, 2006; Gourlay, 2006). The critiques stem from the argument that if one of the factors that makes knowledge tacit is its inability to be articulated, transforming that knowledge to an explicit form means the knowledge will be changed (Durrance, 1998) and an essential aspect will be lost. Through advocating for codifying tacit knowledge as the best method of management, Nonaka and Takeuchi are ignoring the risk of losing valuable knowledge.

Research is beginning to conclude that organizational tacit knowledge may be beyond overt control, and therefore not directly manageable (Gourlay, 2006). There is a definite recognition of the difficulties involved with managing highly personal, contextual, and often unconscious behaviours (Coff, 1997; Leonard & Sensiper, 1998; Hansen, Nohria & Tierney, 1999). Even the basic requirements for management are incredibly difficult to ascertain, including specifically what tacit knowledge exists, where it resides, and how much the organization currently possesses (Gertler, 2003). Managing tacit knowledge may only be possible indirectly, through the management of the behaviour of the individuals holding the knowledge (Gourlay, 2006). Hansen, Nohria, and Tierney (1999) refer to this type of knowledge management as the personalization strategy, where knowledge is left in its tacit state and shared mainly through interpersonal communication.

Leonard and Sensiper (1998) discuss ways in which managers can encourage the full use, and transfer when possible, of their employees' tacit knowledge. Managers need to create and maintain an environment conducive to the specific skills and knowledge of their employees. They should show respect for different thinking styles, allow their employees to fail, and should not assume that position in the organizational hierarchy denotes ability or wisdom. Possessing valuable tacit knowledge bestows power on an individual, and there may be reluctance to surrender that power by sharing knowledge. Employees should be actively encouraged to participate in organizational innovation, and rewarded for mentoring and assisting others (Leonard & Sensiper, 1998; Hansen, Nohria & Tierney, 1999; Smith, 2001).

People may feel foolish when unable to provide detailed explanations of how they know something. Managers therefore need to convey to their employees that it is acceptable to do something well without being able to fully, rationally, or scientifically articulate how it is done. At the same time, managers need to understand that not all tacit knowledge is valuable, or accurate (Leonard & Sensiper, 1998). While not being experts in the same areas as their employees, managers need to be familiar enough with their work that they are capable of ascertaining the value of an individual's tacit skills. As value becomes known, retention becomes an important consideration. If an individual's tacit knowledge cannot be made explicit, and provides great value to the organization, the only way to maintain that competitive advantage is by retaining the employee (Coff, 1997).

Workplace autonomy is important for the creation and use of tacit knowledge in an innovative capacity. Overly controlled work environments stifle innovation and creativity. Managers need to relinquish some control and allow employees sufficient freedom to develop and use their tacit knowledge (Schultze & Stabell, 2004). When managers rely on their employees to accomplish tasks using tacit knowledge and skills that the manager does not personally have, employees must be given trust and the autonomy to do what they know they need to do (Pfeffer & Viega, 1999). Trust also plays a

key role in the success of tacit knowledge transfer between individuals (Foos, Schum & Rothenberg, 2006). Alvesson and Karreman (2001) recommend approaching knowledge management as a community where ideas are shared. Management is considered to be a coordination role, rather than a control role.

### **Can a Classroom Help?**

Tacit knowledge and skills, of course, already exist in the classroom. An effective instructor uses tacit skills even when teaching curriculum that is ostensibly explicit. Students consciously learn the explicit knowledge being transferred by their instructor, but often unknowingly acquire new tacit knowledge through implicit learning (Reber, 1993). Examples of this include unconsciously internalizing the communication styles of instructors who capture their attention, while eschewing those that lead to boredom.

#### **The Case for Teaching About Tacit Knowledge**

Managers are being asked to manage, both directly and indirectly, tacit knowledge resources, as well as expected to acquire and utilize tacit knowledge and skills themselves. Yet research shows that the subject of tacit knowledge is poorly understood in the workplace. There are misunderstandings among managers as to what tacit knowledge actually is, and little differentiation made between technology transfer and tacit knowledge transfer (Foos, Schum & Rothenberg, 2006). The relative newness of knowledge management within organizations means that there is a lack of successful models that can be used by managers for guidance (Hansen, Nohria & Tierney, 1999).

Burke and Sadler-Smith (2006) have recently made the argument that “management learning and education should incorporate into its pedagogy the notions of implicit learning, tacit knowledge, and intuition from both the instructors’ and the students’ point of view” (p. 169). While not advocating against the rational approach, they believe that the inclusion of the constructs of tacit knowledge and intuition within the management curriculum would better enable students to assess the value and reliability of tacit knowledge and intuitive judgments. These skills are important in a complex and dynamic business world.

The construct of tacit knowledge, and the issues involved with managing it, are complex enough that they do not lend themselves to being effectively taught in a seminar or two offered to current managers by their employer. The focused, and intensive, environment of a knowledge management classroom would provide a forum in which complex constructs can be explained and refined, and that techniques for the management of the use of tacit knowledge can be taught. The workplace will be where managers fully grasp the significance of tacit knowledge and begin to hone their abilities to manage it, but a classroom is the ideal place for the foundation to be laid.

#### **The Current Situation**

Tacit knowledge as a construct does not currently hold a position of great importance within business schools. The basic structure and concepts of management courses have seen little change since the popularity of business schools soared in the 1950s and 1960s (Pfeffer & Fong, 2002) despite the rise of the knowledge economy. Rationalism and quantitative techniques are still the norm in most management curricula (Porter & Mckibbin, 1988; Dehler, Welsh & Lewis, 2001; Pfeffer & Fong, 2002; Sadler-Smith & Shefy, 2004). The interest in tacit knowledge in the workplace is a relatively recent phenomenon, and understanding tacit knowledge to its fullest extent, beyond that of simply transforming it into explicit knowledge, requires subjective thought and qualitative techniques.

A small survey of organizational behaviour texts shows that some do discuss tacit knowledge and knowledge management, thereby creating an initial awareness of the construct (Gibson, Ivancevich, Donnelly & Konopaske, 2003; Mcshane, 2006; Mills, Helms Mills, Forshaw & Bratton, 2006). Others, however, do not (Schermerhorn, Hunt & Osborn, 1991; Moorhead & Griffin, 1992; Field & House, 1995; Greenberg, Baron, Sales & Owen, 2000; Robbins & Langton,

2003). Those texts that do address tacit knowledge tend towards one or two paragraphs regarding the subject, with a simple definition and brief discussion of knowledge management. This simple definition, however, is in sharp contrast to the knowledge management literature. Definitions of, and opinions regarding, tacit knowledge abound, to the risk of the construct achieving multiparadigmaticism (Castillo, 2002). Providing students with a simplified definition, and the instruction that managing tacit knowledge is important, does little to prepare them for the complexities surrounding tacit knowledge in the workplace. We are not proposing that organizational behaviour courses should take responsibility for the depth of instruction being promoted in this paper, but that a course dedicated to tacit knowledge, its use, and the management of its use, should be recognized as a new way forward.

We have accepted the position that the effective use of tacit knowledge requires managers to be capable of managing its use by their employees. Due to the personal and subjective nature of tacit knowledge, managing its use requires behavioural management skills. We would therefore expect managers of knowledge workers to be competent in behavioural, interpersonal, and oral and written communication aspects of management. Yet surveys have found that these subject matters are not being emphasized in business school curricula (Porter & Mckibbin, 1988; Pfeffer & Fong, 2002). These issues need to be addressed in order to prepare managers for managing knowledge workers.

### **Curriculum for Managing the Use of Tacit Knowledge**

There are specific areas of knowledge which, if brought into a knowledge management course in a business school, would provide current and potential managers with an understanding of what to expect when managing employees who use tacit knowledge.

**Defining tacit knowledge.** The first step in providing managers with the ability to successfully manage their knowledge workers is ensuring that they have a solid understanding and awareness of what tacit knowledge is. A one sentence definition of tacit knowledge, as found in some organizational behaviour textbooks today, does not adequately prepare managers to deal with the multiple definitions that abound in the knowledge economy. Castillo (2002) proposes a new typology of tacit knowledge that incorporates many of the ideas prominent across the literature. While more work would be required to validate this particular typology, it is a step in the right direction for providing managers and management students with an encapsulated and bounded idea common throughout the knowledge management field.

It is important, however, not to oversimplify the construct of tacit knowledge. While clarity and focus is required, oversimplification increases the risk of glossing over the full complexities and creating a sense of complacency as to mastery of the knowledge and issues at hand. By requiring students to understand concepts of complexity slightly beyond their current abilities, we provide a developmental education and aid them in creating more sophisticated knowledge structures (Dehler, Welsh & Lewis, 2001).

**Managing the use of tacit knowledge.** The complexity and subjectivity surrounding both tacit knowledge and its management requires stepping away from the traditional rational and quantitative business school curriculum. The indirect management of tacit knowledge requires the management of behaviour (Gourlay, 2006). Organizations have already been requesting an increased focus on behaviourally oriented management techniques within business school curricula (Porter & Mckibbin, 1988), and many experienced managers indicate that “people issues” cause them the most problems (Burke & Moore, 2003). A knowledge management course focused on the management of the use of tacit knowledge would be an excellent opportunity to include the behavioural aspects of management.

Based on recommended methods for managing the use of tacit knowledge, there are some areas on which management curricula could focus in order to enable managers in this task. The management of the use of tacit knowledge involves two distinct responsibilities. The first centers on the use and development of tacit knowledge and skills by the individuals who possess them, and the second on the transfer of tacit knowledge and skills where possible, and with minimal loss of information.

Managing the use and development of tacit knowledge and skills requires an approach that fosters trust, autonomy, respect, and comfort. Communication surrounding the use of tacit knowledge can be difficult, since the very nature of tacit knowledge means it cannot be easily and clearly articulated. It is critical that the work environment be conducive to exploration, innovation, and failure. The importance of interpersonal and communication skills in meeting these needs cannot be overestimated. Including these skills in business schools is considered important by organizations (Porter & McKibbin, 1988) and experienced managers (Burke & Moore, 2003) for general management purposes. Now, we also make a case for them being included specifically for the management of the use of tacit knowledge and skills.

The management of the use of tacit knowledge can involve the transfer of that knowledge from one individual to another. In order for this to occur, positive social interaction and dialogue, mentoring, organizational innovation, communication, and implicit learning are required. Again, we see the importance of interpersonal and communication skills. Another well-researched area that can be included in management curricula in order to augment the discussion of transfer of tacit knowledge is that of mentoring. There have been many studies examining the benefits of mentoring for an organization (Underhill, 2006), as well as the pros and cons of various mentoring programs, both formal (Ragins, Cotton & Miller, 2000) and informal (Allen, Poteet & Russell, 2000).

Since the complete transfer of tacit knowledge between employees is rare and difficult, retention of key employees can become the safest mechanism for ensuring that valuable tacit knowledge remains within the organization. Research and literature on retention strategies has recently become an issue of importance for the very reason of maintaining competitive advantage through the retention of employee knowledge (Lee & Maurer, 1997). Retention strategies specific to valuable knowledge workers are beginning to be formulated (Cappelli, 2000), and incorporating these strategies into management curriculum would be straightforward.

### **Conclusion**

Tacit knowledge is a construct that was developed to help explain the ability of people to do more than they can tell (Polanyi, 1966). As it becomes recognized as a key factor in the competitive advantage of knowledge-based organizations, the management of tacit knowledge likewise becomes a key responsibility for managers. The ability to manage the use of tacit knowledge, through the management of its use by individuals and its transfer between colleagues, plays an integral role in the success of managers of knowledge workers. Unfortunately, many managers are lacking the knowledge base required to effectively carry out their newfound responsibilities. Misunderstanding, confusion, and debate surround the management of tacit knowledge (Foos, Schum & Rothenberg, 2006). The newness of the construct within organizations, combined with the industry's multiple definitions and opinions regarding its management, is a prime contributor to these issues. The fact remains, however, that a thorough understanding of the construct of tacit knowledge, along with many of the management skills required to deal with it effectively, are missing from the average manager's skill set. The ideal forum for building this understanding is in knowledge management courses offered through business schools. This paper discusses various additions to the knowledge management curriculum which could be made, such as defining tacit knowledge, increasing focus on behaviourally oriented subject matter, such as interpersonal and communication skills, and looking at existing strategies for implementing mentoring and retention programs.

While theoretical in its approach, this paper paves the way for future research. What level of understanding do current managers have regarding tacit knowledge, and what do they see as their role in its management? What are some detailed pedagogical methods for introducing complex ideas such as tacit knowledge into the knowledge management classroom, and how would they differ for undergraduate versus graduate programs? Does the implementation of those methods increase a manager's effectiveness in the workplace? What effect will these management techniques have on employees?

## References

- Allen, T., Poteet, M. L. & Russell, J. E. A., "Protege Selection by Mentors: What Makes the Difference?" *Journal of Organizational Behavior*, 21(3), (2000), 271.
- Alvesson, M. & Karreman, D., "Odd Couple: Making Sense of the Curious Concept of Knowledge Management," *Journal of Management Studies*, 38(7), (2001), 995-1018.
- Ambrosini, V. & Bowman, C., "Tacit Knowledge: Some Suggestions for Operationalization," *Journal of Management Studies*, 38(6), (2001), 811-829.
- Barney, J., "Firm Resources and Sustained Competitive Advantage," *Journal of Management*, 17(1), (1991), 99-120.
- Bhardwaj, M. & Monin, J., "Tacit to Explicit: An Interplay Shaping Organization Knowledge," *Journal of Knowledge Management*, 10(3), (2006), 72-85.
- Burke, L. A. & Moore, J. E., "A Perennial Dilemma in Ob Education: Engaging the Traditional Student," *Academy of Management Learning and Education*, 2(1), (2003), 37-52.
- Burke, L. A. & Sadler-Smith, E., "Instructor Intuition and the Educational Setting," *Academy of Management Learning and Education*, 5(2), (2006), 169-181.
- Cappelli, P., "A Market-Driven Approach to Retaining Talent," *Harvard Business Review*, 78(1), (2000), 103-113.
- Castillo, J., "A Note on the Concept of Tacit Knowledge," *Journal of Management Inquiry*, 11(1), (2002), 46-57.
- Child, J. & Mcgrath, R. G., "Organizations Unfettered: Organizational Form in an Information-Intensive Economy," *Academy of Management Journal*, 44(6), (2001), 1135-1148.
- Coff, R. W., "Human Assets and Management Dilemmas: Coping with Hazards on the Road to Resource-Based Theory," *Academy of Management Review*, 22(2), (1997), 374-402.
- Dehler, G. E., Welsh, M. A. & Lewis, M. W., "Critical Pedagogy in the 'New Paradigm'," *Management Learning*, 32(4), (2001), 493-511.
- Drucker, P. F., *Post-Capitalist Society*, New York: HarperBusiness, 1993.
- Durrance, B., "Some Explicit Thoughts on Tacit Learning," *Training & Development*, 52(12), (1998), 24-29.
- Field, R. H. G. & House, R. J., *Human Behaviour in Organizations: A Canadian Perspective*, Scarborough, ON: Prentice-Hall Canada Inc., 1995.
- Foos, T., Schum, G. & Rothenberg, S., "Tacit Knowledge Transfer and the Knowledge Disconnect," *Journal of Knowledge Management*, 10(1), (2006), 6-18.
- Gertler, M. S., "Tacit Knowledge and the Economic Geography of Context, or the Undefinable Tacitness of Being (There)," *Journal of Economic Geography*, 3, (2003), 75-99.
- Gibson, J. L., Ivancevich, J. M., Donnelly, J. H. J. & Konopaske, R., *Organizations: Behavior Structure Processes*, New York: McGraw-Hill/Irwin, 2003.
- Gourlay, S., "Conceptualizing Knowledge Creation: A Critique of Nonaka's Theory," *Journal of Management Studies*, 43(7), (2006), 1415-1436.
- Greenberg, J., Baron, R. A., Sales, C. A. & Owen, F. A., *Behaviour in Organizations*, Scarborough, ON: Prentice-Hall Canada Inc., 2000.
- Hansen, M. T., Nohria, N. & Tierney, T., "What's Your Strategy for Managing Knowledge?" *Harvard Business Review*, 77(2), (1999), 106-116.
- Lam, A., "Tacit Knowledge, Organizational Learning and Societal Institutions: An Integrated Framework," *Organization Studies*, 21(3), (2000), 487-513.
- Lee, T. W. & Maurer, S. D., "The Retention of Knowledge Workers with the Unfolding Model of Voluntary Turnover," *Human Resource Management Review*, 7(3), (1997), 247-275.
- Leonard, D. & Sensiper, S., "The Role of Tacit Knowledge in Group Innovation," *California Management Review*, 40(3), (1998), 112-132.
- Mcshane, S. L., *Canadian Organizational Behavior*, Toronto: McGraw-Hill Ryerson Limited, 2006.
- Mills, A. J., Helms Mills, J. C., Forshaw, C. & Bratton, J., *Organizational Behaviour in a Global Context*, Peterborough, ON: Broadview Press, 2006.
- Mooradian, N., "Tacit Knowledge: Philosophic Roots and Role in Km," *Journal of Knowledge Management*, 9(6),

(2005), 104-113.

Moorhead, G. & Griffin, R. W., *Organizational Behavior*, Boston, MA: Houghton Mifflin Company, 1992.

Nonaka, I., "The Knowledge-Creating Company," *Harvard Business Review*, 69(6), (1991), 96-104.

Nonaka, I., "A Dynamic Theory of Organizational Knowledge Creation," *Organization Science*, 5(1), (1994), 14-37.

Nonaka, I. & Takeuchi, H., *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, New York: Oxford University Press, 1995.

Pfeffer, J., *Competitive Advantage through People: Unleashing the Power of the Work Force*, Boston: Harvard Business School Press, 1994.

Pfeffer, J. & Fong, C. T., "The End of Business Schools? Less Success Than Meets the Eye," *Academy of Management Learning and Education*, 1(1), (2002), 78-95.

Pfeffer, J. & Viega, J. F., "Putting People First for Organizational Success," *Academy of Management Executive*, 13(2), (1999), 37-48.

Polanyi, M., *The Tacit Dimension*, Garden City, New York: Doubleday, 1966.

Porter, L. W. & Mckibbin, L. E., *Management Education and Development: Drift or Thrust into the 21st Century?* New York: McGraw-Hill Book Company, 1988.

Ragins, B. R., Cotton, J. L. & Miller, J. S., "Marginal Mentoring: The Effects of Type of Mentor, Quality of Relationship, and Program Design on Work and Career Attitudes," *Academy of Management Journal*, 43(6), (2000), 1177-1194.

Reber, A. S., *Implicit Learning and Tacit Knowledge: An Essay on the Cognitive Unconscious*, New York: Oxford University Press, 1993.

Robbins, S. P. & Langton, N., *Organizational Behaviour: Concepts, Controversies, Applications*, Toronto, ON: Pearson Education Canada Inc., 2003.

Sadler-Smith, E. & Shefy, E., "The Intuitive Executive: Understanding and Applying 'Gut Feel' in Decision-Making," *Academy of Management Executive*, 18(4), (2004), 76-91.

Schermerhorn, J. R. J., Hunt, J. G. & Osborn, R. N., *Managing Organizational Behavior*, New York: John Wiley & Sons, Inc., 1991.

Schultze, U. & Stabell, C., "Knowing What You Don't Know? Discourses and Contradictions in Knowledge Management Research," *Journal of Management Studies*, 41(4), (2004), 549-573.

Smith, E. A., "The Role of Tacit and Explicit Knowledge in the Workplace," *Journal of Knowledge Management*, 5(4), (2001), 311-321.

Underhill, C. M., "The Effectiveness of Mentoring in Corporate Settings: A Meta-Analytical View of the Literature," *Journal of Vocational Behavior*, 68(2), (2006), 292-307.

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## **INTEGRATING SOCIAL IMPACT MANAGEMENT INTO MANAGEMENT EDUCATION: EXPLORING ATTITUDES & ASSESSMENTS**

This paper considers ethical attitudes of business students from an Atlantic Canadian university. We investigate students' attitudes toward the topics of business ethics, social impact management, corporate social responsibility and environmental awareness being included in management education. We report on established student clubs, societies, and groups in Canadian business schools which promote these topics. We also discuss implications related to integrating these topics into management education.

### **Introduction**

The past decade's corporate scandals continue to have the public, business practitioners, academics, and media attentive to the topic of integrating ethics and social impact management into business practice (Ahmed, Chung and Eichenseher, 2003). Research has shown that business students believe that business ethics, social impact management, corporate social responsibility and environmental awareness should be incorporated into management education as well (Aspen Institute's Initiative for Social Innovation through Business, 2003), and that students want to be given the tools to develop a skill set that will allow them to pragmatically manage and solve challenging ethical dilemmas.

This paper considers ethical attitudes of business students from both the undergraduate and graduate levels at one Atlantic Canadian university. We investigated students' attitudes toward the topics of business ethics, social impact management, corporate social responsibility and environmental awareness (hereafter social impact management) being integrated into management education. In addition, we researched established student clubs, societies, and groups in Canadian business schools which promote these topics. In the last section of the paper, we discuss implications related to integrating these topics into management education.

### **Business Students' Ethical Attitudes and Social Impact Management**

Academia and media have reported how business students cheat more than other students (e.g., recent cheating scandal at Duke University's Fuqua School of Business; McCabe, Butterfield, & Trevino, 2006), score lower than other students on ethical and social responsibility attitudes (e.g., Aspen Institute - Initiative for Social Innovation through Business, 2003; Cole and Smith, 1996; Wood, Longenecker, McKinney and Moore, 1988), and are partially to blame for large-scale corporate scandals (*The Economist*, May 10, 2007; Ghoshal, 2005; Oliva, 2004:11). Giacalone & Thompson (2006) recently suggested that the organizational-centered worldview that underpins business education prevents students from developing an other-centered focus and believing that business can be an agent for social change. However, ethical attitudes of business students are reported to be changing and more students are suggesting that topics such as business ethics and social impact management should be incorporated into management education, in the form of either a stand alone course or integrating the topic into the curriculum of various courses. This has been reported at the undergraduate level (e.g., Malone, 2006) and graduate level (e.g., Knight, 2006). Other research has shown that ethical attitudes have increased (in a favourable direction) among undergraduate business students (e.g., Cole & Smith, 1996; Emerson & Conroy, 2004; Farling & Winston, 2001;

Johns and Strand, 2000; and Malone, 2006). For example, Emerson and Conroy (2004) found that business students, when presented with vignettes with ethical connotations, were less accepting of the questionable situations compared to those surveyed in a mid-1980s (Wood et al., 1988) study.

Crane (2004) found evidence that MBA students believed strongly in the implementation of ethical standards in business practices. The Aspen Institute's Initiative for Social Innovation through Business (Aspen ISIB) conducted an important study to assess how an MBA education affects student attitudes toward acceptable values and business practices and the role of the company in society (ISIB, 2003). MBA students from thirteen high ranking business schools participated in the survey; eleven from the United States and two from Canada. One important result is the finding that students are unsure how social responsibility contributes to the success of a business but are interested to learn more about it and deem the topic important enough to be integrated into core curriculum.

### **Social Impact Management in the Classroom**

Garten (2005) insists that business schools are responsible for placing business ethics at the highest priority to enhance a student's ethical education. In a Business Week Online Reader's Survey (2003), the majority of participants thought teaching ethics should be approached by requiring a stand alone course; however, 27 percent believed that ethics would be better absorbed if business schools integrated the topic into core courses such as accounting, finance and marketing. The results from three other studies found positive attitudes toward the integration of ethics education into business school curriculum either in a stand alone course or integrated throughout the curriculum, and respondents thought ethics an important component of business education (Stewart, Felicetti and Kuehn, 1996; Power and Lundsten, 2001; Crane, 2004). Some scholars have suggested that business ethics courses alone do not provide the business student with the scope and the skill set to analyze and solve complex business problems that involve ethical, environmental and societal repercussions (Samuelson, 2004; Williams and Dewett, 2005; Zlotkowski, 1996). Oddo (1997) indicates that the value of classroom learning is improved when ethics is integrated into all business courses as opposed to a stand alone ethics course. Sims and Brinkmann (2003, 80) suggest that the considerable size of the topic of ethics requires integration across all aspects of business curriculum; it allows for business schools to "build bridges" across various disciplines. Some business faculty are apprehensive to apply ethics to courses due to inexperience, lack of ability and deficiency of education and training (Oddo, 1997).

According to the 2005 Knight School rankings, the offering of mandatory courses fully dedicated to social impact management decreased in Canadian MBA programs between 2004 and 2005; however, offerings of fully dedicated electives and partially dedicated mandatory and elective courses increased over the one year period (Troper, 2005). Increases were seen in all categories at the undergraduate level of Canadian business education (Troper, 2005).

Porter and McKibbin (1988: 316-325) diagnosed business schools as having "undernourished curriculum" in relation to student disregard for factors beyond the 'bottom line'. Ferraro, Pfeffer and Sutton (2005: 14) suggest that "self-interested behaviour is learned behaviour, and people learn it by studying economics and business." This statement has been supported with empirical research (e.g., Marwell & Ames, 1981; Carter and Irons, 1991; Miller, 1999; and Frank and Schulze, 2000). A comment by an anonymous professor stresses the role of business education in shaping students' attitudes and values:

The most important thing this research [Aspen Institute] shows is that business education does socialize and shape students' views. It teaches them about what is possible and about what is appropriate. This tells me that business schools cannot hide behind the old story that they are merely about technical and managerial skills. They have always been in the business of shaping values and attitudes – whether they want to admit it or not (ISIB, 2003, 11).

Gautschi and Jones (1998, 8) examined business students who were exposed to a business ethics course and those

who were not and they determined that those students who participated in ethics education were more susceptible to the development of an “increased ability to recognize ethical issues” after the completion of the course.

In the classroom approaches to integrating ethics and social issues management into management education that have been reviewed in the literature include case studies (e.g., Kuhn, 1998; McPhail, 2001; Schaupp and Lane, 1992); life-cycle case studies (e.g., Desjardins and Diedrich, 2003); using personal work experience (e.g., Jurkiewicz, Giacalone and Knouse, 2004; Laditka and Houck, 2006); simulations, games, and role playing (e.g., Kuhn, 1998; McPhail, 2001; Zlotkowski, 1996); journaling (e.g., McPhail, 2001; Nasher and Ruhe, 2001); and group learning and film analysis (e.g., Champoux, 2006; McPhail, 2001). Service learning projects based on experiential learning are reported to be another successful way to integrate social impact management into business curricula and programs (e.g., Morton & Troppe, 1996; Fleckenstein, 1997; Easterling & Rudell, 1997; Kenworthy-U’ren, 1999).

### **Social Impact Management Education beyond the Curriculum**

Ethical content is required for a business school to be accredited by the Association of Advanced Collegiate Schools of Business; however, a required course or learning outcomes are not specified and curriculum planners are left to determine how best to incorporate business ethics into the teaching curriculum (Moore, 2004). Trevino and McCabe (1994:414; see also LeClair, 2004) indicate that the environment in which students learn is as important as what they learn; therefore, student organizations and outside of the classroom activities are essential for providing a well rounded business education and to understand the factors that influence people to be ethical or unethical, and more likely to accept responsibility as community members to participate in developing solutions.

Examples of extracurricular activities that can be used to integrate social impact management into business education include **case competitions** (e.g., Dalhousie’s Business Ethics Case Competition) and speaker series (e.g., Aspen Institute, n.d.; Gentile, 2001). Anderson (2004) points to successful student run activities that are making a change in the lives of graduate business students and the communities in which they live (for example Net Impact)<sup>1</sup>. In addition, there are student-run conferences that deal with topics related to social impact management (e.g., Sobey Annual MBA Leadership conference).

### **Methodology**

Our research took place at the Sobey School of Business at Saint Mary’s University (SMU) during the 2005-2006 Academic Year. Participants who took part in the study included both undergraduate and graduate students enrolled in business programs at SMU during the second semester of the 2005-2006 academic year. Three hundred and nine undergraduate students and sixty-eight Master of Business Administration students voluntarily participated in the study.

The data collection for the primary research was achieved through the use of a survey questionnaire entitled “*Business Ethics, Social Impact Management and Environmental Awareness: Business School Curriculum and Student Involvement. What is accomplished to date and how much further do we need to go?*” Questions were taken from Mescon, Albert, and Kedoun’s (1988) scale and Lowell Rein’s (1980) “*Is Your (Ethical) Slippage Showing?*” ethics test. These questions provided the opportunity to investigate at what level respondents would agree or disagree with statements such as “managers sometimes need to overlook contract and safety violations so that the job can get done” and “it’s okay sometimes to conduct personal business on company time”. Specific questions were also designed to get answers to questions about the

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<sup>1</sup> Net Impact is an international organization, conceived in 1993, whose mission is to “improve the world by growing and strengthening a network of new leaders who are using the power of business to make a positive net social, environmental, and economic impact” (Net Impact, n.d.).

experience and interest the respondents had with respect to social impact management being integrated into the curriculum and programs.

Secondary research information on established student clubs, societies, and groups involved with the promotion of social impact management was gathered on-line and by mail. This portion of the research project involved compiling a list of Knight Schools that participated in the 2005 Corporate Knights survey (Troper, 2005); visiting the individual schools' websites to determine the mandates of student clubs, societies, and groups; and emailing club leaders to gather additional information.

## Results

The majority of the students in both programs possessed average ethical attitudes. The undergraduate respondents had slightly higher ethical scores than the graduate respondents. A higher percentage of graduate respondents (40 %) took a course related to social impact management than did undergraduate respondents (27 %). The majority of both graduate respondents (59 %) and undergraduate respondents (56 %) agreed that courses relating to social impact management should be one of the core/required courses for the business programs at SMU. A greater percentage of undergraduate respondents (68 %) wanted to see more courses relating to social impact management offered at SMU than did graduate students (54 %). Half of both graduate and undergraduate respondents agreed that SMU should offer a specialization or concentration within the scope of social impact management. Graduate respondents had a much higher 'yes' response rate for participating in extra-curricular seminars, speaking engagements or conferences related to social impact management (44% compared to 15% for undergraduates). A high 'yes' response was provided by both graduate and undergraduate respondents for both SMU (76% MBA and 72% UG) and the student body (40% MBA and 44% UG) to be responsible for promoting outside of the classroom activities related to social impact management. Less than half of the respondents thought it was their responsibility as students to promote 'outside of the classroom' activities; however, more than 30 % of each student respondent group indicated interest in either organizing or getting involved in a student run organization at SMU.<sup>2</sup>

The results of the secondary research component involved compiling a list of student run organizations that initiate activities related to social impact management. According to our research, there are currently twenty student run organizations in business schools across Canada that promote topics such as business ethics, corporate social responsibility, social impact management and environmental awareness. There are six chapters of Net Impact, two chapters of CESR (founded at Dalhousie University), and various sustainability clubs, student charity organizations, and business and environment groups found at highly recognized business schools across the country. Some of the activities organized by these groups include: fundraisers for charity and relief programs; film screenings; case competitions and conferences; lectures and special presentations; public workshops; newsletters; career fairs; consulting services; and community action days for volunteer opportunities.<sup>3</sup>

## Discussion & Implications

The concept of incorporating topics such as business ethics, social impact management, corporate social responsibility and environmental awareness into management education is not a new one; however, it can prove to be challenging for business schools as obstacles such as academic legitimacy, value system modification and topic subjectivity are questioned. This research project has provided the opportunity to review some of the academic research related to the incorporation of topics such as these into business school curriculum, but it also goes beyond the classroom to see how business students are embracing these topics into the education experience.

The primary research provided the opportunity to gauge the ethical attitudes of undergraduate and graduate business students at the Sobey School of Business and determine that the majority of the students in both programs possess average ethical attitudes. The research also indicated that the students would be interested to see more courses and or/concentrations in the area of social impact management. Our findings are encouraging, but not overwhelmingly positive. The incorporation

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2 A copy of the survey and detailed results can be requested from the first author.

3 Detailed results for the secondary research can be requested from the first author.

of a student run organization that promotes these topics could be an option for the Sobey School of Business to support as the survey findings indicate an obvious interest from a percentage of the undergraduate and graduate students. One area that all universities can take advantage of for promotion of social impact management in relation to the business programs is orientation activities. A very high percentage of SMU undergraduate respondents indicated that they have never been involved in orientation activities that promoted these issues. SMU currently integrates the topic of business ethics into the orientation activities of graduate students and this could be used as a model to develop an opportunity for the undergraduate students.

Although some business students wait for administrative action to take place within their institutions, many are taking initiative to develop student run organizations that promote and link business with society. These organizations, as discussed above, provide business students an opportunity to use their skills learned inside the classroom to give back to society. One suggestion for future research is a study focused on students who are involved with student run organizations that promote social impact management to consider how involvement in these organizations is advantageous to their management education experience and their ethical development.

Surveys such as Corporate Knights provide the opportunity to see how the number of ethics related courses, both mandatory and elective, are increasing (or decreasing in some cases) in business schools across Canada; however, little empirical research is available to determine which type of integration is more successful, particularly with respect to application post course. Future research might involve a longitudinal study comparing learning outcomes among universities that use different approaches to integrating ethics into their curricula and programs.

Both educators and business students are reminded of the important links between universities and communities and of the responsibility of students towards the needs of their community (McCarthy & Tucker, 2002); and the reaffirmation of the purpose of university – “to help one generation after another grow intellectually and morally through study and the self scrutiny such study can sometimes prompt” (Wittmer, 2004, 368). We encourage our colleagues to explore how this study and self scrutiny can happen both inside and outside of the classroom in management education.

### References

- Ahmed, M.M., Chung, K.Y. & Eichenseher, J.W. (2003). Business students' perception of ethics and moral judgment: A cross-cultural study. *Journal of Business Ethics*, Vol. 43 (1/2), 89.
- Anderson, L. (2004, January 26). Social awareness takes a higher profile. *Financial Times*, p11.
- Aspen Institute (n.d.). [www.aspeninstitute.org](http://www.aspeninstitute.org), accessed July 13, 2006.
- Business Week Online* (2003, January 22). MBAs Need More Than Ethics 101. [http://www.businessweek.com/bschools/content/jan2003/bs20030121\\_5068.htm](http://www.businessweek.com/bschools/content/jan2003/bs20030121_5068.htm), accessed March 24, 2006.
- Carter, J.R., & Irons, M.D. (1991). Are economists different, and if so, why? *Journal of Economic Perspective*, Vol. 5, (2), 171-177.
- Champoux, J.E. (2006). At the cinema: Aspiring to a higher ethical standard, *Academy of Management Learning & Education*, 5 (3), 386.
- Cole, B.C. & Smith, D.L. (1996). Perceptions of business ethics: Students vs business people. *Journal of Business Ethics*, Vol. 15, (8), 889-897.
- Crane, F.G. (2004). The Teaching of Business Ethics: An Imperative at Business Schools. *Journal of Education for Business*, Jan /Feb, 149-151.

- Desjardins, J.R. & Diedrich, E. (2003). Learning What It Really Costs: Teaching Business Ethics with Life Cycle Case Studies. *Journal of Business Ethics*, Vol. 48 (1), 33.
- Easterling, D. & Rudell, F. (1997). Rational, Benefits and Methods of Service-Learning in Marketing Education. *Journal of Education for Business*, Vol. 73 (1), 58.
- The Economist. (2007). New business skills. *The Economist*, May 10, 2007, [www.economist.com/business/displaystory.cfm?story\\_id=9149115](http://www.economist.com/business/displaystory.cfm?story_id=9149115), accessed July 7, 2007.
- Emerson, T.L.N. & Conroy, S.J. (2004). Have Ethical Attitudes Changed? An Intertemporal Comparison of the Ethical Perceptions of College Students in 1985 and 2001. *Journal of Business Ethics*, Vol. 50 (2), 167-176.
- Farling, M. L. & Winston, B.E. (2001). A Replication Study: “Attitudes Towards Ethics: A View of the College Student. *Teaching Business Ethics*, Vol 5, 251-266.
- Ferraro, F., Pfeffer, J, & Sutton, R.I. (2005). Economics Language and Assumptions: How Theories Can Become Self-Fulfilling. *The Academy Of Management Review*, Vol. 30, (1), 8-22.
- Fleckenstein, M.P. (1997). Service learning in business ethics. *Journal of Business Ethics*, Vol. 16 (12/13), 1347-1352.
- Frank, B. & Schulze, G.G. (2000). Does economics make citizens corrupt? *Journal of Economic Behaviour and Organization*, Vol. 73, 101-113.
- Garten, J.E. (2005, September 5). B-Schools: Only a C+ in Ethics. *Business Week*, 3949, 110.
- Gautschi III, F.H.& Jones, T. M. (1998). **Enhancing the ability of business students to recognize ethical issues: An empirical assessment of the effectiveness of a course in business ethics.** *Journal of Business Ethics*, Vol. 17 (2), 205-217.
- Gentile, M.C. (2001). *Preparing Business Leaders to Manage Social Impacts: Lessons for the Field*. The Business Institute Business and Society Program. Reprinted with permission from the Journal of Human Values, Jan 2002. [http://www.aspeninstitute.org/atf/cf/{DEB6F227-659B-4EC8-8F84-8DF23CA704F5}/3\\_PREPARINGBIZLEADERS.PDF](http://www.aspeninstitute.org/atf/cf/{DEB6F227-659B-4EC8-8F84-8DF23CA704F5}/3_PREPARINGBIZLEADERS.PDF), accessed May 26, 2006.
- Ghoshal, S. (2005). Bad management theories are destroying good management practice. *Academy of Management Learning & Education*, 4(1): 75-91.
- Giacalone, R.A., & Thompson, K.R. (2006). Business ethics and social responsibility education: Shifting the worldview. *Academy of Management Learning & Education*, 5(3), 266-277.
- Grant, E.W. & Broom, L.S. (1988). Attitudes Toward Ethics: A View of the College Student. *Journal of Business Ethics*, Vol. 7, 617-619.
- Initiative for Social Innovation Through Business (May 2003). *Where will they lead? MBA Student Attitudes About Business and Society*. <http://www.aspeninstitute.org/atf/cf/{DEB6F227-659B-4EC8-8F84-8DF23CA704F5}/SAS.PDF>, accessed April 5, 2006.
- Johns, S.K. & Strand, C.A. (2000). Survey results of the ethical beliefs of business students. *Journal of Education for Business*, Vol. 75, (1), 315-321.

- Jurkiewicz, C. L., Giacalone, R.A. & Knouse S.B. (2004). Transforming Personal Experience into a Pedagogical Tool: Ethical Complaints. *Journal of Business Ethics*, Vol. 53 (3), 283-295.
- Kenworthy-U'ren, A.L. (1999). Management Students As Consultants An Alternative Perspective on the Service-Learning "Call to Action". *Journal of Management Inquiry*, Vol. 8 (4), 379.
- Knight, R. (2006). Business students portrayed as ethically minded in study. *Financial Times*, October 25, 2006.
- Kuhn, J.W. (1998). Emotion as well as reason: Getting students beyond "interpersonal accountability". *Journal of Business Ethics*, Vol. 17 (3), 295-309.
- Laditka, S.B. & Houck, M.M, (2006). Student-Developed Case Studies: An Experiential Approach for Teaching Ethics in Management. *Journal of Business Ethics*, Vol. 64 (2), 157.
- LeClair, Dan (2004). Panel: The Role of Ethics in Business Curricula. *Journal of Business Ethics Education*, Vol. 2 (1), 5-12.
- Malone, F.L. (2006). The Ethical Attitudes of Accounting Students. *Journal of American Academy of Business*, Vol. 8 (1). 142-147.
- Marwell, G. & Ames, R.E. (1981). Economists free ride, does anyone else? *Journal of Public Economics*, Vol. 15, 295-310.
- McCabe, D.L., Butterfield, K.D., & Trevino, L.K. (2006). Academic Dishonesty in Graduate Business Programs: Prevalence, Causes, and Proposed Action. *Academy of Management Learning & Education*. Vol. 5(3), 294-306.
- McCarthy, A.M.& Tucker, M.L. (2002). Encouraging community service through service learning. *Journal of Management Education*, Vol. 26 (6), 629-648.
- McPhail, K. (2001). The other objective of ethics education: Re-humanising the accounting profession – a study of ethics education in law, engineering, medicine and accountancy. *Journal of Business Ethics*, Vol. 34 (3/4), 279-299.
- Mescon, M.H., Albert, M., & Khedoun, F. (1988). An Ethics Test. Management. 3<sup>rd</sup> ed. NY Harper & Row Publishers, pg. 139.
- Miller, D.T. (1999). The norm of self-interest. *American Psychologist*, Vol. 54, 1053-1060.
- Moore, J. (2004). Regulatory Perspectives on Business Ethics in the Curriculum. *Journal of Business Ethics*, Vol. 54, 249-356.
- Morton, K. & Troppe, M. (1996). From the Margin to the Mainstream: Campus Compact's Project on Integrating Service with Academic Study. *Journal of Business Ethics*, Vol. 15 (1), 21.
- Net Impact (n.d.). [www.netimpact.org](http://www.netimpact.org), accessed July 3, 2006.
- Nasher, F.B & Ruhe, J. (2001). Putting American pragmatism to work in the classroom. *Journal of Business Ethics*, Vol. 34 (3/4), 317-331.
- Oddo, A.R. (1997). A framework for teaching business ethics. *Journal of Business Ethics*, Vol. 16 (3), 293-298.

- Oliva, L. (2004). Ethics edges onto courses. *The Financial Times*, London, p. 11.
- Porter, L.W. & McKibbin, L.E. (1988). *Management Education & Development. Drift or Thrust into the 21<sup>st</sup> Century?* USA: McGraw-Hill, Inc.
- Power, S.P. & Lundsten, L.L. (2001). MBA student opinion about the teaching of business ethics: Preference for inclusion and perceived benefit. *Teaching Business Ethics*, 5(1), 59-70.
- Rein, L.G. (1980). Is Your (Ethical) Slippage Showing? *Personal Journal*, Vol. 59, p. 740.
- Samuelson, J.F. (2004). Going Beyond Business Ethics. *Business and Economic Review*, Vol. 4 (50), 7.
- Schaupp, D & Lane, D. (1992). Teaching Business Ethics: Bringing Reality to the Classroom. *Journal of Business Ethics*, Vol. 11 (3), 225-230.
- Sims, R.R. & Brinkmann, J. (2003). Business Ethics Curriculum Design: Suggestions and Illustrations. *Teaching Business Ethics*, Vol. 7 (1), 69-87.
- Stewart, K., Felicetti, L. & Kuehn, S. (1996). The attitudes of business majors toward the teaching of business ethics. *Journal of Business Ethics*, Vol. 15 (8), 913-919.
- Trevino, L.K. & McCabe, D. (1994). **Meta-learning About Business Ethics : Building Honorable Business School Communities.** *Journal of Business Ethics*, Vol.13 (6), 405-416.
- Troper, C. [Research by S. Loney and K. Kisilenko]. Second Annual Guide to Business Education: Knight Schools. A guide to business schools for students who want to change the world. *Corporate Knights*, 3(3), (2005), 38.
- Williams, S.D.& Dewett, T. (2005). Yes, You Can Teach Business Ethics: A Review and Research Agenda. *Journal of Leadership & Organizational Studies*, Vol. 12 (2), 109 – 121.
- Wittmer, D.P. (2004). Business and Community: Integrating Service Learning in Graduate Business Education. *Journal of Business Ethics*, Vol. 51 (4), 359.
- Wood, J.A., Longenecker, J.G., McKinney, J.A. & Moore, C.W. (1988). Ethical Attitudes of Students and Business Professionals: A Study of Moral Reasoning. *Journal of Business Ethics*, Vol. 7 (4), 249-257.
- Zlotkowski, E. (1996). Opportunity for all: Linking Service-Learning and Business Education. *Journal of Business Ethics*, Vol. 15 (1), 5-20.

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## LOST IN TRANSFORMATION: WHY THE THEORY THAT WE TEACH IS NOT THE THEORY THAT THEY KNOW

This paper describes the process wherein management theory, as produced by management scholars, undergoes a series of transformations such that the student in the business school is actually presented with a simulacral version of theory. This process provides a potential explanation for the perceived academic-practitioner gap as a received view within the management academy.

### Introduction

“Great fleas have little fleas upon their backs to bite ‘em,  
And little fleas have lesser fleas, and so *ad infinitum*.  
And the great fleas themselves, in turn, have greater fleas to go on,  
While these again have greater still, and greater still, and so on.”

(De Morgan, 1872)

Like a fitful, restless, but still sleeping volcano, concerns over the academic-practitioner gap, a gap that has been described as the ‘great-divide’ (Rynes, Bartunek, & Daft, 2001), have simmered lava-like beneath the surface of the management academy for decades. While many organizational scholars are expending effort attempting to understand why this gap exists and how to bridge the gap (Shapiro, Kirkman, & Courtney, 2007), very little research has focused upon what happens to management theory when the theory actually *does* span the gap. One exception to this state of affairs is the work of Weatherbee, Dye and Mills (forthcoming) who describe how the means-ends rationality of the producers of management theory, the scholar, differs from the users of management theory, organizational practitioners and managers, who break scholarly theory away from its epistemological context. They argue that the results of this break are the transformation of management theory into an assortment of ‘ontological artefacts’ used as heuristics for managerial problem-solving.

Weatherbee et. al.’s. work explicates the various conduits and mechanisms of how management theory moves from the academic into the practitioner domain, and they show why and how the effects of localization transform management theory into new and different forms. While their work provides us with a useful framework within which to study these transformations, the processes depicted within the framework focus on macro-level shifts when management theory crosses various social and institutional boundaries. It does not fully explicate the micro processes located at the beginnings of the transformation of that management knowledge. As these micro-processes actually commence the transference of much of management theory across this gap, a more fine grained analysis is needed. As most of these micro-processes first take place within the classrooms of the business school, this necessitates a situated look at the relationships between faculty, the management theory they produce or teach, and the student.

Drawing upon Wittgenstein’s ‘language games’ (Wittgenstein, 1965), Bernstein’s pedagogical device (1985), and Baudrillard’s (1994) simulacra, various processes are described to show how the teaching of management theory paradoxically results in the production and release of *reductive simulacra of theory* rather than theory. Understanding the interplay of these processes illuminates a) how management theory is a mutable construct that is more dependent upon processes of language and social negotiation rather than processes of science; b) how the complexity of the relation between scholars and their scientific understandings are transformed through processes of decontextualization, recontextualization,

and entextualization in their journey to the student; and c) finally, how these transformations result in the production of reductive simulacra of management theory and the positioning of the student in a relation of *simulacral comprehension*.

### The Knowing of Management Theory

Within our system of higher education the normative practice is for faculty to engage in various activities associated with the dual roles of scholar and teacher (Vroom, 2007). In their role as scholar, faculty contribute to the academy's collective understanding within a given field or area of study. This is accomplished through the conduct and dissemination of research published in journals or presented to colleagues in various academic fora. In their role as teacher, the primary function is to transmit the findings of this collective endeavour to students with the expectation that students will then carry the latest management knowledge from the business school into the world of management practice.

Within the business school, this duality means that faculty are not only expected to be experts in the production of management knowledge, but they are also expected to be facilitators and arbiters for the student learning of that knowledge. However, the processes of the production of knowledge by the scholar and the processes of consumption or learning of that knowledge by the student reflect two very distinct modes of knowing. These modes of knowing are defined by the relation of the knower to the known. That is, the act of comprehending, of knowing, by a scholar is different than the comprehension of a student. For the scholar, this relation may be best described as a form of ontological-knowing, while for the student the relation may be more appropriately described as a form of technical-knowing (Noble, 1997; Oliver & Gershman, 1989).

In ontological-knowing the relation between the knower and the known, the scholar and their subject of study, is a strong intimate relation. It is characterized by a broader, more detailed, and highly personal understanding of a knowledge and its particular relationship with other related knowledge. Ontological-knowing is also inextricably bound by the processes involved in the production of the knowledge itself - as scholarly knowledge can not be interpreted without reference to the method(s) (Sinding, 1996) and the language (Astley & Zammuto, 1992) which generate it. By definition then, a scholar is intimately familiar with both the methods and language used within a field.

In counterpoint, the student's mode of knowing, or technical-knowing, is far less detailed, almost impersonal. It is a weaker relation, much more discrete, a great deal narrower, and the knowledge is separate from any specific awareness of the processes, methods, and language involved in its production. The ontological and technical modalities of the scholar and student respectively reflect the positional differences in the relations that exist between an individual knower and their knowing, their comprehension of what is known.

The knower-known relation is not only positional it is transformative as well. Any change to the knower, as when a student moves to become a scholar, the movement also changes the known, or how knowledge is comprehended. This change is a double movement, thus changes to the knower and the known also change the form of the relation itself. However, any change in the knower, the known, or their relationship is more than simply a quantitative shift, e.g. the amount and types of knowledge known. Fundamentally it is a qualitative shift, a shift that transforms all three elements. From the abstract, theoretical conceptualizations used in academe in their transformations to the schema and model driven, problem solving focus of students (Astley & Zammuto, 1992), the contextual differences are foundational to the knower-known relation.

Therefore, in order to understand the transformative processes that shifts management theory from a state of ontological to technical knowledge, the language used to describe management theory, and the context within which this language is used, must be followed. For the purposes of understanding the outcomes associated with teaching theory the centre of the discussion will remain focussed on the transformation of only one form of the known - management theory, in only one direction – from scholar to student – and the results of this new positioning - the relation between the student and

management theory. Or, in other words, two questions will be answered. First, what happens to management theory as it travels between scholar and student? Second, when management theory does arrive, is it really the same theory?

### **The Transformative Movement of Management Theory**

The movement of management theory from the scholar to the student does not occur in a straightforward manner - as is described by the received pedagogic concepts associated with student teacher interactions (Bernstein, 1985). The process is much more complex, and the student-teacher interaction is only the penultimate in a series of transformations during this movement. These transformations are not simply a process wherein the scholar renders academic description into more simplistic or lay description for the benefit of the student. This is only the symptomatic end result of transformation. Rather, the movement of knowledge from scholar to student is a complex social process (Koulaidis & Tsatsaroni, 1996) involving a series of actors and activities which recontextualizes the language, and hence comprehension, of management theory, until finally the student themselves entextualize this theory in order to move into a relation with it.

For the scholar, the context of knowledge production, the formation of the relation of knower to known, is the 'where' and 'how' management theory 'happens'. This context is composed of those first in situ factors, processes, and relationships that influence the research activities of the scholar. Two of the most important elements that form this context are the methods and the language the scholar uses as tools to enact knowledge production (Astley & Zammuto, 1992). Borrowing from Bernstein's (1990) conceptualization of *contextualization* within his pedagogic device, the term contextualization is intended herein to mean a/the *primary* contextualization of management theory.

This context is also the 'how' of the process whereby a scholar comes to know management theory. The establishing of this context is achieved through the construction of the relation between the scholarly knower and the management theory as known. The term contextualization is designed to differentiate between the first step in the transformation of knowledge and the establishment of the ontological knowledge relation, and subsequent transformations found in the transformation and movement of management theory to technical knowledge. These secondary transformations involve the subsequent processes of decontextualization, recontextualization, and entextualization.

Following the accepted practices found within the academy, when research has been completed the scholar submits the results as their contribution to the collective knowledge as held by peers within their field of study. Normatively speaking, this action primarily involves the writing up of research results for publication. At this juncture in the production of management theory, the scholar is engaging in a process of entextualization. The writing up of their description of method, analysis, and results, or, in other words, the creation of a *text* (Urban, 1996).

Within academic enquiry the creation of a *text* inevitably results in changes to the knowledge that is being entextualized. Examples of these transformations were discovered by Ochs (1979) in the study of the differences found between actual speech acts and a researcher's transcription, or transcription of those same acts of speech. Ochs noted that in the act of transcribing a verbal exchange between two children, the transcriber introduced several non-existent or non-present elements into the transcription. First, Ochs found that the resulting transcription pre-supposed an ordering and sequencing to the children's 'conversation', and second, that this placement of the transcribed elements of speech pre-supposed acts of adult forms of conversational initiation and response. Ochs concluded that in the process of generating the transcript, the researcher was actually recontextualizing the children's speech acts; changing them in such a way as to transform them into the language structures of adults through the addition of contextual elements that were not originally present, and through the exclusion of other elements that were present. Similar processes may also be observed in the research text, the 'writing-up' of knowledge for presentation in journal articles.

In a journal article, the original 'messiness' of science and research (Parkhe, 1993) which is the actual context of

knowledge production, becomes hidden. In the production of the journal *text* the description of what has actually occurred and why it was important for and to the researcher is subsumed. The social, historical and material influences affecting the research and their project, the research, the ontological relation between knower and known, which comprise the very context of management theory is made to vanish. The very structure of journal articles, the normative practices and language games found within every disciplinary field, work together to transform, constrain, and limit the representation of theory (Sinding, 1996). Thus, the process of *entextualization* of knowledge into a journal text serves first to decontextualize, and then second to recontextualize. In effect, knowledge is normalized by removing the context of the theory (Haviland, 1996; Urban, 1996), by forcing it to fit a predefined structure (Sinding, 1996) or language (Wittgenstein, 1965 #5894).

Therefore, the entextualization process, the act of writing out the results of research, functions to re-encode the knower-known relation into a new and different form. In the following of a particular journal style, a set of proceedings requirements, or a particular presentation format (e.g. page style, citation method, page length, etc.) the constellation of elements found in the original ‘messy’ research are re-ordered, some accentuated, others suppressed (Starbuck, 2003). As the research is re-described following the practices of ‘writing’ science (e.g. third person, particular grammar, terminological practices, etc.) critical context is changed.

This recontextualization is a process which involves the selection, abstraction, and re-focusing of inter-relationships between practices, activities, and knowledges (Bernstein, 1990). The messy theory becomes formally abstracted, rigorously evaluated, and finally, arbitrated by both editors and peers (Campanario, 1998; Graue, 2006; Starbuck, 2003) prior to its publication in a final entextualized form. However, for the undergraduate student who may rarely be exposed to journal articles, it is not this first entextualization that they usually encounter in their learning. The management theory they are first exposed to is further removed from the journal representation, with this theory usually contained in another, separate entextualization – the management textbook.

At some point in the journey of knowledge from scholarly production to student learning, journal articles are appropriated for use in a textbook. The journal article is not, however, simply ‘plunked’ into the textbook as is! In the process of authoring the textbook, the author(s) themselves also engage in entextualization, involving sub processes of decontextualization and recontextualization - as did the original journal author(s) themselves. To complicate this process, this entextualization of management theory is not just a function of the textbook authors. This entextualization of management theory is actually a negotiated and social affair - in essence a collective entextualization of a multiple of management theories.

The contents of a textbook, the results of decisions taken for inclusion of some theory and the exclusion of other theory, of how that theory is presented or represented in text or images, is negotiated between the author(s), the editor(s) and the reviewers(s). Therefore, the authoring of the text is the entextualization of management theories, where the known, the theory, is again rearticulated, re-presented, and recontextualized. The author(s), within the consensual limits established between themselves and their editors and reviewers, now re-situate the theory(ies). Thus, the theory is now thrice removed from its original context as held in its original relation with the knower(s). The theory in the textbook is theory no more – it is now a simulacrum (Baudrillard, 1983, 1994) of management theory. The re-texted, re-imaged management theory is a third-order entextualized copy of a second-order entextualized theory, which is itself a re/decontextualized copy of the original comprehension of the theory as found within the originating context belonging to a different scholar.

The end result of this multiplicity of entextualizations, is the transformation of the context, the knower-know relation, the very language used to depict or describe theory. Or, viewed another way, it is the production of a reductive simulacra of theory and its presentation to the student. The management theory, to be presented in the classroom, has thus been greatly transformed. It has been stripped of almost all context associated with its original production, and any context that was present at its initial point of textualization, or context that was present in its appropriation by other scholars, has been changed or removed. First, in the primary entextualization of research effort, where the ‘messy’ processes of production and understanding were re-presented as a much ‘neater’, logical and linear sequence in accordance with the accepted norms of scientific practice. Second, as the theory was again entextualized when brought into alignment and inter-relation with other

theory through incorporation within a management textbook.

The description and representation of the management theory/fact is now a much more simplistic rendering than the theory in its original form (see for example the presentation of selected theories of Maslow and Lewin in Dye, Mills, & Weatherbee, 2005). Hence, what is actually presented to the student for the purposes of their being educated into the realm of management thought is a reductive simulacra of management theory – and not the theory itself. However, there is yet one more transformation before theory enters the practitioner domain. The final step in the movement and transformation of management theory occurs with the student. It is a form of what Shotter (1993) describes as practical authorship. It is where the students makes sense of the theory in light of their own lived experience. In making sense of the simulcral theory students are engaging in a final recontextulaization through their own internal process of entextualization (Bernstein, 1971, 1977). The processes of transformation from scholar to student in there entirety are depicted graphically in figure 1.

**Mind and The Gap**

The context that students bring to their entextualization of the theory is both limited with, and dissonant to, management and scholarly theory respectively. Students exist in a pre-managerial and atheoretical context. They are not aware of the context that influenced the scholarly effort in founding the theory, the language and method, and they are not aware of the subsequent recontextualizations and entextualizations of the theory as it moved from research - to journal - to textbook. While in journal articles the interpretive authority is granted to the reader, in textbooks this interpretative authority is removed and in its stead fact is presented (Koulaidis & Tsatsaroni, 1996). In Myers description (1992) the representation of theory has shifted from the language of scholars to the language of fact. The student first learns of the theory as it *is* then, as a form of theory/fact (Dye et al., 2005) bounded by the limited contextual experiences of their lifeworld (Bernstein, 1990). As the students have little or no managerial experience their life experience(s) becomes the lens through which they entextualize, or learn, the theory/fact. Therefore, not only is the student comprehension of management theory not the comprehension of the scholar, not even a ‘mini’ or restricted version of the scholar’s knowing; but it is a fundamentally different and distinct way of knowing. The student is in a weakly held relation with a rude and factual copy of what was once a managerial theory.

In effect, the bounded, pre-managerial, technical knowing of the student means that the management theory is comprehended as a simulacral ‘something else’. The simulacral nature of the ‘fact’ is apparent, but its very presence begs the question of what exactly the ‘something else’ is.

While this ‘something else’ is some form of knowledge, drawn from and presented within the language of management; the exact nature of that knowledge remains indeterminate. If a student’s understanding lies somewhere along a continuum of comprehension, the anchors of that continuum would include the weakest understanding of ‘management fact’ or technical-knowing of simulacra at one end, with ontological-knowing or understanding of management theory at the other. The pedagogical pessimist would see the student’s comprehension of the fact as a form of “certified ‘official’ knowledge ... to be regurgitated at examination time and to be negotiated in learning exercises.” (Issitt, 2004. p. 684) and likely emplace it somewhere close to the weak anchor. An optimist may describe the ‘something else’ as a form of ‘pre-theory’ (Pearce & Rantala, 1983) which may eventually lead to a stronger form of understanding.

Whether a pessimistic or optimistic perspective is taken this management simulacra does represent a nascent *in nuce* schema. The potential contexts in which it may later serve range from a fact that is used in conjunction with other facts in the pursuit of a class grade, perhaps then to be forgotten once its utility has been fulfilled; or alternatively; it could be considered as one ‘knowledge brick’ used in creating the foundational conditions necessary to advance in educational qualification, perhaps even to undergo a reverse transformation and become the theory that it once was as the student studies

to become a scholar. Finally, and most germane to this line of enquiry, perhaps it will be applied within the practitioner domain at some later date, having then become simply an ontological artifact (Weatherbee et al., , forthcoming), a fact which has been separated from its epistemological origin and used, rule like, in some future context of managerial problem solving or sensemaking (Weick, 1995).

### Conclusion

Despite the undoubted diligence of generations of business school faculty, scholarly understandings and practitioner understandings of management theory still remain at odds (Dye et al., 2005; Weatherbee et al., , forthcoming). Management theory is still perceived by many scholars and practitioners to suffer from a lack of relevance (Bowman, 1978; Kanter, 2005; Pfeffer, 2005). Consequently, the efficacy of the current pedagogical processes as a method of ‘spanning-the-gap’ remains questionable. Koulaidis and Tsatsaroni (1996) quite rightly ask a critical question “is it possible to present a difficult content in a simplified form? Because one can argue that changes in the form of expression can lead to modification of the form as well.” (p. 86).

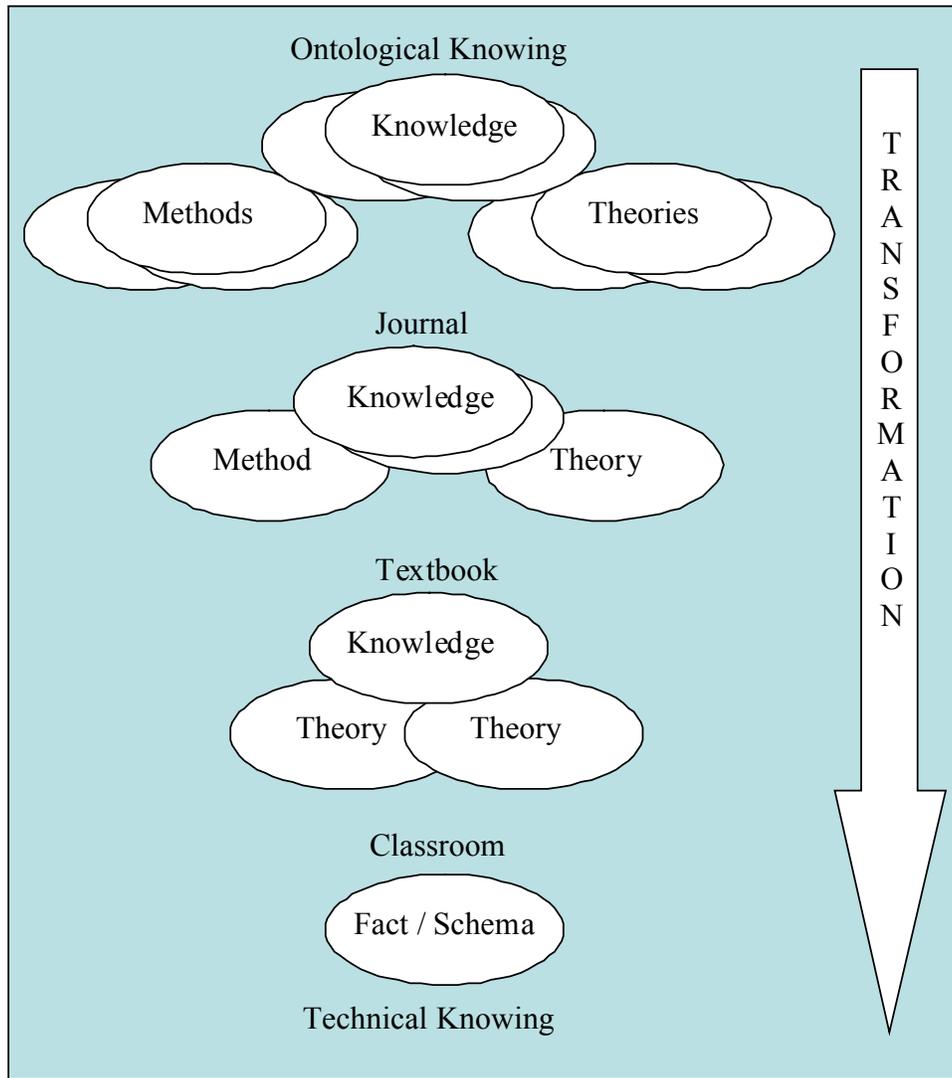
There is the assumption, implicit in textbooks, that the user of the textbook is an autonomous knower who stands apart from the knowledge contained in the text (Koulaidis & Tsatsaroni, 1996). However, the student is not a knower apart from the content, but rather, comes to know only when in a specific relation to the knowledge and through this movement they themselves become the practical authors (Cunliffe, 2001; Shotter, 1993) of a *text*. It is this self-written or simulacral comprehension of reductive management theory that students as future managers take into the practitioner world. If, as teachers of management theory, we acknowledge that the results of management research are transformed by pedagogical processes and outcomes - then we need to be concerned about these transformations and their effects. One potential solution is to re-provide some of the original context that is lost in transformation. That is, to understand the way in which the student comprehends theory as simulacra, to comprehend the limits of their simulacral knowing; to inform the student of the production process of the theory; to empirically ground the theory for the student (Shapiro et al., 2007). We need to teach them to think in terms of “complicated understanding”.(Bartunek, Gordon, & Weathersby, 1983). We need to revisit for them the language that we use in describing the theory, for it is the language that, in part, constructs the reality they need to understand (Cunliffe, 2001). If, as the opening quotation implies (DeMorgan, 1872), we can understand where our own shifts in language occur, then perhaps we can also show the student where their knowing is in relation to the greater project of management knowledge and theory.

### References

- Astley, W. G. and R. F. Zammuto. 1992. Organization science, managers, and language games. *Organization Science* 3, no. 4: 443-460.
- Astley, W. G. and R. F. Zammuto. 1992. Organization science, managers, and language games. *Organization Science* 3, no. 4: 443-460.
- Bartunek, J. M., J. R. Gordon, and R. P. Weathersby. 1983. Developing ‘complicated’ understandings in administrators. *Academy of Management Review* 8: 273-284.
- Baudrillard, J. 1983. *Simulations*. New York: Semiotext(e).
- \_\_\_\_\_. 1994. *Simulacra and simulation*. Ann Arbor, MI: The University of Michigan Press.
- Bernstein, B. 1971. On the classification and framing of educational knowledge. In *Knowledge and control*, ed. M. F. D. Young:47-69. London: Collier-Macmillan.
- \_\_\_\_\_. 1977. *Class, codes and control: Towards a theory of educational transmission*. Primary socialization, language and education. London: Routledge & Keagan Paul.
- \_\_\_\_\_. 1985. On pedagogic discourse. In *Handbook of theory and research for the sociology of education*, ed. J.

- Richards:205-240. London: Greenwood Press.
- \_\_\_\_\_. 1990. *Class, codes and control: The structuring of pedagogic discourse*. London: Routledge.
- Bowman, J. S. 1978. Managerial theory and practice: The transfer of knowledge in public administration. *Public Administration Review* 38, no. 6: 563-570.
- Campanario, J. M. 1998. Peer review for journals as it stands today - part 1. *Science Communication* 19, no. 3: 181-211.
- Cunliffe, A. 2001. Managers as practical authors: Reconstructing our understanding of management practice. *Journal of Management Studies*. 38, no. 3: 351-371.
- De Morgan, A. 1872. *Budget of paradoxes*. London: Longmans, Green, and Company.
- Dye, K., A. J. Mills, and T. G. Weatherbee. 2005. Maslow: Man interrupted: Reading management theory in context. *Management Decision* 43, no. 10: 1375-1395.
- Graue, B. 2006. *The transformative power of reviewing*. Educational Researcher. Accessed 18 June 2006. Available from [http://www.aera.net/uploadedFiles/Publications/Journals/Educational\\_Researcher/3509/10324-07\\_Graue\\_p36-41.pdf](http://www.aera.net/uploadedFiles/Publications/Journals/Educational_Researcher/3509/10324-07_Graue_p36-41.pdf).
- Haviland, J. B. 1996. Text from talk in tzotzil. In *Natural histories of discourse*, ed. M. Silverstein and G. L. Urban:45-78. Chicago: University of Chicago Press.
- Issitt, J. 2004. Reflections on the study of textbooks. *History of Education* 33, no. 6: 683-696.
- Kanter, R. M. 2005. What theories do audiences want? Exploring the demand side. *Academy of Management Learning and Executive* 4, no. 1: 93-95.
- Koulaidis, V. and A. Tsatsaroni. 1996. A pedagogical analysis of science textbooks: How can we proceed? *Research in Science Education* 26, no. 1: 55-71.
- Myers, G. 1992. Textbooks and the sociology of scientific knowledge. *English for Specific Purposes* 11, no. 1: 3-17.
- Noble, David F. 1997. *Digital diploma mills: The automation of higher education*. Toronto: OCUFA.
- Ochs, E. 1979. Transcription as theory. In *Developmental pragmatics*, ed. E. Ochs and B. B. Schieffelin:43-72. New York: Academic Press.
- Oliver, D. W. and K. W. Gershman. 1989. *Education, modernity, and fractured meaning: Toward a process theory of teaching and learning*. Edited by P. L. Smith. The philosophy of education. Albany, NY: State University of New York Press.
- Parkhe, A. 1993. Messy research: Methodological predispositions and theory development in joint ventures. *Academy of Management Review* 31, no. 2: 227-242.
- Pearce, D. and V. Rantala. 1983. New foundations for metascience. *Synthesis* 56: 1-26.
- Pfeffer, J. 2005. Why do bad management theories persist? A comment on ghosal. *Academy of Management Learning and Education* 4, no. 1: 96-100.
- Rynes, Sara L, Jean M Bartunek, and Richard L Daft. 2001. Across the great divide: Knowledge creation and transfer between practitioners and academics. *Academy of Management Journal* 44, no. 2: 340.
- Shapiro, D. L., B. L. Kirkman, and H. G. Courtney. 2007. Perceived causes and solutions of the translation problem in management research. *Academy of Management Journal* 50, no. 2: 249-266.
- Shotter, J. 1993. *Conversational realities: Constructing life through language*. London: Sage.
- Sinding, C. 1996. Literary genres and construction of knowledge in biology: Semantic shifts and scientific change. *Social Studies of Science* 26, no. 1: 43-70.
- Starbuck, W. 2003. Turing lemons into lemonade: Where is the value in peer reviews? *Journal of Management Inquiry* 12, no. 4: 344-351.
- Urban, G. L. 1996. Entextualization, replication, and power. In *Natural histories of discourse*, ed. M. Silverstein and G. L. Urban:21-44. Chicago: University of Chicago Press.
- Vroom, V. H. 2007. On the synergy between research and teaching. *Journal of Management Education* 31, no. 3: 365-375.
- Weatherbee, T. G., K. Dye, and A. J. Mills. 2008. There's nothing as good as a practical theory: The paradox of management theory. *Management History* 3, no. 1: forthcoming.
- Weick, K. E. 1995. *Sensemaking in organizations*. Foundations for organizational science. Thousand Oaks: Sage Publications.
- Wittgenstein, L. 1965. *Philosophical investigations*. New York: The Macmillan Company.

Figure 1: **Process of Transformation from Theory to Simulacra**



# HOSPITALITY & TOURISM MANAGEMENT

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## WHAT'S STOPPING ATLANTIC CANADIAN B&BS AND INNS FROM ADOPTING SOPHISTICATED INTERNET BUSINESS SOLUTIONS?

Recent research has indicated that Atlantic Canada bed and breakfasts and private inns have embraced the adoption of basic Internet Business Solutions including email, web browsing and hosting a website. While the firms have benefited from their use of IBS their adoption of Internet business solutions has not moved to more sophisticated technologies. The researcher conducted 10 case studies amongst Atlantic Canada firms and completed a cross case analysis to determine why firms are hesitant to expand beyond basic technologies. The case studies revealed that firms do not believe that the adoption of sophisticated Internet Business Solutions would offer their firms much benefit, that the government should provide them with assistance to aid in the adoption and respondents felt that they lacked the financial resources to successfully adopt the technology.

### Introduction

The Internet has revolutionized the way tourism operators are conducting business. Research has found that online spending for travel purchases has increased ten times over the last five years and consumers are taking advantage of tourism websites to obtain maps, accommodations and information (Davis & Vlادica, 2005). The adoption and use of the Internet by tourism consumers has facilitated the adoption of Internet Business Solutions (IBS) by tourism operators including Atlantic Canada bed and breakfasts (B&Bs). In Atlantic Canada, it was found that roughly 97% of B&Bs and private inns were using Internet Business Solutions. While the adoption of IBS is high, most firms were only using basic technologies and did not have any plans to expand their IBS adoption beyond the use of email, web browsing and/or maintaining a public website (Mombourquette & Blotnicky, 2006, 2007). The following paper will focus on identifying facilitators and barriers of sophisticated IBS adoption.

The research is justified by a number of factors including the lack of research on small and medium enterprises (SMEs) and their adoption of sophisticated technologies (Levenburg & Magal, 2005; Wymer & Regan, 2005; Net Impact III 2003). In addition there is a lack of research on IBS adoption specifically in the Atlantic Canada region and in the tourism sector which is important to the areas' economy (Mombourquette & Blotnicky, 2006, 2007).

Since research (Wymer & Reagan, 2005; Premkumar, 2003) has concluded that the use of various contradictory terms and definitions in IBS literature has resulted in confusion, this paper will define IBS and sophisticated IBS as:

‘Internet Business Solutions: The use of Internet technologies including, but not limited to, e-mail, EDI, electronic transactions, Intranets and websites to exchange or share information, maintain or build business relations and conduct transactions’ (Mombourquette, 2006).

‘Sophisticated IBS: The use of Internet technologies beyond basic email, web

browsing and maintaining a public website, including, but not limited to, the buying and selling of goods online, electronic transactions, maintaining a website that allows for interactivity and/or transaction processing and the use of online metrics.’

### **Literature review**

The literature review will first discuss the facilitators and barriers of IBS. It will then determine if SMEs are adopting IBS and if IBS adoption has been beneficial, and will conclude with an examination of the current adoption rates among Atlantic Canadian B&Bs and private inns.

Several researchers have examined facilitators and barriers of sophisticated IBS in small and medium businesses (SMEs). Fomin et al. (2005) found that companies are adopting Internet technologies to obtain future benefits such as entering new markets, expand their sales or improve customer and supplier relations. Levenburg & Magal (2005) surveyed 439 SMEs in the United States and determined that the extent or sophistication of adoption was determined by a desire to achieve a competitive advantage, increase sales and improve marketing. Further facilitators include top management knowledge (Raymond, Bergeron & Blili, 2005), pressure from competitors (Looi, 2005), and perceived future benefits (Looi 2005; Fast Forward 5.0 2004; Grandon & Pearson, 2004). Barriers included a lack of resources including time and money (Fomin et al., 2005; Net Impact IV, 2004), lack of top management knowledge and support (Premkumar, 2003; Abdullah, 2002), and the perception that further adoption may not be beneficial (Mombourquette & Blotnick, 2006, 2007).

An examination of research on the adoption of IBS by SMEs finds that they are unlikely to adopt, are slow when they do adopt, adopt incrementally, and will not adopt beyond basic technologies such as email, web browsing or maintaining a public website that primarily markets the company (Fast Forward 5.0, 2004; Net Impact IV, 2004; MacGregor & Vrazalic, 2004). Levenburg (2005) interviewed 395 businesses in the United States and found that most SMEs are only using the Internet to communicate or market their firm. In Canada, a series of studies were completed to determine SMEs’ IBS use and they all concluded that SMEs are only using basic technologies and are avoiding the use of sophisticated solutions (Fast Forward 5.0, 2004; Net Impact IV, 2004).

Since SMEs are only adopting basic technologies, they are missing out on potential benefits associated with sophisticated IBS adoption. Fast Forward 5.0 notes that a representative SME that adopts advanced e-business solutions could increase profitability by 150%. Furthermore, Beck, Wigand and König (2005) noted that SMEs that fail to adopt many e-commerce technologies will not realize the full benefits associated with e-commerce: ‘E-commerce output and, therefore, the impact of e-commerce on business processes or e-commerce satisfaction depend directly on the intensity and variety of applications implemented’ (page 45).

Since research has indicated that SME adoption rates can vary industry to industry and region to region (Fomin et al., 2005), thus the research will review the adoption of IBS by Atlantic Canadian B&Bs and private inns. Mombourquette and Blotnick (2006, 2007) conducted research specifically on the industry and region and determined that SMEs have adopted basic IBS (97%) but that only 10.2% of firms used sophisticated technologies. They noted that while B&Bs and inns are leaders in adopting IBS in Atlantic Canada, only a small number of adopters were considering adopting further technologies. Their research was supported by Blotnick (2004a,b) who concluded that Atlantic Canada tourism operators are reluctant to embrace advanced online technologies. Their reluctance is even more noteworthy as the businesses are enjoying benefits from basic technology adoption (Mombourquette and Blotnick 2006, 2007).

### **Goals and methodology**

The primary goal of this study was to determine why B&Bs and private inns are not adopting sophisticated IBS. As such, eight B&Bs and two private inn owners were selected for case study interviews. Interviews were used as they

allow for the greatest depth and detail of information compared to other methods (Cooper and Schindler, 2001). In addition interviews are a better data collection method for obtaining qualitative data (Marshall & Rossman, 1985), and allow for probing or follow-up questions which provide greater insight into a research problem (Zikmund, 2003). Owners were selected as the target group because they were the most likely to have made or are in the process of making IBS adoption decisions (Fast Forward 4.0, 2003; 5.0, 2004; Thong, 1999).

The case study method was selected as it is appropriate for exploratory research (Yin, 1994) and interviews with knowledgeable participants are useful in gaining an understanding about a research question (Flyvbjerg, 2006; Zikmund, 2003). There is no agreed upon appropriate number of cases that should be used in case study research (Zikmund) although there are suggested minimum and maximum limits. (Eisenhardt 1989) states that the number of cases must be at least four, while Ellram (1996) notes that the number should not exceed 12 - 15. Other researchers state that cases should only stop being added when no new information is being recorded (Gummesson, 2002). Ten cases were selected, as the number falls between the lower and upper limits.

The ten participants for the study were chosen using a judgment sample. The researcher wanted to ensure that the case study participants consisted of B&Bs and private inns that had adopted basic IBS and operated in different regions in Atlantic Canada. Cooper and Schindler (2001) state that judgment samples are appropriate for exploratory research. The researcher started the search for case participants by contacting business B&B and private inn operators with whom the researcher had some knowledge of their adoption of IBS. Two B&Bs were selected from each of the four Atlantic Provinces, with the inns coming from Nova Scotia and Prince Edward Island (See Table I). The selection of cases kept in practice with Yin’s (1994) recommendation that the researcher consider convenience, access, and geographic proximity. All of the participants were contacted and interviewed by phone.

**Table I: Location of Case Study Participants**

<i>New Brunswick</i>	<i>2 B&amp;Bs</i>
<i>Newfoundland</i>	<i>2 B&amp;Bs</i>
<i>Nova Scotia</i>	<i>2 B&amp;Bs; 1 private inn</i>
<i>Prince Edward Island</i>	<i>2 B&amp;Bs; 1 private inn</i>
<i>Total</i>	<i>8 B&amp;Bs; 2 private inns</i>

The researcher used a semi-structure format for the interviews, making use of both open-ended and close-ended questions. Close-ended questions were mostly used to solicit demographic information while open-ended questions were used to ask about IBS use and identify facilitators and barriers. The questions were pre-tested with three of the researchers’ colleagues prior to completing the case studies. Based on feedback, parts of the questionnaire were revised for clarity and some questions were deleted.

Interviews ranged in length from 60 – 90 minutes, with close-ended questions being marked accordingly and open-ended questions being recorded verbatim. When appropriate, the researcher read the participants’ answers back to them to verify their responses. Information was recorded in Excel spreadsheets, allowing for the organization of data into a matrix-like structure which is acknowledged as appropriate for facilitating pattern matching of qualitative data (Yin 1994). Cross-case analysis was then used to gain insight into the research question. The presentation of the cross-case analysis includes some quotes from case study participants as they assist the reader in gaining insight into the issue(s) being studied (Patton, 1990).

### Results and discussion

Information from the case studies is now discussed and analyzed. This section starts with an examination of SMEs’ current IBS use and future adoption intentions. A short description of the participants is provided in Table II. Any information that likely makes the identification of the company possible is omitted in order to protect the anonymity of the SMEs. The cases are presented in the order in which they were interviewed.

For the most part, participants are micro or small businesses as they all have fewer than five employees. Their establishments are small, ranging from three rooms for the smallest B&B to 12 rooms in the largest inn. The respondents self-categorized their IBS adoption as low (50%) or moderate (50%) and seven firms noted that the adoption of IBS has either been useful or very useful. Even though basic IBS adoption has helped the majority of firms, only one firm is seriously considering adopting more sophisticated IBS, while five firms might be willing to consider further adoption, and four firms are not interested in adopting further technology. Please note that firms that categorized their use of IBS as low did not allow for any online bookings either via their website or through email, nor did they purchase supplies online. Firms that categorized themselves as moderate allowed for some online bookings and/or made purchases online.

**Table II: Summary of Case Study Participants**

	<i>Location</i>	<i>Full Time</i>		<i>Current IBS Use</i>			<i>Further Adoption Intentions</i>
<i>Firm A (inn)</i>	<i>Nova Scotia</i>	<i>4</i>	<i>12</i>		<i>Yes</i>	<i>Useful</i>	<i>May be willing to consider further adoption</i>
<i>Firm B</i>	<i>Nova Scotia</i>	<i>1.5</i>	<i>4</i>		<i>Yes</i>	<i>Very Useful</i>	<i>None</i>
<i>Firm C</i>	<i>Nova Scotia</i>	<i>2</i>	<i>6</i>	<i>Low</i>	<i>Yes</i>	<i>Unsure</i>	<i>None</i>
<i>Firm D</i>	<i>New Brunswick</i>	<i>2</i>	<i>6</i>		<i>Yes</i>	<i>Useful</i>	<i>May be willing to consider further adoption</i>
<i>Firm E</i>	<i>New Brunswick</i>	<i>1.5</i>	<i>5</i>	<i>Low</i>	<i>Yes</i>	<i>Useful</i>	<i>May be willing to consider further adoption</i>
<i>Firm F</i>	<i>Newfoundland</i>	<i>3</i>	<i>8</i>	<i>Low</i>	<i>Yes</i>	<i>Very Useful</i>	<i>May be willing to consider further adoption</i>
<i>Firm G</i>	<i>Newfoundland</i>	<i>3</i>	<i>5</i>	<i>Low</i>	<i>Yes</i>	<i>Unsure</i>	<i>May be willing to consider further adoption</i>
<i>Firm H</i>	<i>PEI</i>	<i>2.5</i>	<i>6</i>		<i>Yes</i>	<i>Useful</i>	<i>None</i>
<i>Firm I (inn)</i>	<i>PEI</i>	<i>4</i>	<i>9</i>		<i>Yes</i>	<i>Useful</i>	<i>Considering further adoption</i>
<i>Firm J</i>	<i>PEI</i>	<i>1</i>	<i>3</i>	<i>Low</i>	<i>Yes</i>	<i>Unsure</i>	<i>None</i>

When discussing facilitators of IBS adoption, several common themes emerged. Nine out of ten firms adopted technology because of the perception that their business would benefit as a result. Firms were mostly looking to improve marketing and generate more revenue. Only one firm stated that their adoption was fueled by a desire to reduce costs or to improve how they manage their company. As noted by Firm A: “Our main motive in adopting IBS was to improve our business. We felt that at the very least we would be able to market our company more effectively and hoped that we would increase our revenues.” The respondent for firm C echoes this comment: “We adopted the Internet with the hopes of increasing sales and improving our marketing efforts.”

The other major drivers of IBS include consumer pressure, government education, top management support (interest and knowledge) and the perception that IBS are easy to use. As noted by Firm J, almost every customer would ask if they had a website and what features and functions it offered: “First customers wanted to know if we had e-mail, then if we had a website, then what was on the site. It has become such a norm in the travel industry that customers expect us to be online and offer a variety of services over the Internet.” Furthermore, government initiatives promoting the use of IBS appear to have had some impact as stated by Firm E:

“The government and all their agencies have sent us literature, invited us to free education seminars, and have offered assistance (non-monetary) a number of times. At times I felt if I didn’t do anything they might just build me a webpage. The result, I am (company website) on the Internet and my company is benefiting as a result.”

**Table III: Main facilitators of adoption of IBS**

<i>Participants</i>	<i>Most Important Facilitator(s)<sup>1</sup></i>	<i>Additional Facilitators<sup>2</sup></i>
<i>Firm A (inn)</i>	<i>Perceived benefits<sup>3</sup> including additional revenue, a desire to improve marketing</i>	<i>Ease of use, top management support</i>
<i>Firm B</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Consumer pressure and government education</i>
<i>Firm C</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Consumer pressure, government education, top management knowledge, ease of use</i>
<i>Firm D</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Consumer pressure, potential cost savings</i>
<i>Firm E</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Government pressure, Government incentives, A desire to stay in business</i>
<i>Firm F</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Others were doing it and consumer pressure</i>
<i>Firm G</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Top manager knowledge and love for technology</i>

<i>Firm H</i>	<i>Top management support</i>	<i>Vendor pressure, consumer pressure</i>
<i>Firm I (inn)</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Help with management of operations, government education, consumer pressure</i>
<i>Firm J</i>	<i>Perceived benefits including additional revenue, a desire to improve marketing</i>	<i>Consumer pressure</i>

1. Respondents were asked to identify the most important facilitators. Some respondents were asked to rank facilitators.

2. Reported in order of ranking.

3. Perceived Benefits condensed all of the following into one term: ability to generate more sales, ability to generate international sales, generate more leads, market to different geographical areas, use e-mail to speed up communication, improve marketing, offer more information to consumers, use e-mail to book rooms.

The main barriers to adopting more sophisticated IBS included a lack of resources, specifically money and time, a lack of understanding about the potential benefits of sophisticated IBS, and a lack of government assistance or incentives. Firm A notes:

“All small tourism operators work 15 hour days, seven days a week. It’s the very nature of a B&B. We can’t afford to hire people, so my wife and I clean, cook, make reservations and so forth. We don’t make a lot of money and have no time. So how can we possibly adopt sophisticated technologies?”

While Firm C speaks to the lack of understanding of benefits associated with sophisticated IBS: “The government has been pushing us to adopt more and more IBS. But after a website and e-mail, I am not sure if we would benefit from much else. I mean what else is there for a small company?”

The latter barrier, lack of government incentives or assistance, is tied into the lack of resources as five out of ten firms noted that they lacked the money to expand IBS, and the government should be proving them with some type of monetary assistance to facilitate the adoption. Firm D states:

“The government, whether it be the Atlantic Canada Opportunities Agency, federal, provincial or municipal government, have all been encouraging us to adopt IBS. Yet none of them are willing to provide any real financial assistance. The tourism industry is struggling and if they wanted us to adopt technology some help would be appreciated.”

Firm E made very similar comments saying: “The government really needs to help us use the Internet. Training is one thing but what we really need is money.” Other barriers include fears that sophisticated technologies will be too complex and lack of management interest. Major barriers are identified in Table IV.

**Table IV: Barriers to IBS adoption**

<i>Participants</i>	<i>Main Barrier (s)<sup>1</sup></i>	<i>Additional Barriers<sup>2</sup></i>
<i>Firm A (inn)</i>	<i>Financial resources</i>	<i>Lack of government assistance, lack of time, not sure if adoption will help</i>
<i>Firm B</i>	<i>Lack of government assistance</i>	<i>Not sure if adoption will helpful</i>
<i>Firm C</i>	<i>Not sure if adoption will be helpful</i>	
<i>Firm D</i>	<i>Lack of government assistance</i>	<i>Lack of time and money</i>
<i>Firm E</i>	<i>Not sure if adoption will be helpful</i>	
<i>Firm F</i>	<i>Financial resources</i>	<i>Government assistance</i>
<i>Firm G</i>	<i>Financial resources</i>	<i>Not sure if adoption will be helpful, complex</i>
<i>Firm H</i>	<i>Financial resources</i>	<i>Not sure if adoption will complement other business practices</i>
<i>Firm I (inn)</i>	<i>Time, Not sure if adoption will be helpful</i>	<i>Not sure if adoption will complement other business practices, complex</i>
<i>Firm J</i>	<i>Financial resources</i>	<i>Government assistance, complex, not sure if adoption will be helpful,</i>

1. Respondents were asked what the most important barriers were. Some respondents were asked to rank barriers.

2. Are reported in order of ranking

### Conclusions and recommendations

The results from this study confirm previous research that SMEs are likely to adopt basic IBS but not adopt more sophisticated technologies (Net Impact IV, 2004). Facilitators and barriers confirm previous research discussed in the literature review, with some notable additions. Consumer pressure and government education have been identified as strong consistent facilitators. While they are mentioned in literature (Fomin et al., 2005; Net Impact IV, 2004) they are both appear to be more prominent facilitators in this region and sector. Consumer pressure is most likely explained by the nature of the tourism industry. The impact of government education probably results from the number of government agencies and programs that are promoting the use of IBS. Barriers are consistent with what is in the literature, with one exception, government assistance. SMEs in the tourism industry are looking for financial help from the government to aid their IBS

adoption. While some research supports this claim, it is not a consistently strong barrier in other studies (Fast Forward 5.0, 2004). The identification of government assistance as a strong barrier may reflect the region or the industry itself. Further research is needed on its role as a barrier and/or facilitator. Furthermore, while government education and assistance programs have been successful in encouraging basic IBS adoption, they have not been as successful in promoting the adoption of sophisticated IBS.

The research provides the government and vendors with some important results. B&Bs and inns have adopted basic technologies, yet they are unconvinced of the need to further their adoption. Vendors must educate potential customers prior to selling them additional technology. Since government programs are not working in encouraging the adoption of sophisticated technologies, the government (agencies) should consider either revamping these programs or consider offering financial assistance to firms. SMEs that receive some financial assistance appear willing to adopt additional technologies. Researchers can extend this research into a larger quantitative study to determine if the facilitators and barriers identified here are applicable to the industry as a whole. Additional research can be carried out in other industries in Atlantic Canada or within the B&B sector but in other geographic regions.

### References

Abdullah, MA, "Entrepreneurs and Their Influence on the Usage of Information Technology in SMEs: Evidence from Malaysia," *Journal of Small Business and Entrepreneurship*, 16(2), (2002), 60-77.

Beck, R, Wigand, RT & König, W, "The Diffusion and Efficient Use of Electronic Commerce Among Small and Medium-Sized Enterprises: An International Three-Industry Survey," *Electronic Markets*, 14(1), (2005), 38-52.

Blotnicky, K.A. "Impacts of IT for the Tourism Sector: Preliminary Report," Tourism Industry Association of Nova Scotia and the Nova Scotia Information Technology Human Resource Council, [http://ithrsc.ns.ca/documents/Research\\_Report.doc](http://ithrsc.ns.ca/documents/Research_Report.doc). [Accessed 11 May 2005].

Blotnicky, K.A. "Challenges, Approaches and Impacts of IT Adoption among SMEs in the Tourism Industry," *Proceedings of the Atlantic Schools of Business Conference, Halifax, NS, (2004b)*.

Cooper, R. & Schindler, S, *Business Research Methods, International Edition*, Boston, MA: Mc-Graw Hill, 2001.

Davis, C.H. & Vladica, F. "Demand for E-Business Support Services among New Brunswick SMEs," *Proceedings of the 2005 Atlantic Schools of Business Conference, Halifax, NS*.

Eisenhardt K, "Building Theories from Case Study Research," *Academy of Management Review*, 14(4), (1989), 532-550.

Ellram, Lisa M., "The Use of the Case Study Method in Logistics Research," *Journal of Business Logistics*, 17(2), (1996), 93-139.

"Fast Forward 4.0, Growing Canada's Digital Economy," Industry Canada, (May 2003); in-text citation (Fast Forward 4.0, 2003)

"Fast Forward 5.0, Making Connectivity Work for Canada," Industry Canada, (September 2004); in-text citation (Fast Forward 5.0, 2004)

Flyvbjerg, B, "Five Misunderstandings About Case Study Research," *Qualitative Inquiry*, 12(2), (April 2006), 219-245.

- Fomin, V.V., King, J.L., Lyytinen, K.J. & McGann, S.T., "Diffusion and Impacts of e-Commerce in the United States of America: Results from an Industry Survey," *Communications of the AIS*, 16, (2005), 559-603.
- Grandon, E & Pearson, JM, "E-commerce adoption: Perception of Managers/Owners of Small and Medium Sized Firms in Chile," *Communications of the Association for Information Systems*, 13(21), (2004), 81-102.
- Gummesson, E, "Relationship Marketing in the New Economy," *Journal of Relationship Marketing*, 1(1), (2002), 37-58.
- Levenburg, N.M., "Does Size Matter? Small Firms' Use of E-Business Tools in the Supply Chain," *Electronic Markets*, 15(2), (June 2005), 94-105.
- Levenburg, N.M., & Magal, S.R., "Applying Importance-Performance Analysis to Evaluate E-Business Strategies among Small Firms," *e-Service Journal (Project Muse)*, 3(3), (September, 2005), 29-48.
- Looi, H.C. "E-commerce adoption in Brunei Darussalam: A Quantitative Analysis of Factors Influencing its Adoption," *Communications of AIS*, (15), (2005), 61-81.
- MacGregor, RC & Vrazalic, L, "Electronic commerce adoption in small to medium enterprises (SMEs): A comparative study of SMEs in Wollongong (Australia) and Karlstad (Sweden)," [www.uow.edu.au/commerce/econ/csbrt/pdf/E-commerceStudy.pdf](http://www.uow.edu.au/commerce/econ/csbrt/pdf/E-commerceStudy.pdf), (2004). [Accessed 19 January 2005]
- Marshall, C. & Rossman, G. *Designing qualitative research*, Beverly Hills, CA: Publications, Inc., 1989.
- Mombourquette, P., 2006 "E-commerce definitions," working paper, University of Southern Queensland, Australia.
- Mombourquette, P. & Blotnicky, K. "Bed and Breakfasts and Inns: Drivers, Adoption and Intensity of Internet Business Solutions, Proceedings of the the 2007 American Society of Business and Behavioral Sciences conference.
- Mombourquette, P. & Blotnicky, K. "Leading the Way in e-Marketing: Atlantic Canada's B&Bs," Proceedings of the the 2006 ASB conference, Sackville, NB.
- Net Impact III, *Overcoming the Barriers*, Industry Canada, (October 2003) ; in-text citation (Net Impact III, 2003)
- Net Impact IV, *Net Impact Canada IV: Strategies For Increasing SME Engagement In The E-Economy*, Final Report, Industry Canada, (September 2004); in-text citation (Net Impact IV, 2004)
- Patton, M. Q., *Qualitative Evaluation and Research Methods* (2nd ed.). Newbury Park, CA: Sage Publications, Inc., 1990.
- Raymond, L., F. Bergeron and S. Blili, "The Assimilation of E-Business in Manufacturing SMEs: Determinants and Effects on Growth and Internationalization," *Electronic Markets* 15(2), (2005), 106-118.
- Thong, JYL, "An integrated model of information systems adoption in small business," *Journal of Management Information Systems*, 15(4), (1999), 187-214.
- Wymer, S. & Regan, E, "Factors Influencing e-commerce Adoption and Use by Small and Medium Businesses," *Electronic Markets* 15(4), (November 2005), 438-453.

Yin, RK, Case Study Research: Design and Methods, 2nd edn, Thousand Oaks, CA: Sage Publications Inc., 1994

Zikmund, W., Business Research Methods, 7<sup>th</sup> ed., Mason, OH: Thomson, South Western, 2003.

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## **ABORIGINAL CULTURAL TOURISM: HERITAGE AND ECONOMIC DEVELOPMENT REFLECTIONS FROM THE CAPE BRETON EXPERIENCE**

Cultural tourism, Aboriginal cultural tourism and importance of product authenticity are examined. The paper provides a case narrative of Aboriginal cultural tourism involving five First Nations communities on Cape Breton Island, Nova Scotia, Canada. It discusses the role of Cape Breton University, the island's only university, as a linking-pin and neutral venue for interested parties to discuss a long-term unified strategy for Aboriginal cultural tourism development in this region.

### **Cultural Tourism**

While it is only in the past few decades that the term cultural tourism has become widely used, the practice is arguably millennia old. The Romans traveled to Egypt to witness a civilization and culture that preceded their own by at least two thousand years and a century ago, the grand tours of Europe, were considered a prerequisite for the wealthy and the nobility. (ICOMOS 1996). In the post Second World War era, backpacking across Europe has become a rite of passage for countless North American university students, with the more adventurous, perhaps, trekking off to India and Asia

In the late 1970's and early 1980's the term cultural tourism began to be used by the tourism industry, but was still referring to a niche market which was perceived to be small, affluent and well educated. (Tighe 1986, McKercher and du Cros 2002). At the 12<sup>th</sup> general assembly of the International Council on Monuments and Sites (ICOMOS) in Mexico, 1999, the international council adopted the International Cultural Tourism Charter (ICOMOS 1999). The charter recognized the organic relationship between tourism and cultural heritage and the increasing tensions that can develop as communities and cultures try to protect their heritage while "packaging" it for tourism consumption. ICOMOS recognized that defining cultural tourism is difficult as the concept has different and at times conflicting meanings to different observers. The World Tourism Organization (WTO) defines cultural tourism as "movements of persons essentially for cultural motivations such as study tours, performing arts and cultural tours, travel to festivals and other events, visits to sites and monuments, travel to study nature, folklore or art and pilgrimages" (WTO 1985). Further refinements of these definitions look to both stratify the cultural contributions within the development of the cultural tourism relationship and to recognize the experiential need of a segment of the traveling public (Richards 1996, Clark 2000 and Chang 2006). It is exactly this type of stratification which places Aboriginal Cultural Tourism in niches which include interests in history, heritage, spiritualism, environmentalism, indigenous rights and pan Aboriginal issues, to name but some of the target market segments.

There are several references in the literature which illustrate that a broadly encompassing definition of cultural tourism has not yet been accepted. Agreement on key elements of the sector appears to be wide spread, but issues remain surrounding the intersections of principle components of art, culture, entertainment and heritage (Richards 1996, 2001

and Rojek and Urry, 1997). A distinction between heritage tourism and arts tourism has been suggested in relation to time. Heritage tourism becomes essentially an interaction with sites and attraction focusing on preservation of the past and arts tourism focusing on the consumption of present day offerings (Richards, 1996). There is agreement in the literature and amongst practitioners that cultural tourism is growing and has contributed to the diversification of the tourism product within the industry. However, there is confusion about the definitional depth and breadth of the sector, market segmentation and supporting demographic and psychographic data, and the primary and secondary interest levels towards the product by the consumer/tourist (Hughes, 2002).

As the stratification of cultural tourism grows, the literature is replete with research and argumentation which supports the inclusion of popular culture within the broader definition (Markwick, 2001, Chang 2006). The product offered through tourist business interests may not coincide with market demand. In other instances, it is the interests of participating businesses and communities which can be used as a lobbying effort towards governments to invest in cultural tourism infrastructure (Grefe, 2004). An interesting dichotomy develops as the cultural tourism industries expand. Industry is looking for ever increasing new product while the tourism consumer becomes more concerned about the experience and its authenticity. The issue of authenticity is of importance throughout this sector, but none more so than in the Aboriginal product. The consumer may ask the question, "Is this experience real?" while the Aboriginal elder may feel strongly that their culture is "not for sale".

### Authenticity

Authenticity of experience and product for the cultural tourist is increasingly raised in the literature ( Nara 1993, Chhabra, Healy and Sills 2003, Cano and Mysyk 2004 ). What is the real cultural experience? Is the cultural experience being presented to the tourist authentic or has it become part of the current cultural experience of the community and therefore represented as culturally current? There are several schools of thought on the issue of authenticity as it relates to tourism. One group argue that tourism and tourism products are by nature contrived to create an artificial experience (Brown, 1999 and Greenwood, 1989). Wang (2000) argues the concept of authenticity is contextual and dependent upon the individual. The very nature of the tourist and their identification with the product will heighten the desire and expectation of authenticity of experience. Research using a group of participants in a staged reenactment of the 1744 siege of the Fortress of Louisbourg, a Parks Canada site located on Cape Breton Island, Nova Scotia, Canada indicated historical authenticity of product and experience were of paramount importance (Brown, 1999). The commitment of Parks Canada to historical and archaeological authenticity is not necessarily replicated at other "living museums" throughout North America. As cultural products develop within a geographic location, there is the risk that "authentic" becomes "synthetic" as operators or governments attempt to attract larger numbers or broader ranges of tourist (Markwick, 2001). As "synthetic" cultural practices or attractions merge within the local culture, this form of "emergent authenticity" (Cohen, 1988) can become to be considered authentic by the local population (Nara 1993, Prins 1996, Chhabra, Healy and Sills 2003, Cano and Mysyk, 2004, Brown, 2006).

Mather-Simard (2003) has affirmed this understanding of Aboriginal cultural tourism while also insisting that the "authenticity of products facilities" and "cultural integrity" must be hallmarks of all cultural tourism initiatives within First Nations (Mather-Simard, 2003, p.3). "We hear a great deal about the market searching for 'authentic' experiences, wrote Mather-Simard, "and I propose that this is our industry's greatest challenge. What constitutes an authentic experience? ... I would define an authentic experience as an accurate representation of that community's heritage through past, present and future evolutions of their culture from their own perspective (Ibid).

Aspects of the Mi'kmaq First Nation in general and the First Nations of Cape Breton Island in particular will be explored further as an exemplar of these developments and debates in Aboriginal cultural tourism.

## Aboriginal Cultural Tourism

As the cultural tourism niche market is associated with the importance of history, heritage, art, music, crafts, cultural attachments to geography and place, and the search for cultural identity, meaning and affirmation, it is no surprise that as this aspect of the tourism industry has developed over the past two decades, such development has attracted growing interest amongst members of Canada's First Nations.

This interest is part of a broader renaissance in how Aboriginal Canadians view their place in this country, how they perceive the socio-economic challenges and opportunities their peoples face and how First Nations can assert control and direction of their own economic futures through the advent of self-government. As Aboriginal authors such as Diabo(2003), Hager(2003), Mather-Simard(2003), and O'Neil(2003) have all asserted, First Nations' self-government is integral to improving economic sustainability in First Nations and, as First Nations governments seek the ways and means of promoting economic development opportunities for their peoples, they will be carefully addressing the social and economic environment of cultural tourism operations for their peoples.

According to Barry Parker (2004), a member of the Okanagan First Nation and a national tourism advisor for the Department of Indian and Northern Affairs, "[t]here is significant market demand for cultural tourism, and this can be translated into real business opportunities for Aboriginal people in Canada and Indigenous people around the world".. "At the same time", he continued, "it is a platform for which people can enhance, sustain, strengthen and protect their cultures" so long as Aboriginal tourism initiatives are undertaken "with dignity and respect for cultures, communities and the environment" (Canada World View, 2004, p. 8).

This twin concern for reaping the economic benefits of commercially successful Aboriginal tourism initiatives while also respecting and promoting the uniqueness and integrity of Aboriginal cultures is echoed by Diabo (2003), Hager (2003) and Mather-Simard (2003). Diabo (2003) has written that while mainstream tourism is largely associated with strictly commercial values centred upon the "commoditization of culture", tourism itself "has its' origins as social and cultural exchanges that preceded tourism as a commercial activity"(Diabo, 2004, P.2). The challenge for those interested in promoting Aboriginal cultural tourism undertakings, according to Diabo, is to develop cultural tourism offerings that are grounded in the reality of given First Nations. "...[T]he engagement of Aboriginal communities in the tourism sector must occur on their own terms and at their own pace, since it is their existence as distinct peoples that is at stake"(Ibid). The key to successful Aboriginal cultural tourism development, to Diabo, is for Aboriginal communities themselves to fully control the planning, development, implementation and on-going management of all tourism initiatives within their lands. In this manner of "self-government", First Nations can realize the benefits of tourism-related economic development in terms of employment, commercial activity, revenue-generation and community vibrancy while also ensuring that such tourism development serves to respect cultural heritage and traditions, promote cultural authenticity in tourism content, products and messages, and enhance cross-cultural understanding and awareness between Aboriginal and non-Aboriginal populations(Diabo, 2004, p. 2. See also Notzke, 2004, Kortright, 2002).

Hager and Mather-Simard echo these conclusions asserting that while Aboriginal cultural tourism initiatives offer First Nations significant potential for economic development, job creation, and opportunities for Aboriginal youth, all such tourism undertakings must be subject to the control, direction and wisdom of First Nations governments, elders, and members of the community. This is to ensure that Aboriginal cultural tourism initiatives do not result in the sell-out of Aboriginal culture, that such initiatives are reflective of Aboriginal authenticity in both historical and contemporary presentations of Aboriginal life, and that First Nations communities are fully comfortable with the tourism initiatives occurring within their lands(Hager, 2003, Mather-Simard, 2003). On this point the message from Aboriginal Elders is unequivocal: "Aboriginal spirituality is not for sale, and there is not a place for spiritual ceremonies in tourism products" (Notzke, 2004).

In asserting Aboriginal leadership in the development of First Nations tourism developments, Hager (2003) has commented upon the importance of Aboriginal cultural tourism promoters within First Nations building partnerships with like-minded persons, government officials, elders and community groups within their own First Nation as well as with

sympathetic individuals, government officials and business leaders in the non-Aboriginal community. Hager has also emphasized the importance of asserting cultural and historical authenticity in all presentations respecting the nature of Aboriginal life, culture, arts, crafts, beliefs and world views (Hager, 2003, pp.4-5).

### **Cape Breton, Economic Development Policy, and Aboriginal Cultural Tourism: The Role of the Mi'kmaq First Nations**

Having assessed the theoretical dimensions of Aboriginal cultural tourism this article now turns to a case narrative of how Aboriginal cultural tourism initiatives have been and are being developed in one of Canada's premier tourist markets, namely Cape Breton Island. Cape Breton Island, Nova Scotia, is located off the eastern most portion of mainland Canada at roughly 47°N, 60°W (Brown, 2006).

The Government of Nova Scotia established the Department of Tourism, Culture and Heritage in 1971. In 1975, revenue from tourism for the entire province was \$380 million. In 2004 revenue topped \$1.3 billion. Tourism officials in Nova Scotia are predicting a 100% increase in revenue by 2012 to \$2.6 billion (Province of Nova Scotia, 2005b, p.21). Cape Breton Island tourism revenues reached \$150 million per year by the late 1980s and exceeded \$219 million in 2004 (Brown and Geddes, 2007).

In 2004 Condé Nast named Cape Breton one of the greatest island vacation destinations in North America. Cape Breton has also won similar accolades from other international travel magazines such as National Geographic Traveler in 2004. In its own tourism promotional material, the Government of Nova Scotia refers to Cape Breton as "Nova Scotia's Masterpiece".

As the tourism industry in Cape Breton witnessed great growth and development over these decades, this dynamic must be placed in the context of an Island facing the slow but inexorable decline and demise of its traditional anchor industries of coal and steel, coupled with growing economic weaknesses and fragility in the natural resource industries of fishing and forestry. As Cape Breton experienced the economic and social challenges of "deindustrialization" and resource industry "structural adjustment", policy leaders in both the private and public sectors within Cape Breton came to search for ways and means to grow a "new economy" out of the old. The socio-economic challenges confronting officials within federal, provincial and municipal government agencies mandated a role in promoting economic development within Cape Breton, however, were only magnified for those in leadership positions within the Mi'kmaq First Nations of Cape Breton.

Just as Cape Breton suffers from elevated rates of socio-economic disadvantage in terms of unemployment, underemployment, poverty, youth outmigration, under-education and poor health in comparison to the rest of Nova Scotia and Canada (Johnson, 2007) so too do the five First Nations of Membertou, Eskasoni, Chapel Island, Waycobah and Wagmatcook record indicators of greater socio-economic disadvantage in comparison to the rest of the Island. Coupled to and rooted in the facts of greater poverty and disadvantage, members of the First Nations have had to experience and struggle against a historical reality of cultural colonization, racism, discrimination, neglect and isolation at the hands of the dominant non-Aboriginal population.(Dickason, 2002) And just as the non-Aboriginal policy leaders in Cape Breton have sought the ways and means to address and alleviate the socio-economic problems confronting Cape Breton overall, so too have leaders within the Mi'kmaq First Nations sought to promote the socio-economic development of their people.

A number of the Mi'kmaq First Nations in Cape Breton have developed explicit policy and program interests with respect to Aboriginal cultural tourism. Over the past decade the leaderships of all five Cape Breton First Nations have supported the promotion of tourism opportunities for their Nations ranging from the economic support of local, native arts and crafts artisans to the support of summer cultural festivals and Pow-Wows. Furthermore, the leaderships of the Wagmatcook, Waycobah, and Membertou First Nations have supported the development of community centres within their nations, with such centres having a direct role to play in providing tourism services via museums, art galleries, cultural exhibits, arts and crafts production facilities, gift shops and restaurants.

In interviews recently conducted with leaders from Cape Breton's five First Nations communities, all leaders favoured the promotion of Aboriginal cultural tourism through the development of Aboriginal product and service delivery to visitors to their communities. All leaders saw such ventures as a means of employment and economic development for their communities, but they recognized the care and sensitivity that must precede and inform all such tourism initiatives. All leaders shared a general concern for the authenticity of product offerings. These community leaders adamantly agreed that they do not want products or services sold which do not portray authentic Aboriginal culture and history. Heritage presenters and product producers must be knowledgeable, sincere, genuine and of Aboriginal descent. The consensus among those interviewed indicated the need for collaborative tourism development initiatives by all five First Nations communities on Cape Breton Island. There was a recognition that the uniqueness of each community and its tourism offerings was a cultural strength for the entire Mi'kmaq cultural tourism venture, with such diversity serving to attract the interest of those non-Aboriginals seeking to learn more about Mi'kmaq culture and identity, history and current life. Interviewees also stressed the needed involvement of local non-Aboriginal government and tourist operators to further develop and promote Aboriginal products and services for the tourist trade (Thompson, Personal Interviews, 2007).

### **The Cape Breton Aboriginal Cultural Tourism Initiative: Analytical Reflections**

The foregoing overview of the Aboriginal cultural tourism initiative within Cape Breton reveals a business venture still in the state of becoming. This is unsurprising given the relatively recent interest by both Aboriginal and non-Aboriginal actors in seeking to promote cultural tourism undertakings as a major aspect of economic and tourism developments within Cape Breton Island. The relative newness of this emerging field of business reveals both challenges and opportunities that need to be recognized and either enhanced or ameliorated by those wishing to see the future success of Cape Breton Aboriginal cultural tourism.

That there is a nascent Aboriginal cultural tourism initiative within Cape Breton is perhaps the single greatest mark of success for those Aboriginal and non-Aboriginal Canadians who can visualize the future importance of this tourism industry. At the heart of this tourism venture stand the Cape Breton First Nations, their governmental leaders and elders, and those within these First Nations who have already inaugurated cultural tourism initiatives ranging from the Wagmatcook Culture and Heritage Centre through the Eskasoni Pow-Wow to the Membertou Trade and Convention Centre. Leaders of these First Nations recognize the potential that Aboriginal cultural tourism ventures can offer their peoples in terms of economic development, employment, and the generation of wealth within these communities as well as promoting an authentic portrayal of Mi'kmaq history and culture, and encouraging cross-cultural communication and understanding between members of the Mi'kmaq nations and members of the general Cape Breton community.

The existence of this emerging field of cultural tourism offerings, however, should not be a cause for complacency amongst those interested in developing Aboriginal cultural tourism ventures within Cape Breton. While this unique tourism product is coming into being and is beginning to reap benefits for Mi'kmaq First Nations there are certain problematics that will need to be overcome if Cape Breton Aboriginal cultural tourism initiatives are to reach their full potential. One is that the Aboriginal leaderships with each of the five First Nations within Cape Breton will need to effectively come together as a unified force providing co-ordinated direction and leadership for all Aboriginal cultural tourism ventures within "Unama'ki"(Cape Breton Island). At present, each First Nation tends to work as a separate actor in their economic development initiatives and their stress on the authenticity of cultural tourism products and services. While each First Nation retains responsibility for its own economic development initiatives, First Nation leaders and their peoples need to be encouraged to realize that, given the unique and special nature of the Mi'kmaq cultural tourism offering, collective and co-operative tourism development respectful of Aboriginal authenticity will yield greater results than individual, un-coordinated and ad hoc initiatives. The whole can be greater than the sum of the parts.

This same admonition also needs to be directed to cultural tourism policy leaders within the non-Aboriginal community. While institutions such as the federal departments of Indian and Northern Affairs, and Canadian Heritage, and Enterprise Cape Breton Corporation have played a lead role in promoting and encouraging the development of Aboriginal

cultural tourism initiatives and ventures within Cape Breton, these institutions need to marry their work to a host of other public and private sector organizations involved with the tourism industry within Cape Breton, Nova Scotia, and Canada overall.

As the Mi'kmaq First Nations pursue their goals of developing a major Aboriginal cultural tourism industry within Cape Breton, a number of non-native organizations beyond the federal governmental bodies listed above will have to be involved in the development of this industry due to the fact that a number of other organizations have a direct jurisdictional, organizational and entrepreneurial stake in the development of such an industry. These other organizations range from the Government of Nova Scotia's Department of Economic Development and Tourism Nova Scotia, through municipal Regional Development Agencies such as the Cape Breton Country Economic Development Agency and the Straight Area Economic Development Agency, to private sector tourism industry promotional and marketing agencies such as Destination Cape Breton. All of these institutions have a vested interest in matters respecting economic development within Cape Breton in general, and with respect to the elaboration and promotion of the Cape Breton tourism industry in particular. As Aboriginal cultural tourism ventures are developed and take root on Cape Breton, there will be a need for close interaction and mutual support from all of these interested institutional actors, especially in relation to the institutional sensitivity needed by non-Aboriginal tourism policy leaders with respect to Aboriginal cultural tourism initiatives.

Just as the Cape Breton First Nations will need to speak with a single voice if they are to fully realize their cultural tourism potential, so too will the non-Aboriginal agencies and actors interested in promoting Aboriginal cultural tourism have to develop the ways and means to co-ordinate their policy and program development initiatives so as to promote greater coherence in initiative design, development, authenticity and implementation. While all of these agencies and actors gain retail sovereign jurisdiction over their own economic development and tourism promotion undertakings, they also need to learn that policy and program co-ordination elicits greater coherence and effectiveness in end results and overall policy community leadership.

The diverse policy community environment perceived here, one encompassing a wide variety of Aboriginal and non-Aboriginal groups and institutions, while also representing an amalgam of governmental actors from First Nations and federal, provincial, and municipal governments, as well as a distribution of public and private sector actors, is one that is, by definition, inherently pluralistic, varied, and all too easily disparate. For a policy community to be successful as a community it requires a strong degree of coherence, co-ordination, and shared communication, coupled with the ability to engage in an on-going interchange of ideas, values, attitudes, beliefs, such that the members of the community come to see themselves as valuable parts of a valued community, with the community itself possessing a strong sense of direction and leadership.

As Michael E. Porter (1990) has stressed in his studies of regional economic development initiatives, such successful initiatives are usually founded upon strong policy communities, with these policy communities usually comprising a supportive university or two. The role of the university is then to act as a linking pin for all the members of the policy community, providing a supportive and institutionally neutral ground where members of the community can come together with interested academics and university leaders on regular occasions to discuss matters of shared interest and concern. Within a university setting members of the policy community can be encouraged both to think about broad strategic trends in their community while also focusing, and receiving advice, upon practical matters of industry tactics and program implementation. A university should also be an ideal setting for probing long-term directions for the community while also critically addressing matters respecting the strengths and weaknesses, the opportunities and threats, of current approaches to policy and program development, and how and why improvements can be made to current undertakings.

Within the Aboriginal cultural tourism policy community in Cape Breton the relevant university to play this vital role would be Cape Breton University. This university already has a strong connection to the local Mi'kmaq First Nations and has a well developed track record for providing academic programming with a distinct Aboriginal dimension. With respect to the development of Mi'kmaq cultural tourism initiatives with Cape Breton, Cape Breton University could serve as an ideal meeting place where Aboriginal and non-Aboriginal policy leaders interested in the promotion and development

of this unique tourism venture could come together in order to assess current and future opportunities, tourism business capabilities, capacities and requirements, and to promote knowledge and sensitivity respecting the preservation of cultural authenticity regarding Aboriginal cultural tourism offerings.

At the December 8, 2006 meeting of the Board of Governors of Cape Breton University, the Board adopted an Aboriginal Strategy. The strategy builds on the thirty year tradition of Aboriginal programming and research at Cape Breton University which has established itself as the Atlantic Canadian university with the largest enrolment of Mi'kmaq students and graduates.

The strategy will begin with local, regional and then national consultation to ascertain interest in broadening offerings into health sciences, education and policing preparation as well as more targeted programming in economic development. The President has established an Aboriginal Task Force to guide the consultation process.

### Conclusion

This paper reveals that Aboriginal cultural tourism has great potential to provide economic growth for First Nations communities. The literature identifies concern for authenticity of tourist product and need for self-governance by First Nations communities with full involvement in all levels of decision making. Aboriginal communities see tourism as a “means to promote better understanding of their history, culture, and values, as well as a means to preserve and build interest amongst their people in preservation and revival of their culture and language” (Aboriginal Tourism in Canada, Part 1: Economic Impact Analysis, 2003). Aboriginal leaders, although they realize the potential cultural tourism could bring to struggling communities, do not ignore the call for unified support from non-Aboriginal interested parties, government bodies and tourist operators.

This case narrative has achieved its objective by presenting a unique situation highlighting Cape Breton Island's five Aboriginal communities. Leaders from these communities realize they must come together collectively to promote Aboriginal cultural offerings at their respective communities. By working together, these communities can present an image of product abundance and collective knowledge to attract tourists for the long-term. While agreement is reached by Cape Breton First Nations leaders that collaboration to develop and promote Aboriginal cultural tourism is the most viable approach, consensus surrounding authenticity of the tourist experience is unanimous. The literature is replete with evidence to suggest that authenticity must be controlled by the culture of which it represents. Taylor (2001) suggests that if the concept of authenticity is to have any legitimate place in the discussion of culture, its definition must rest with the individuals who “make up” that culture. He argues that due to the recent explosion of interest in “cultural tourism”, authenticity should also be considered important to those involved in the industry itself (Taylor, 2001).

The paper has also identified government's willingness to become involved with advancing local Aboriginal cultural tourism. These findings are significant because they form the basis of recommendations for Cape Breton Island's Aboriginal tourism direction. The issue of how to bring all interested parties together to discuss the challenges and opportunities presented by this new niche market is raised. The authors propose that Cape Breton University is the neutral body, where meetings take place to discuss issues surrounding Aboriginal cultural tourism development. Both Aboriginal and non-Aboriginal entities want Aboriginal cultural tourism advanced and promoted as part of the Cape Breton tourism product. A pattern of cooperation must be established between government, tourist operators and the host communities in pursuit of a common interest.

In its first attempt, this study has advanced the understanding of Aboriginal cultural tourism development in a particular case within Canada. As a result, it has served as a catalyst for further research in this unique market which has recently grown in popularity in Canada and worldwide. As revealed in the literature, the challenges and opportunities presented in this study are not unique to Cape Breton Island's First Nations communities, however, the direction proposed

by the authors has implications for further Aboriginal cultural tourism development in this region and elsewhere. It is hoped that tourists in the near future will not only be visiting Cape Breton Island to experience its culture and beauty, but also for the Aboriginal cultural adventure offered by our local First Nations communities.

### References

- Aboriginal Tourism in Canada, Part 1: Economic Impact Analysis BearingPoint LP, Goss Gilray Inc. and Associates, March 2003.
- Brown, K.G., Geddes, R., “Resorts, culture and music: the Cape Breton tourism cluster,” *Tourism Economics*, 13, (1), (2007), 129-141.
- Brown, K.G., “They Danced and They Sang: Cultural Tourism Marketing on Cape Breton Island,” Paper presented at 2006 Sustainable Tourism Conference with special reference to Islands and Small States, University of Malta, Valetta, Malta.
- Brown, Keith G., “Attitudinal Change: Tourist as Consumer,” PhD Thesis, Bradford University, Bradford, United Kingdom, 1999.
- Cano, Lucero Morales & Mysyk, Avis, “Cultural Tourism, the State, and Day of the Dead,” *Annals of Tourism Research*, 31, (4), (2004), 879-898.
- Chang, Janet, “Segmenting tourists to aboriginal cultural festivals: An example in the Rukai tribal area, Tawan,” *Tourism Management*, 27, (2006), 1224-1234. Available at: [www.elsevier.com/locate/tourman](http://www.elsevier.com/locate/tourman).
- Chhabra, Deepak, Healy, Robert & Sills, Erin, “Staged Authenticity and Heritage Tourism,” *Annals of Tourism Research*, 30, (3), (2003), 702-719.
- Clark, A., “The power to define: meanings and values in cultural tourism” in Robinson, M. et al (eds.), *Reflections on International Tourism: Expressions of Culture, Identity and Meaning in Tourism* (Business Education Publishing), 2000.
- Cohen, E., “Authenticity and commoditization in tourism,” *Annals of Tourism Research*, 15, (1988), 371-386
- Diabo, Mitchell Karhakeron, “Aboriginal Cultures and the Tourism Industry,” A discussion paper for the National Gathering on Aboriginal Cultures and Tourism, Ottawa, 2003. Available at: [http://www.destinations.gc.ca/docs/diabo\\_paper\\_e.cfm](http://www.destinations.gc.ca/docs/diabo_paper_e.cfm)
- Dickason, Olive, *Canada’s First Nations: A History of Founding Peoples from Earliest Times*, 3<sup>rd</sup> ed. Toronto: Oxford University Press, 2002.
- Greenwood, David, Culture by the pound: an anthropological perspective on tourism as cultural commoditization, in Valene L. Smith (ed.), *Hosts and Guests: The Anthropology of Tourism*, Philadelphia, PA: University of Pennsylvania Press, 1977.  
——— 1989 ‘Epilogue’, in Valene L. Smith (ed.), *Hosts and Guests: The Anthropology of Tourism*, 2nd edn, Philadelphia, PA: University of Pennsylvania Press, 1989.
- Greffé, Xavier, “Is rural tourism a lever for economic and social development?,” *Journal of Sustainable Tourism*, 2, (1-2), (1994), 22-40

Hager, Barbara, "Aboriginal Cultural Tourism: Promoting Your History to the World," A discussion paper for the 2003 National Gathering on Aboriginal Cultures and Tourism, Ottawa, December 1-3, 2003. Available at:

[http://www.destinations.gc.ca/docs/hager\\_paper\\_e.cfm](http://www.destinations.gc.ca/docs/hager_paper_e.cfm)

[http://www.destinations.gc.ca/docs/mathersimard\\_paper\\_e.cfm](http://www.destinations.gc.ca/docs/mathersimard_paper_e.cfm)

[http://www.destinations.gc.ca/docs/oneil\\_paper\\_e.cfm](http://www.destinations.gc.ca/docs/oneil_paper_e.cfm)

<http://www.international.gc.ca/canada-magazine/issue23/02-title-en.asp>

Hughes, H., "Culture and tourism: a framework for further analysis," *Managing Leisure*, 7 (3), (2002), 164-175.

ICOMOS - Managing Tourism at Places of Heritage Significance: the 1999 International Cultural Tourism Charter," Proceedings at the 12<sup>th</sup> General Assembly, International Council on Monuments and Sites, Mexico (1999).

ICOMOS International Committee on Cultural Tourism, (1996), no 6.

Johnson, David, "Regional Development as the Work of Prometheus: A Critical Analysis of Enterprise Cape Breton Corporation," in Susan Hodgett, David Johnson and Stephen A. Royle, eds., *Doing Development Differently: Regional Development on the Atlantic Periphery* (Sydney: Cape Breton University Press, 2007).

Kortright, Robin, "Aboriginal Tourism: blessing or curse?" *Socio-Cultural Impacts of Tourism*, Trent University, 2002.

Markwick, M., "Marketing Myths and the cultural commodification of Ireland: Where the grass is always greener," *Geography*, 86(1), (2001), 37-49.

Mather-Simard, Trina, "Aboriginal Tourism, Culture and Communities," A discussion paper for the 2003 National Gathering on Aboriginal Cultures and Tourism, Ottawa.

McKercher, Bob, du Cros, Hilary, "Cultural Tourism," Binghamton, NY: Haworth Hospitality Press, 2002.

MRSB Consulting Services, Economic Impact Analysis of Enterprise Cape Breton Corporation Festival and Events Program, Sydney, Nova Scotia, March 2006.

"The Nara Document on Authenticity," Proceedings at the 1993 Conference on Authenticity in Relation to the World Heritage Convention," Japan.

Notzke, Claudia, "Indigenous Tourism Development in Southern Alberta, Canada: Tentative Engagement," *Journal of Sustainable Tourism*, 12, (1), (2004), 29-52.

O'Neil, Beverley, "Traditions and Marketing: Strategies for Developing Tourism with Cultural Integrity," A discussion paper for the 2003 National Gathering on Aboriginal Cultures and Tourism, Ottawa.

Parker, Barry, "Aboriginal Planet," *Foreign Affairs & International Trade Canada, Canada World View*, Issue 23, Fall, 2004.

Porter, Michael E., *The Competitive Advantage of Nations*, New York: The Free Press, 1990.

Prins, E.L., *The Mi'kmaq: Resistance, Accommodation & Cultural Survival*, Fort Worth, Texas: Harcourt Brace, 1996.

Province of Nova Scotia, "Tourism Activity in Nova Scotia – a 25 Year Comparison," Department of Tourism and Culture, 2001.

Richards, Greg, "Cultural Tourism in Europe," Wallingford, UK, CAB International Publishers, 1996.

Rojek, Chris, Urry, John, "Touring Cultures: Transformations of Travel and Theory," Routledge, London, 1997.

Taylor, John, "Authenticity and Sincerity in Tourism," *Annals of Tourism Research*, 29, (1), (2001), 7-26.

Thompson, Krista, Personal Interviews, 2007.

Tighe, Anthony, "The arts/tourism partnership," *Journal of Travel Research*, 24,(3), (1986), 2-5.

Wang, Ning, «Rethinking Authenticity in Tourism Experience,» *Annals of Tourism Research*, 26(2), (1999), 349-70.

WTO, "Developing Tourism," World Tourism Organization, 1985.

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# PRESENTATION ABSTRACTS

## Accounting

### A LITERATURE REVIEW ON CREDIT OFFERS TO SMALL AND MEDIUM SIZE BUSINESSES FACING FINANCIAL DIFFICULTIES

**Sébastien Deschênes**

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**Jocelyne Gosselin**

**Benoît-Mario Papillon**

*Université du Québec à Trois-Rivières*

Excluding the owners' contribution and the reinvestment of profits, financing to small and medium size businesses (SME) mainly comes from bank loans and supplier credit. Access to a commercial loan or trade credit depends, first, on the SME's financial situation and, second, on the lender's predisposition to agree to a particular credit risk. This paper highlights the considerations that influence the decision process of an active lender with regards to commercial loans and trade credit. Close attention is given to issues specific to files involving SMEs in financial difficulty. To conclude, the entrepreneur's perspective is taken into account in order to understand what makes him choose between bank loans or supplier credit.

# ASB History

## EXPLORING THE NATURAL HISTORY OF INFORMAL ORGANIZATION IN THE ATLANTIC SCHOOLS OF BUSINESS CONFERENCES

**Adam Rostis (student)**  
*Sobey School of Business*  
*Saint Mary's University*

This paper will examine the natural history of informal organizing. Through a case study of the Atlantic Schools of Business conferences, it will build on existing studies of alternative or grassroots organizations by studying a long-standing informal organization that has recently made the decision to formalize. The long history of this organization, together with the sudden decision to adopt formal structures, provides a unique opportunity to gain insight into the process of formalization.

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# Case Track

## **LIFE IN THE THEATRE: THE REWARDS AND STRUGGLES OF LIVE BAIT THEATRE**

**Candice de Saldanha (student)**

**Gina Grandy**

*Mount Allison University*

Sharon Young juggles many roles as the Office Manager at Live Bait Theatre in Sackville, New Brunswick. Over the past 20 years the organization has grown from managing a budget of \$10,000 to \$300,000. The arts contribute much to the economy in which they belong in regards to the shows, consumption of food and beverages, and required accommodation. Operating a professional theatre in a small town, however, has its challenges. Balancing an ever-changing part-time workforce, spearheading needed changes with the board as the organization matures and managing the constant uncertainty of funding for operations mean life at Live Bait is a constant struggle, but nevertheless rewarding endeavour.

## **BACKLOT VIDEO. THE PAST, PRESENT AND FUTURE OF AN INDEPENDENT VIDEO STORE**

**Jessica Fennell (student)**

**Gina Grandy**

*Mount Allison University*

This vignette depicts the life of a small, independent video store in a rural university town. The owners play a significant role in the culture of the organization. Individual, social and organization identities are intertwined in this environment and feed into the culture of the organization. The liberal arts university setting serves as an ideal niche market for this business, however, broader external environmental threats may affect the sustainability of the organization.

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**OUT OF NEWFOUNDLAND WITH ICEBERG BEER™ QUIDI VIDI BREWING COMPANY'S STRATEGIC  
MOVE INTO PREMIUM AND GLOBAL BEER MARKETS**

**Amy Hsiao (MBA student)**

**Thomas Cooper**

*Memorial University of Newfoundland*

On its 10th anniversary, Quidi Vidi Brewery is introducing a new brand of premium beer into the Canadian, U.S., and global markets. It plans to make this new brand, Iceberg Beer™, its “flagship” label that will lead its existing family of brands to new national and international locations. Having obtained the trademark for the name “Iceberg Beer” and the phrases, “Ice Aged” and “Ice Cap”, QV has focused on packaging and quality in the last two years of product development. The company has strong brand recognition within Newfoundland, a lean operation and state-of-the-facilities, but given the microbrewery industry in which it belongs and the current environment of the global beer industry - is QV positioned strategically in respect to market clarity and understanding of market realities to take advantage of the opportunities that Iceberg Beer™ presents?

**ACME INDUSTRIAL: A MATTER OF HYGIENE**

**Fred James (student)**

**Kori Pippy (student)**

*Cape Breton University*

Acme Industrial is a company that falls into the category of “heavy industry” and is located in eastern Nova Scotia. This case deals with the various issues the Human Resources department must face when dealing with a long-term employee whose personal hygiene has deteriorated to the point that co-workers are complaining and the work environment has become very stressful.

**SPRINGFIELD LAKE COMMUNITY CHURCH**

**Robert A. MacDonald**  
**Tanya Godbout (student)**  
**Joy Laughlin (student)**  
**Angeline Quek (student)**  
**Jeff Vass (student)**  
*Atlantic Baptist University*

While often ignored by contemporary studies in management, ecclesiastical bodies (i.e. churches) as organizations share many of the same challenges faced by secular corporations. This case considers the experience of one church in particular and explores themes of leadership, conflict, change, and structure from an organizational behaviour perspective.

**MONCTON FLIGHT COLLEGE**

**Robert MacDonald**  
**Heather Steeves**  
*Atlantic Baptist University*

For the small or medium sized enterprise, decisions regarding strategic direction are often complicated by limited resources and situational effects. This case traces the historic development of the Moncton Flight College and presents a strategic decision that must be made regarding the organization's future.

**PASSIONATE ABOUT THE ARTS: FOG FOREST GALLERY OVER THE YEARS****Chelsa McLaughlin (student)****Gina Grandy***Mount Allison University*

Janet Crawford, owner of the Fog Forest Gallery, has always been involved in the arts in some capacity. As the primary employee and decision maker Janet's approach to business is flexible and easy going, yet professional in nature as she takes great care in displaying the work of every artist working with her. Her identity informs the culture of her gallery and her collaborative approach extends to her relationships with customers, artists, competitors and the community as a whole. She also plays an active role in the promotion of the arts and business development in Sackville, New Brunswick. The small town atmosphere is what makes the town so special, yet the limited size of the market is one of the greatest ongoing challenges she faces.

**LOOKING BEYOND THE GRIDIRON: LEADERSHIP AND CHANGE IN DIFFICULT TIMES****Daniel Parker (student)****Gina Grandy***Mount Allison University*

Michael Bailey, captain of the varsity football team, has been asked by the head coach to reflect upon his experiences over the past five years with the team. The head coach is interested in hearing what Michael thinks about the future of the team. Michael has experienced two different leadership styles under two head coaches while a part of the team. It has been a hard five years. After a long period of 'no wins' finally the team seems to be turning it all around.

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## THE CONVENIENCE STORE PURCHASE DECISION

**Shripad G Pendse**

*Saint Mary's University*

**P. Jagam**

*University of Guelph and The NORM Group*

In July 2007 Maya and Jay (M&J) were considering whether they should go ahead with the purchase of a convenience store. The store, located some 20 kilometers from their home, had been advertised for sale in June. Maya and Jay were searching for an opportunity to support themselves and their teenage son after retirement. Did it make sense for them to invest a portion of their savings into a business in which they had little former experience, and in an industry that was rapidly changing? Would their previous work experiences help them to succeed in this new business?

## FAMILY DINNERS: A TRADITION OF STYLE, ELEGANCE AND QUALITY

**Donna Sears**

**Cal Cipolla (student)**

*University of New Brunswick Saint John*

Sheffield and Eddington takes pride in their long history and place in the city of Saint John, New Brunswick. As one of the oldest businesses in the community and a fifth-generation family run business, they are committed to their values and mission. The company has survived tough times and huge challenges in the business environment by being innovative, creative and tenacious. The company is equally committed to the tradition and sophistication inline with their products and reputation. Sheffield and Eddington is a company that clearly finds itself in the maturity stage of the product life cycle and the latest challenge for the business is to remain competitive, remain a business leader in its community and avoid entering a period of decline.

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# Finance

## APPLICATION OF THE BINOMIAL OPTION PRICING MODEL TO GOVERNMENT POLICY ANALYSIS

**Jie Xiong**

*Memorial University of Newfoundland*

The purpose of this study is to demonstrate the potential of the Binomial Option Pricing Model (OPM), a financial asset-pricing model, in examining the effectiveness of government policy. The paper proposes and tests three hypotheses: that despite the changes in economic variables a Binomial OPM is able to evaluate the practical value the government program offers to the public; that the Binomial OPM is able to evaluate the different values the government policy has on different target groups; and that the Binomial OPM is able to measure the cost effectiveness of the government program.

## BOND INDEXING AND FOREIGN EXCHANGE RISK MANAGEMENT

**Trevor W. Chamberlain**

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*McMaster University*

The effects of unstable commodity prices on export earnings and economic development have been analyzed and debated for many years. In those instances in which unstable commodity prices are an important source of risk for developing countries, compensating actions are required. One relatively inexpensive, but potentially effective, response is the linking of the principal and/or interest of external borrowing to one or more major commodity exports. The social cost of linking debt is likely to be small compared with that of compensating arrangements that interfere with the resource allocation function of the market.

## AN EMPIRICAL ANALYSIS OF CANADIAN SHAREHOLDER PROPOSALS

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This paper studies shareholder proposals in Canada during the period of 2001-2005. In recent years Canadian shareholders have become more active in submitting proposals that cover a variety of subjects. The voting analysis shows that filer identity and proposal subject are important influences on voting outcomes. Proposals submitted by institutions or coordinated shareholder groups gain more support than those submitted by individuals. Overall, the market does not respond to news about shareholder proposals.

# Gender & Diversity

## A GROUNDED THEORY APPROACH TO UNDERSTANDING GENDER DIFFERENCES IN THE EXPERIENCES OF MEMBERS OF BOARDS OF DIRECTORS

**Kristina King (student)**

**Kelly Dye**

*Manning School of Business*

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Current research on female participation on boards has been highly quantitative, and has demonstrated that there is an issue of lack of female involvement on boards. Very little qualitative analysis has been done to answer the question of why this trend is continuing. This study, through use of the long interview (McCracken, 2002), examines the experiences of both male and female board members. The primary question for analysis spoke to the interpretation of gender dynamics on boards. Our results provide some insight into the reasons why female representation continues to lag; namely, latent biases and prejudices and preconceived notions about required experience, training, appropriate career paths, and personal characteristics. Perhaps this insight can help us to address such biases and preconceived notions, and create new understandings of what board members 'ought to look like'.

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**COMPOSITION AND EXPERIENCE OF CORPORATE BOARD MEMBERS THROUGH A FEMINIST LENS**

**Elana Morris (student)**

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Implicit in many studies of gender misrepresentation on corporate boards is the assumption that improvements in female director representation will lead to equality in the boardroom. Examining the experiences of female corporate directors is one approach to gaining insight into boardroom processes in order to investigate this assumption of equality. A semi-structured, open ended questionnaire was developed from the feminist literature and telephone interviews were conducted to gain a deeper understanding of the experiences of women on corporate boards. We found that, through both language and processes, gendered behavior is maintained in the boardroom despite board composition. This finding leads us to believe that equality cannot be felt without first addressing how corporate boards are socially constructed in a gendered manner through the mechanisms of power, voice and visibility. The contribution made by this study is twofold. First, our interpretive approach allowed us to better understand the experiences of women directors. It is through these narratives that the impact of gendered processes became clearer. Second, our particular feminist lens allowed us to see beyond representation to how power remains problematic in these social structures.

# Human Resources & Information Resources

## MBA'S MOTIVATION TO LEARN AND PERCEPTION OF AGE

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This study examined the impact employer's support of an employee's education has on their performance and motivation to learn. Many organizations now emphasize the need to invest in employee development programs. The current study also assessed the impact a person's age and perception of their age on their motivation and their performance.

The survey of 88 MBA students found a significant relationship between a person's total motivation to learn and a person's age, and between a person's total motivation and their perception of their age and their age category. Furthermore, a significant relationship was found between a person's motivation to learn and the rating they gave the course they were taking.

## EMPLOYMENT STATUS AMONG YOUNG ADULT WORKERS IN ATLANTIC CANADA<sup>1</sup>

**Gordon B. Cooke**

*Faculty of Business Administration*

*Memorial University of Newfoundland*

Working conditions are polarized as a substantial number of Canadians have part-time and/or temporary employment status which is associated with unfavourable working conditions. Young workers in particular are more likely to have non-standard employment status and/or poor quality jobs. There is also regional disparity with economic conditions being weaker in Atlantic Canada than elsewhere. Due to these issues, acquiring education is critical since educated workers are likely to have more and better employment prospects now and in the future. This paper analyzes these issues among Canadian workers between the ages of 23 to 30.

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<sup>1</sup> This research is supported by a Vice-President's Research Grant from MUN. Data was accessed remotely via Statistics Canada with the patient assistance of Yves Decady. The expressed opinions do not represent the views of Statistics Canada.

# Law

## POLITICAL TURNOVERS, CONTRACT DAMAGES, AND LONG TERM GOVERNMENT CONTRACTS

**Alan Chan**

*Atlantic Baptist University*

Government contracts may be inherited by policy makers of different political viewpoints. In this paper, I propose a model in which the incumbent policy maker, the potential inheritor and all voters make strategic choices upon undertaking a long term government contract. Given that the incumbent knows it may not remain in power for the ending term of the contract, it has incentives to execute contracts that are potentially difficult to re-negotiate. Forward looking voters, after observing the contract entered into by the incumbent, determine the next government. The potential inheritor, based on the terms and conditions of the contract, will choose to abide, terminate or re-negotiate the original contract. This model predicts the following: (1) when the political parties' viewpoints are "similar", the incumbent will select contracts that make re-negotiation impossible; (2) when political parties' viewpoints are "different", the incumbent will have the strongest incentive to sign contracts that are shorter in duration than optimal under expectation damages; and (3) when political parties' viewpoints are "far different", stipulated damages will induce the most efficient outcome upon a political turnover.

## PRIVACY LAW IN 2007

**Steven Enman**  
*Acadia University*

The federal government enacted legislation in 2001 to protect personal information in the private sector. The legislation required that it be reviewed every five years after its enactment. The first review has recently been completed and recommendations presented to government. This discussion paper outlines the genesis of the legislation, its purposes, and key features. It then chronicles the implementation of the law and the developments (legal and otherwise) during its first five years in force. The review process and the resulting recommendations are discussed. The paper concludes with a discussion of issues relating to privacy law and the significance of the law in the larger picture of e-business and consumer confidence.

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# Management Education

## LEARNER CENTERED AND REALISITIC LEARNING ENVIRONMENTS: THE CASE OF THE ACADIA MANAGEMENT INTERVIEW SERIES VIDEO DATABASE

**Clive Reynoldson**

*Edith Cowan University*

**Conor Vibert**

*Acadia University*

This paper suggests that in order to maximize the positive impact of investment in ICT, academics should develop learner centred and realistic learning environments that are characterized by authenticity, engagement and professionalism. These three characteristics are used to appraise Acadia University's Management Interview Series Video Database, (AMISVD) a platform that encompasses streaming video and web-based interactive software. It builds on a paper by Reynoldson and Vibert (2005) that sought to establish the cause for the unexpectedly slow worldwide uptake of ICT (e-learning) in business education and develop a framework for better targeting ICT-enabled education investments in the future.

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# Marketing

## DETERMINANTS OF SATISFACTION OF FIRST-TIME AND REPEAT MUSEUM VISITORS

**Danielle A. H. Dorn & Rosemary Polegato**

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Museums compete with other attractions that offer entertainment. The purpose of this study is to examine the determinants of satisfaction of first-time and repeat museum visitors. A services-marketing approach was taken to sketch a profile of the two visitor segments, and to study six aspects of satisfaction with a museum visit.

## AN EXPLORATORY EXAMINATION OF NEGATIVE EMOTIONS AS MOTIVATORS OF CONSUMPTION

**Harish Kapoor**

*Acadia University*

Emotions constitute a key component of consumer decision making and have been examined widely in the context of marketing. However, most studies on emotions in marketing have examined how certain marketing stimuli results in a given emotional response on the part of consumers and the role of emotions as antecedent has not been ignored. Similarly, research in marketing has focused on positive emotions and the role of negative emotions has not received much attention. The present study explores the role of negative emotions as motivators for consumption. An exploratory study was conducted as a first step to fill this gap and analysis suggests that negative emotions result in action tendencies resulting in consumption which otherwise would not have been undertaken.

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# Management of Information Systems

## **CHALKBOARDS AND FACEBOOKS™: THE GROWING DISCONNECT BETWEEN THE ELECTRONIC WORLD OF STUDENTS AND EDUCATORS**

**Gregory Fleet**

*Faculty of Business*

*University of New Brunswick at Saint John*

Creating opportunities for learning requires attention be paid to four key elements: learner, mentor, knowledge and environment. Concerning the last of these, universities today are physically much as they have been for centuries. Formal study and learning takes place in lecture halls, labs, libraries, using the familiar tools of textbooks, notebooks, chalkboards, and writing instruments. In the last few decades, though, computing devices and their networking are challenging these spaces and tools in fundamental ways. Currently, most institutions are seeking to find a comfortable balance between the existing physical and new virtual environments. This paper examines these newer social networking tools and services and how they present both challenges and opportunities for the learner, mentor, the creation and dissemination of knowledge, and the environments in which this players and activities take place.

## **MOBILE PHONE: WHO USES IT, AND WHY?**

**G rard Fillion**

**Thang Le Dinh**

*Faculty of Administration*

*University of Moncton*

Individual adoption of technology has been studied extensively in the workplace (Brown and Venkatesh 2005). Far less attention has been paid to adoption of technology in the household (Brown and Venkatesh 2005). Obviously, mobile phone is now integrated into our daily life. Indeed, according to the more recent forecast of Gartner Research, 986 millions of mobile phones have been sold throughout the world in 2006 (Ouellet 2006). And, as the tendency is showing up, mobile phone use will be continuously increasing in the future. The purpose of this study is then to investigate who uses a mobile phone, and why?

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# Organizational Behaviour

## **HAVE YOU HEARD THE LATESTEST ABOUT GOSSIP? EXPLORING THE FACTOR STRUCTURE OF INFORMAL INTERPERSONAL COMMUNICATION BEHAVIOR AT WORK**

**Anthony R. Yue, (PhD Student)**

*Saint Mary's University*

Gossip and rumor are ubiquitous features of human social experience. The role of gossip and rumor in the organizational setting of the workplace, however, has been poorly explored (Foster, 2004). This is likely due to the dearth of validated quantitative tools suitable for such inquiry (DiFonzo & Bordia, 2007). In this study we conducted a factor analysis to arrive at a single factor solution describing the construct of informal interpersonal communications behavior at the workplace. This factor account for 73.20% of the variance explained in the sample. Our findings also include significant correlations between informal interpersonal communication at work and attitudes towards gossip, influence tactics at work, and OCB. We note that with further validation of this scale we may begin the exploration of the roles and functions of workplace-based informal interpersonal communication through self-reportage of behaviors and in doing so, move beyond the literatures' focus upon attitudes towards these constructs.

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# Organizational Theory

## THE BOUNDARYLESS ORGANIZATION

**Sandi Findlay-Thompson**

*Department of Business and Tourism  
Mount Saint Vincent University*

The boundaryless organization is a contemporary approach to organizational design. Organizations today find that they are able to operate more effectively by remaining flexible and unstructured. In other words, not having a rigid, traditional organizational structure that is predefined allows for faster responsiveness to opportunities especially in global business environments. But is this type of organization applicable in the not-for-profit sector?

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# Undergraduate Papers

## PLACE-MAKING AND THE MOVEMENT OF PLACE: WORK, HOME, AND IN-BETWEEN

**Alastair Collier (student)**

**Terrance G. Weatherbee**

*Acadia University*

Within the western capitalist context, it is at the intersection of space and time where lived experience is enabled. As bound by space and time, activity happens in places we create. Within the organizational literature, activity and its relation to work, play, and place remains mostly understudied and unacknowledged. Given the hegemonic nature of the situated logics associated with the construction of place, and its intimate relation to the activity of work; this lacuna is viewed as problematic. Using place-making as a theoretical lens, western conceptualizations of place and their relation to work and home are deconstructed.

## THE IMPORTANCE OF HUMANITIES AND SOCIAL SCIENCE COURSES IN A BUSINESS PROGRAM

**Vera Stanojlovic (student)**

**Faculty of Management**

*Dalhousie University*

This essay explores the topic of why social sciences and humanities courses are important in the development of a well-rounded education in a business program. Presenting points about the enhancement of communication, analytical and creativity skills, the paper argues that humanities and social science courses will improve a student's ability to convey their thoughts and ideas in a more concise manner. Most importantly, this paper pushes for implementing these mandatory courses to decrease the large gap that has emerged between the rest of society and the business world.

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**STUDENTS' EVALUATIONS OF TEACHING: A VALIDATION STUDY OF A NEWLY DEVELOPED EVALUATION SCALE**

**Amy McMurray (Student)**

*Sobey School of Business*

**Dr. Victor Catano**

*Department of Psychology*

*Saint Mary's University*

The intent of this study was to further the development of the newly developed evaluation scale, the Students' Evaluation of Teaching (SET), and to establish its convergent validity with an established scale of teaching evaluation. The scale in which the SET will be correlated with is the SEEQ, which is the current evaluation instrument used at Saint Mary's University.

This study set out to test the following hypotheses: Hypothesis1: Upon completion of a conventional factor analysis, all dimensions on the SET will load highly onto one factor; Hypothesis2: Overall evaluation of the SET and SEEQ will have a strong positive correlation; Hypothesis3: Scores on the SEEQ will have the weakest relationship with the Availability dimension on the SET; Hypothesis4: Scores on the SEEQ will have the weakest relationship with the Problem Solving dimension on the SET; Hypothesis5: Scores on the SET will have the weakest relationship with the Workload/Difficulty dimension on the SEEQ; Hypothesis6: Scores on the SET will have the weakest relationship with the Learning/Value dimension on the SEEQ.

Two-hundred students at Saint Mary's University served as the subjects for this study. From this sample, one-hundred and ninety-five surveys were extracted as usable data to analyze. All of the subjects involved were asked to recall one professor whom they have had instruct them in the past twelve months, but not currently instructing them this semester. The subjects were to complete both the SEEQ and the SET while having the one professor in mind. It was strongly emphasized in the written and verbal instructions that the identity of the professor and the course must not be disclosed.

Hypotheses H4 and H6 were not supported from the resulting data, however all other proposed hypotheses were supported. The conventional factor analysis and Pearson correlations demonstrated that convergent validity was achieved. The overall project as proposed by Catano et al. (2006) can now successfully move into phase 3 and faculty data can be collected. It is one step closer to becoming an alternative instrument to the traditional SETs.