

# **Journal of Organizational Psychology**

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# Journal of Organizational Psychology

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# Worker Skill Estimation from Crowdsourced Mutual Assessments

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*Current approaches for estimating skill levels of workforce either do not take into account the expertise of the recommender, or require intricate and expensive processes. In this paper, we propose a crowdsourcing algorithm for worker skill estimation based on mutual assessments. We propose a customized version of PageRank algorithm wherein we specifically considered the expertise of the person who made assessments. By implementing our algorithm on 15 real-world datasets from organizations and companies of varying sizes and domains and by using leave-one-out cross validation, we find that the results are highly correlated with the ground truth in datasets.*

## INTRODUCTION

### Problem Space

In this paper, we study expertise management in organizations and focus on worker skill estimation problems. An efficient algorithm which can successfully assess worker abilities has dozens of applications, such as project team formation, resource planning and succession planning.

To clarify the scope of our research, we first define three key areas in the expertise management problem.

1. Skill modeling: In a knowledge-intensive crowdsourcing organization, each worker has different skills in various domains (Roy, et al., 2015, pp. 467-491). In order to accomplish a task which requires some specific skills, we first need to identify which skill each worker has. Skill modeling is a method to label and construct skill models. A naive approach would use succinct descriptions to tag different skills. Other well-designed methods can be constructing hierarchical skill trees (Mavridis, et al., 2016, pp. 843-853).

2. Skill estimation: Workers may have different levels of proficiency for a particular skill. Skill estimation grades a worker's skill by a deterministic value or provides a probability distribution function to describe the worker's performance (Rahman, et al., 2015, pp. 1142-1153).

3. Automated team formation: Given a pool of workers with different skills and a task with some requirements, we need to select right team members to undertake the task. Our choice should satisfy various criteria and give us optimized results. In real implementations, besides skill requirements and skill levels, we need to consider more variables, such as success probability, cost of failure, team coordination scores and cost overheads (Anagnostopoulos, et al., 2012, pp. 839-848).

Although many expertise management processes highly rely on the the second part, worker skill estimation, accurate skill estimation of individual workers is known to be a complex problem. In this paper, we focus solely on solving the skill estimation problem and propose an feasible solution.

### **Review of Related Work**

Skill estimation has various approaches. One recent work is reconstructing workers' skill level based on evaluation results of tasks undertaken by different groups of people (Rahman et al., 2015, pp. 1142-1153). The models considered in that work mainly contain two skill aggregation functions. 1. The SUM function: The skill of a team is defined as the sum of skill levels of individual workers. 2. The MAX function: The skill of a team is defined as the maximum value of skill levels in that team. This work depends on the data of completed tasks, which in their setting come from basketball games and published papers. In many industries, such data may come from the completion of "projects", and the suggested model may then be applicable.

An entirely different mechanism of assessing skills is to allow workers to endorse each other for skills and use this data to estimate skill levels. Popular social media website LinkedIn provides a form of this endorsement functionality by allowing two connected members to endorse each other's skill ("Skill Endorsement - Overall," 2016). The level of skill is assumed to be proportional to the number of endorsements on that skill by the user's first degree connections. However, this model does not take into account the rating of the person giving the endorsement. For example, consider the following situation: User  $u_1$  gets 10 endorsements on a particular skill, suppose, "Impressionist Painting" from his friends who themselves do not have any knowledge of art. User  $u_2$  gets 5 endorsements on the same skill by 5 different world-renowned painters. It certainly appears dubious to conclude that user  $u_1$  has higher level of "impressionist painting" skill than user  $u_2$ .

In Ding (2011), authors apply PageRank algorithm to the field of citation analysis. Their experimental data showed that PageRank algorithm is a robust and accurate measurement of scientific papers. They treat citations in one paper as outgoing links to other papers and citations from other papers as incoming links of this paper. Reagans, and Zuckerman (2001), also cover some similar ideas. Another paper shows that ranking authors in a co-citation network based on PageRank indicators gives us a valid result which is similar to normal citation rank (Ding, et al., 2009, pp. 2229-2243).

Moreover, Zhang, Ackerman, and Adamic (2007), use PageRank algorithm and HITS algorithm to compute expertise level of users in a Java question and answer forum. It concludes that network structural characteristic matters when we evaluate expertise of users in a system. Their experimental result also shows that PageRank algorithm does nearly as well as human raters in expertise ranking.

We believe that a precise estimation should use as much information as the crowdsourcing system could directly or potentially provide to us. So to give an efficient algorithm, we not only consider quantity value in each mutual assessments, but also the quality of each assessment. Two underlying reasonable assumptions of this work are: 1. Workers with high skill level are likely to receive endorsements with higher scores from other workers. 2. Evaluations from high skill level workers are more important than evaluations from low skill level workers. These assumptions are consistent with real-world data models. To take advantage of our crowdsourcing system, we collect mutual assessment data and derive estimation scores for workers. At a high level, our algorithms take results of crowdsourced mutual assessment as input and output estimation scores on each worker's skill.

### **Structure of Paper**

The rest of the paper is organized as follows. In the following section, we present the underlying data model to formalize the problem. Then in the section for algorithm and implementation, we describe how we apply the original PageRank algorithm to our problems and introduce a customized version. We also discuss implementations and convergence properties of those algorithms in that section. In the experiment

section, we use cross validation to evaluate the accuracy of our result and demonstrate how the dumping factor influences the accuracy. Besides, we also present experimental data to show our algorithms is efficient for a large organization. Finally, we make our conclusion, discuss features and limitations of our mechanism and highlight some possible future works.

## DATA MODEL

We use the following data model. Assume we have  $n$  workers. We notate them as a set  $W = \{w_1, w_2, \dots, w_n\}$ , in which  $w_i$  represents the  $i^{th}$  worker in our worker pool. Similarly, we have a set  $S = \{s_1, s_2, \dots, s_m\}$  to represent  $m$  different skills, and a set  $T = \{t_1, t_2, \dots, t_l\}$  to represent  $l$  different timings at which assessments are made. Following are the input and the output of our algorithm.

**Input:** A four dimensional array  $A_{n \times n \times m \times l}$  where each element is a numerical score in some predetermined scale, recording every assessments. The element  $a_{ijkq}$  is the score that  $w_i$  gives to  $w_j$  for skill  $s_k$  at time  $t_q$ . If  $a_{ijkq} = 0$ , it means either  $w_i$  does not assess  $w_j$ 's skill at  $t_q$  or  $w_i$  does not think  $w_j$  has the skill  $s_k$ . We call array  $A$  the assessment matrix. We consider that clearly the assessment matrix is a very sparse matrix, which reflects the practical observation that only a few workers endorse other workers, and that too, for only a subset of skills.

**Output:** A two dimensional array  $V_{n \times m}$  where each element  $v_{ij}$  is the numerical score in some pre-determined scale that represents estimated skill level of worker  $w_i$  for skill  $s_j$ . We call array  $V$  the skill estimation value matrix.

## ALGORITHM AND IMPLEMENTATION

Generic mutual assessments include two typical types: one is that workers use 1 or 0 to indicate whether they endorse others' skills or not, another is that each of them gives a numerical evaluation to others' skills in a pre-agreed scale. In our paper, if our input is the first type, we call it the endorsement problem, otherwise we call it the evaluation problem.

In case we have multiple assessments for the same combination of sending worker, receiving worker and skill, we take the latest assessment as the valid assessment, because we are only interested in estimating the current skill level. We also assume skills are independent from each other, meaning an estimation on one skill will not effect estimations on other skills for the same worker. In order to make the description of our algorithm compact, we focus on estimating just one single skill, because the generalization of multiple skills is relatively trivial. Therefore we can simplify our input model as a matrix  $A_{n \times n}$  and the output model as one vector  $V = \{v_1, v_2, \dots, v_n\}$ .

### Endorsement Problem

Using the data model built before, we add an additional constraint in this version of problem:  $a_{ij} \in \{0, 1\}$ . Inspired by the idea of PageRank (Page, et al., 1999), we can define the skill estimation function of our algorithm as:

$$v_i = \beta \sum_{j=1}^n \frac{v_j}{d_j} + \frac{1 - \beta}{n} \quad (1)$$

In above equation,  $d_j$  means the total number of endorsements made by  $w_j$ , so

$$d_j = \sum_{i=1}^n a_{ji} \quad (2)$$

and  $\beta$  is called the damping factor which is in the interval  $[0, 1)$ . Our definition assumes that every worker endorses at least one other worker, such that  $d \neq 0$  for any worker. If we present the input as a directed graph,  $d_j$  is the out degree of node  $j$ . We handle the case in which the out degree of some nodes are zero when we discuss actual implementations. We postpone the choice for factor  $\beta$  in later section.

Because our algorithm is defined in a recursive way like PageRank, a naive recursive implementation will fail. To implement the algorithm, we first need to preprocess our data into the form of Markov chains and then use power iteration to compute results (Leskovec, Rajaraman, & Ullman, 2014). Now we briefly describe the preprocessing step for primary data.

Given input matrix  $A$ , we define  $A'$  as:

$$A' = A + h^T e \quad (3)$$

The row vector  $h$  is totally dependent on  $A$ :

$$h_i = \begin{cases} 1 & \text{if } \sum_{j=0}^n a_{ij} = 0 \\ 0 & \text{if } \sum_{j=0}^n a_{ij} \neq 0 \end{cases} \quad (4)$$

and  $h^T$  is its transpose matrix. The vector  $e$  is a special  $1 \times n$  matrix in which all elements is equal to 1. Then we can compute a column vector  $d$ :

$$d = A' \cdot e^T \quad (5)$$

We take the reciprocal of each element in  $d$  to define matrix  $B$  and let element

$$b_{ij} = \frac{1}{d_i} \quad (6)$$

so we have a  $n \times n$  matrix  $B$ . Then we define another  $n \times n$  matrix  $C$  as the Hadamard product of matrix  $A$  and  $B$ :

$$C = A \circ B \quad (7)$$

Because it is an element-wise product, it defines element:

$$c_{ij} = a_{ij} \cdot b_{ij} \quad (8)$$

Let our initial state vector be a column vector  $r^{(0)}$  in which elements are all  $1/n$ . Define Markov transition matrix be  $M$ :

$$M = \beta C + \frac{1 - \beta}{n} e \cdot e^T \quad (9)$$

Then our goal is to find  $r^{(t+1)}$ , the state vector after  $t$  iterations, which satisfies:

$$r^{(t+1)} = M \cdot r^{(t)} \quad (10)$$

Now it is the same as finding an non-zero eigenvector for matrix  $M$ . Since it can be computed efficiently by power iteration algorithm, we skip those implementation details.

Because our Markov transition matrix is stochastic, aperiodic and irreducible, so vector  $r$  will always converge to a unique positive stationary vector, which is exactly equal to the vector  $v$  we are urging to compute.

### Evaluation Problem

In this problem, for the same data model,  $a_{ij}$  is an arbitrary real number in a given scale based on different scenarios. Now the element  $a_{ij}$  does not just show a simple endorsement from  $w_i$  to  $w_j$ , instead it means the weight of that endorsement. In another word, given an evaluation scale,  $a_{ij}$  is the score  $w_i$  graded  $w_j$  on a specific skill. We customize the original PageRank algorithm and define the new estimation function as:

$$v_i = \beta \sum_{j=1}^n \frac{v_j \times a_{ji}}{d_j} + \frac{1 - \beta}{n} \quad (11)$$

Now  $d_j$  denotes the summation of evaluation scores made by  $w_j$ . Again we made a similar assumption for this definition: every worker evaluates at least one worker with a nonzero score. Compared to the endorsement problem,  $v_j$  is not distributed evenly to his co-workers, instead  $v_j$  is given to other workers differently according to their skill levels. Because the data processing and implementation are similar with the first problem, we will not go through them again. The convergence property remains for the same argument.

## EXPERIMENTAL EVALUATION

We conduct experiments on real-world datasets for the evaluation problem. The main purposes are testing the correctness of our algorithm and also trying to find out how the damping factor  $\beta$  dominates the accuracy of our method.

### Implementation

We first collect mutual assessment data of 15 different organizations and companies for various skills on more than 2000 workers from BizMerlin database. Each dataset contains records of assessment score from one worker to other workers in the same organization for one single skill.

Before we take those datasets as input, we process them in the following way. On one hand, since different organizations have their own evaluation scales, we first normalize all scores to the range  $[0, 10]$ . On the other hand, because there might be multiple scores from one worker to another worker in one dataset from different time periods, we pick the latest one.

Then we implement our algorithm on them with the damping factor  $\beta = 0.85$  as original PageRank. Table 1 describes our 15 input datasets from a statistics perspective and their convergence properties.

**TABLE 1**  
**STATISTICS ON DATASETS**

<b>OID</b>	<b>n</b>	<b>m</b>	<b>RECORD DENSITY</b>	<b>NUMBER OF ITERATIONS</b>
1	50	86	1.72	6
2	93	137	1.47	5
3	180	813	4.51	5
4	196	641	3.27	9
5	170	456	2.68	7
6	196	886	4.52	10
7	121	241	1.99	9
8	59	132	2.24	8
9	184	604	3.28	7
10	84	241	2.87	9
11	169	296	1.75	5
12	194	1809	9.32	3
13	89	208	2.34	5
14	70	191	2.73	10
15	152	665	4.38	7

We use OID to denote different organizations, use  $n$  to demote the number of workers and  $m$  to denote the number of assessment records. Because we use power iteration to compute results, we also record the total number of iterations each dataset took before the state vector  $r$  gets stationary. Furthermore, we compute the ratio  $m$  to  $n$  and call it the record density for later convenience.

In these experiments, we observed that the proposed algorithm never takes more than 10 iterations to finish on the datasets despite the size of input.

### **Correctness**

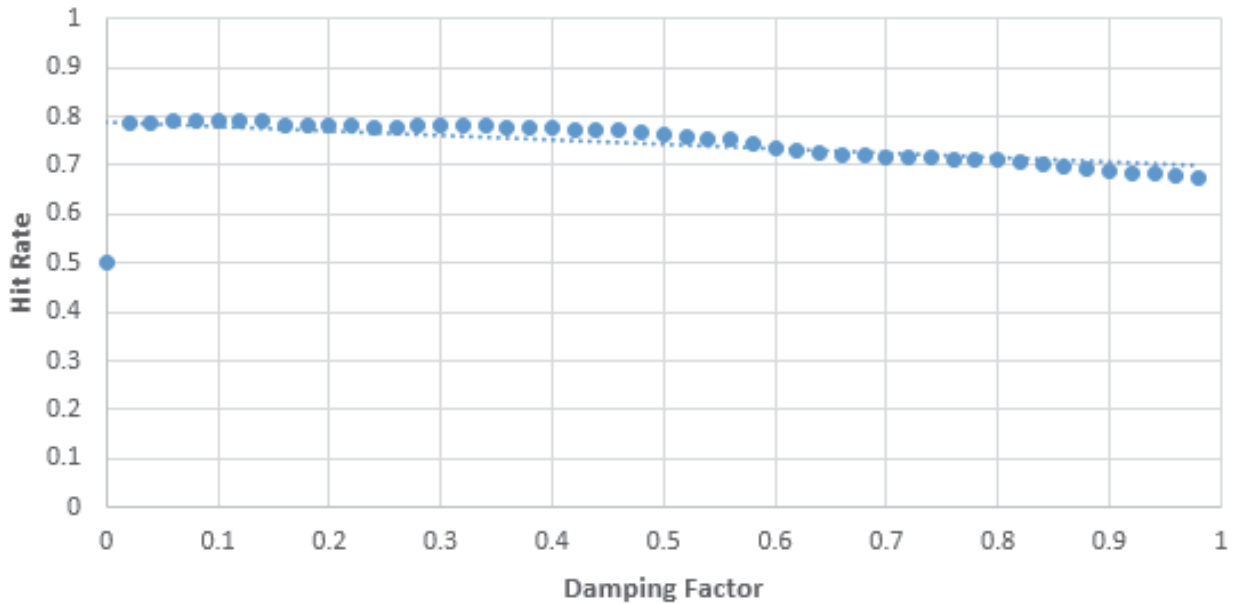
Now we adopt leave-one-out cross validation to evaluate the accuracy of our results. For the dataset of  $n$  workers, if we take worker  $w_i$  as the test element who made assessments to more than one workers, we pick the worker received the highest score from  $w_i$  as the most skilled worker  $w_H$  and the worker received the lowest score from  $w_i$  as the worst skilled worker  $w_L$ . We assume the ground truth for this test element is that the estimation score for  $w_H$  should be higher than the estimation score for  $w_L$ . If the ground truth is hold in estimations from the rest  $n - 1$  workers, we say it is a hit, otherwise, we call it an error. If the total number of hits is  $h$ , we define the hit rate  $\mathcal{D}$  as:

$$\mathcal{D} = \frac{h}{n} \tag{12}$$

The higher  $\mathcal{D}$  we get, higher is the accuracy of our results.

We take the average hit rate of 15 datasets to show the correctness of our algorithm. At the same time, we change the value of damping factor from 0 to 0.98 with 0.02 as the interval. We represent results in a scatter diagram (see Figure 1).

**FIGURE 1**  
**RELATIONSHIP BETWEEN OVERALL HIT RATE AND DAMPING FACTOR.**

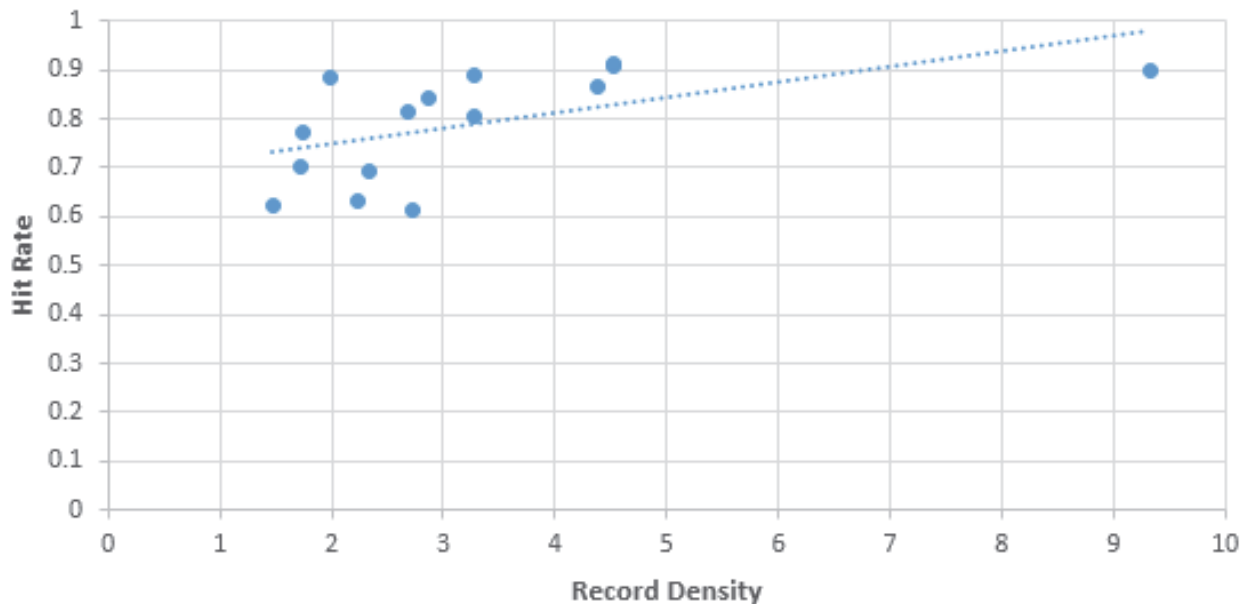


From Figure 1, we make two observations: 1. Our algorithm is valid when the damping factor is in the interval  $[0.02, 0.98]$ . When  $\beta = 0$ , our results are independent from mutual assessments and the expectation value of hit rate is 0.5 which is also reflected by experimental data. For other damping factor values, the overall hit rate keeps relatively high, which means our results are accurate and meaningful. 2. Overall hit rate is decreasing when the damping factor is increasing. The maximum hit rate 0.79 is reached when  $\beta = 0.1$  and the minimum 0.68 is reached when  $\beta = 0.98$ .

Finally, we pick the ideal value 0.1 for factor  $\beta$  and test how the change of record density effects the hit rate. We also depict results for our datasets in a scatter diagram (see Figure 2).



**FIGURE 2**  
**RELATIONSHIP BETWEEN OVERALL HIT RATE AND RECORD DENSITY**



The linear regression function shows a distinct increase of hit rate when the record density gets higher. An intuitive interpretation is that when more feedback are collected from the crowdsourcing system, our algorithm will give us a more accurate result.

Therefore, we draw the conclusion that our algorithm is efficient and accurate for the skill estimation problem and our mechanism expects an input dataset with a high record density.

## CONCLUSIONS AND DISCUSSION

In this paper, we propose a new mechanism to solve skill estimation problem. Our algorithm compute estimation scores on workers' skills based on mutual assessments in a crowdsourced system. We treat an organization as a directed graph and each assessment as an weighted edge from one worker to another. Borrowing the idea of PageRank, we specifically consider the weight of each endorsement and develop a customized version algorithm fitted in our scenario. Then we implement the proposed algorithm on 15 real-world datasets collected from organizations of different skill domains and sizes. Using leave-one-out cross validation, we find that experimental results are highly correlated with the ground truth, so we conclude our proposed algorithm is efficient and meaningful.

Future works on skill estimation can cover many of the following issues.

1. There are harsh raters and mild raters in our system. Building an evaluation base line database may allow an estimation system to take account of differences between raters more effectively.
2. Some users are more likely to participate in mutual assessments than others. It might lower the importance of scores from those active raters.
3. In practice, a few workers may have very large variance in their performance when they work on different tasks, which means their skill level can be better represented by a probability distribution function instead of a deterministic value.
4. The algorithms proposed in this work give a result of one snapshot in time. In some real world applications, the skill level of users varies fast, and the evaluation from one user to another also changes quickly. Therefore, an algorithm that can effectively use the different endorsements (for the same combination of workers and skill at different time), may be of significant practical value.

5. When a worker leaves from one organization and joins another, their skill estimation data in previous organization is lost and is not correlated with the corresponding worker identity in the next organization. This may be more of an implementation consideration and not a research topic, but may have significant practical value nevertheless.
6. Customized PageRank algorithm proposed in this work is one type of weighted PageRank but is different from other published versions (Xing, & Ghorbani, 2004, pp. 305-314). It may be interesting to consider various versions and see if one works better than others.

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# **The Multi-Generational Nursing Workforce: Analysis of Psychological Capital by Generation and Shift**

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*The purpose of the study was to identify if psychological capital scores varied by generation and shift. 203 nurses, from all shifts at a 350 bed community hospital, completed the 24-item psychological capital questionnaire and descriptive survey questions. Nurses' overall psychological capital scores and self-efficacy significantly varied by generation, with Baby Boomers having the highest overall level of psychological capital, followed by Generation X, and Millennials. Self-efficacy was greater for nurses working on day shift, as compared to night shift. Nurse Leaders should examine the role of psychological capital and intervention initiatives for retention, productivity, and improved patient care.*

Technology, health care reform, and a nursing shortage have shaken the core foundation of healthcare. Patient acuity in hospital settings continue to increase, while at the same time patient satisfaction, patient outcomes, and patient length of stay have become a priority (Moore, Everly, & Bauer, 2016). Structures in health care settings are becoming less hierarchical and managers and supervisors are challenged with greater responsibilities and larger numbers of direct reports (Brunetto, Farr-Wharton, & Shacklock, 2012). The patient population is becoming more diverse and the diversity of nurses themselves adds to the turmoil. "Many nurses work in unhealthy settings where disruptive nurse relationships have become the norm" (Moore, Leahy, Sublett, & Lanig, 2013, p. 1). Burn out and turnover are common outcomes to the conditions nurses are exposed to (Moore et al., 2013).

The current nursing workforce in the United States includes five generations of nurses: Traditionalist, Baby Boomers, Generation X, Millennials, and Gen Z. Each group offers unique characteristics and adds to the complexity of patient care and nurse relationships. With the current nursing shortage, organizations are seeking to retain the retiring Baby Boomers, and recruit new graduate nurses (NGNs), whom are often Millennials and now Gen Z. "New graduate nurses are particularly vulnerable to unsupportive health-care work environments as they require opportunities to develop both confidence and their ability to practice independently (Benner, 2001; Hodges et al., 2008; Dyess & Sherman, 2009; Cleary et al., 2013)" (Stam, Laschinger, Regan, & Wong, 2015).

The World Health Organization (2006) considers nurses as the backbone of healthcare systems and indicated that an effective workforce strategy has to be focused on three core challenges: improving recruitment, helping the existing workforce work more efficiently, and slowing the rate which workers are leaving the healthcare market. Recruitment and retention is a vital step to managing the nursing shortage,

with its own set of challenges. Replacement costs for turnover is high. The 2016 National Healthcare Retention and RN Staffing Report found the turnover rate for bedside registered nurses to be 17.2%, with an average cost of turnover ranging from \$37,700 to \$58,400. The result is an average hospital losing \$5.2M-\$8.1M each year. “Even a percent change in turnover would save the average hospital an additional \$373,200” (Nursing Solutions, Inc., 2016). Extensive training is mandatory for new nurse success and retraining for seasoned nurses, which can be costly for any organization. The retention of seasoned nurses will aid in the nursing shortage and help the organization to retain their foundation of nursing expertise. Providing a supportive and psychologically safe environment for nurses, especially NGNs, will aid in retention and lower turnover cost.

Aside from recruitment and retention, nurse leaders and human resource professionals are seeking out ways to help the existing workforce work more efficiently (WHO, 2006). The discussion of the multi-generational workplace has become a popular topic in the literature as nurse leaders seek to manage their workforce. Psychological capital (hope, self-efficacy, resilience, and optimism) (Luthans, Youssef, & Avolio, 2007) has also begun to enter the discourse on ways to manage nurse relations and nursing outcomes (Avey, Luthans, & Jensen, 2009; Baomah & Laschinger, 2015; Laschinger & Grau, 2012; Sun, Zhao, Yang, & Fan, 2011). This study will further add to this discussion, by examining psychological capital (PsyCap) among generational cohorts and between work shifts at a community medical center. PsyCap – a healthcare professional’s hope, self-efficacy, resilience, and optimism- impacts interaction with colleagues and patients, and the employee’s ability to cope with and implement change within the patient care delivery system.

Health care organizations are seeking out new ways to manage the complexity of patient care and the diversity of generations in their workforce. “Holding onto old notions and practices that no longer characterize the demands of the time will do nothing but exacerbate the conditions which facilitate the demise of nurses and nursing work” (Porter-O’Grady, 2001, p. 183). PsyCap can aid in managing the current complexities that exist for nurse leaders and should be explored.

### **Psychological Capital**

PsyCap is defined as “An individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans et al., 2007, p. 3). PsyCap is rooted in positive organizational behavior, “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002, p. 59).

PsyCap plays an important role in nurses work engagement and well-being. PsyCap explained 38% of variance in new nurses’ work engagement (Boamah & Laschinger, 2015). Specifically, in a study of NGNs, Laschinger and Grau (2012) linked PsyCap to positive relationship with their work, lower levels of burnout, and better physical health. PsyCap is moderately to strongly negatively correlated with compassion fatigue (Bao & Taliaferro, 2015), emotional exhaustion (Phillips, 2016), and work stress (Avey, Luthans, & Jensen, 2009). Higher PsyCap increases self-reported job embeddedness and performance of nurses (Sun et al., 2011).

Management is important to PsyCap. Bakri and Ali (2015) revealed that organizational justice partially mediated the effect of PsyCap on job burnout of nurses working in Pakistani hospitals. Additionally, positive PsyCap had a significant influence on customer orientation (Kim, Seo, Kim, & Min, 2015), and self-reported job embeddedness and performance of nurses (Sun et al., 2011).

PsyCap also aids in the workplace between co-worker relations. Roberts, Schere, and Bowyer (2011) found that PsyCap moderated the impact of stress and thus employees with high PsyCap were less likely to be uncivil to their coworkers. Eastman (2013), concluded that PsyCap provides a mild protection against being a target of workplace bullying.

PsyCap is an emerging discussion on managing nurse relations given the strong relationship with positive organizational outcomes. These findings suggest that PsyCap is an important variable to employee well-being, co-worker relations, and customer orientation. PsyCap should be considered as a tool for organizations to use in their effort to recruit, retain, and enhance nursing outcomes. Understanding PsyCap by shift and generational cohort can aid organizations in this initiative.

### Multi-Generational Workforce

There are currently five generations of nurses in the workforce in the United States. This multi-generational workforce has become a popular discussion over the last decade with practitioners. As the workforce has become more generationally diverse, practitioners are exploring ways to manage new graduates and the changing expectations of employees. In the past decade, there have been many articles and books focused on the differing values and behaviors by generation, as well as consulting services for organizations (Stark & Farner, 2015). A plethora of discussions exist, especially on managing millennial employees. Two streams of literature have emerged. One validating that characteristics of generations impact the workplace, and two, “empirical studies have been contradictory and therefore inconclusive suggesting that age/generational difference might not influence perceptions to the extent that human resource and management practitioners have been led to believe” (Teclaw, Osatuke, Fishman, Moore, & Dyrenforth, 2014, p. 4). Regardless of the contradictions, the discussion is important to practitioners and deserves to be researched. Although no one categorization exists in name or dates, most generations are defined similarly. Traditionalist are born prior to 1946, Baby Boomer between 1947-1964, Generation X between 1965-1976, Generation Y between 1977-1993, and the newest generation entering the workforce, Gen Z, was born after 1993.

**TABLE 1**  
**GENERATIONAL COHORTS BIRTH RANGE**

<b>Generational Cohort</b>	<b>Date of Birth</b>
Traditionalist	Prior to 1946
Baby Boomer	1947-1964
Generation X	1965-1976
Millennials (Generation Y)	1977-1993
Gen Z (Nexters)	Born after 1993

### Psychological Capital Research on Generational Cohorts

Staples (2014) explored the generational differences in PsyCap across multiple industries with a sample of 347 respondents. The findings indicated that Baby Boomers’ PsyCap scores were higher than their younger generations and ANOVA results suggested statistically significant difference among the generations. Staples (2014) is currently the only research conducted on PsyCap scores by generation.

Complimentary to the study of PsyCap variances by generation, Sparks (2012) found significant differences among generations’ psychological empowerment scores. Baby Boomers and Generation X nurses differed in their total psychological empowerment scores – how they perceived their environments. There is limited research that explores the differences in PsyCap between generational cohorts.

### Hypotheses & Methods

The purpose of this study was to identify if psychological capital scores varied by generation and shift.

*H1.* There will be statistically significant differences in average psychological capital, hope, self-efficacy, resilience, and optimism scores among generational cohorts.

*H2.* There will be statistically significant differences in average psychological capital, hope, self-efficacy, resilience, and optimism scores between work shift groups.

This research study was conducted at a 350-bed community medical center in the southeastern region of the United States. The population included all employees within a department with direct patient care responsibilities. The population included a total of 843 employees. 500 employees responded, of which 203 were registered nurses (RN) and certified registered nurse anesthetists (CRNA). PsyCap was measured using the PsyCap Questionnaire (PCQ). The PCQ is a self-reported 24-item questionnaire (Luthans et al., 2007). The questionnaire was adopted from established scales to include the self-efficacy scale (Parker, 1998), hope scale (Snyder et al., 1996), resilience scale (Wagnild & Young, 1993), and optimism scale (Scheier & Carver, 1985). PsyCap is defined as “An individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans et al., 2007, p. 3).

The PCQ used a Likert-type scale from one to six: strongly disagree (1), disagree (2), somewhat disagree (3), somewhat agree (4), agree (5), and strongly agree (6). There were six questions for each of the four constructs. To emphasize the “state-like” nature of the measure, the participants were asked to respond by describing “how you may think about yourself right now.” The survey measured four constructs - hope, self-efficacy, resilience, and optimism – as subscales. The subscale scores were computed by averaging the responses to the six questions for each construct. The composite score (or the overall PCQ score) was computed by averaging the four subscales.

The survey instrument contained a question regarding year of birth/generation. The majority of the 203 nurses that participated in the study (186) provided information regarding their year of birth. The data presented in Table 1 show that the nurses largely fell in three generational categories (Baby Boomers, Generation X, and Millennials).

**TABLE 2  
NURSE RESPONSE BY GENERATION**

<b>Range</b>	<b>Number</b>	<b>Percentage</b>
Prior to 1946 (Traditionalist)	2	1.1%
1946-1964 (Baby Boomer)	59	31.7%
1965-1976 (Generation X)	56	30.1%
1977-1993 (Millennial)	69	37.1%

Given the small number of nurses in the “prior to 1946” age category (2), that category was merged with the 59 nurses in “1946-1964” age category in statistical analyses. It should also be noted that Gen Z was not included in the study because there were no staff younger than 18 (born after 1993) included in the population employed at the research site when data was collected.

The survey instrument contained a question regarding shift as well. Specifically, the survey asked, “What shift are you assigned to work, the majority of the time in the last 12 months?” Of the 203 nurses in this study, 163 provided shift information. Table 3 shows that the majority of the nurses (93) in this study were on the day shift. For statistical analyses regarding differences in PsyCap by shift, only the nurses that reported working on either the Day shift (93) or Night shift (50) were used given the sufficiency of the sample sizes.

**TABLE 3**  
**NURSE RESPONSE BY SHIFT**

Shift	Number	Percentage
Day	93	57.1%
Evening	3	1.8%
Night	50	30.7%
Day/night rotation	9	5.5%
Weekend	8	4.9%

In order to explore the differences in PsyCap among nurses, the data gathered through the survey containing Likert-type items was analyzed descriptively using means and standard deviations. Inferential statistics that compared two groups were computed utilizing t-test analyses while those comparing more than two groups utilized the analysis of variance procedure with Tukey post hoc tests. These analyses were selected in keeping with prior PsyCap studies that treated Likert-type data as interval data and utilized the associated descriptive and inferential statistics.

## RESULTS

Results indicated that self-efficacy and overall PsyCap scores varied across generational cohorts. As one might expect, nurses with more experience had higher levels of self-efficacy and overall PsyCap. Millennials indicated the lowest levels of self-efficacy and PsyCap, despite the stereotype that they are perceived as acting entitled and confident (Piper, 2012).

**TABLE 4**  
**PSYCAP RESULTS BY GENERAITONAL COHORT**

Scale	Baby Boomer 1964 or before mean (SD) n	Generation X 1965-1976 mean (SD) n	Millennial 1977-1993 mean (SD) n
Self-efficacy	4.87 (.68) 61	4.80 (.71) 54	4.36 (.70) 66
Hope	5.01 (.72) 56	4.89 (.63) 54	4.85 (.58) 69
Resilience	4.88 (.70) 60	4.90 (.63) 52	4.72 (.69) 66
Optimism	4.66 (.82) 58	4.55 (.67) 52	4.49 (.67) 65
Psychological Capital	4.85 (.52) 53	4.79 (.49) 48	4.62 (.55) 60

As Table 4 shows, the older the generation, the higher the self-efficacy, hope, resilience, optimism, and overall PsyCap. Stated another way, on average, nurses from the Baby Boomer generation reported higher self-efficacy, hope, resilience, optimism, and overall PsyCap than Generation X or Millennial nurses. The Millennial nurses reported the lowest average scores on each of the PsyCap subscales as well as on the composite PsyCap score.

After conducting a test of homogeneity of variance for each construct, univariate analysis of variance were computed for each of the four subscales as well as the composite PsyCap construct. Statistically significant differences among the three generations were found in the self-efficacy subscale,  $F(2, 178) = 9.88, p = .000$ , and composite PsyCap,  $F(2, 158) = 3.048, p = .050$ . Tukey post-hoc analyses revealed that

the significant differences in self-efficacy were between the Millennial nurses ( $M = 4.36$ ) and the GenX nurses ( $M = 4.80$ ),  $p = .002$  as well as the Millennial nurses ( $M = 4.36$ ) and the Baby Boomer nurses ( $M = 4.87$ ),  $p = .000$ . Additionally, the difference in the composite PsyCap score for Millennial nurses ( $M = 4.62$ ) and the Baby Boomer nurses ( $M = 4.85$ ),  $p = .051$  was likely the driver of the overall statistically significant ANOVA result. Statistical analyses did not reveal significant generational differences on the Hope,  $F(2, 176) = 1.039$ ,  $p = .356$ , Resilience,  $F(2, 175) = 1.264$ ,  $p = .285$ , or Optimism  $F(2, 172) = 0.907$ ,  $p = .406$ ) constructs. These findings suggest that the differences between generational groups were not large enough to be statistically significant and thus may not be inferred from this sample of nurses to the larger population of nurses.

In an effort to understand differences in PsyCap across the organization, data was analyzed by nurses on day and night shift. Descriptive statistics showed that day shift nurses reported higher average self-efficacy, resilience, optimism, and overall PsyCap.

**TABLE 5**  
**PSYCAP RESULTS BY SHIFT**

Scale	Day Shift mean (SD) n	Night Shift mean (SD) n
Self-efficacy	4.78 (.72) 91	4.44 (.77) 49
Hope	4.93 (.62) 90	4.93 (.60) 49
Resilience	4.88 (.74) 88	4.75 (.69) 49
Optimism	4.62 (.74) 86	4.48 (.74) 47
Psychological Capital	4.81 (.55) 81	4.65 (.49) 44

T-tests were conducted to compare day shift nurses and night shift nurses reports of PsyCap. The only statistically significant difference was found in self-efficacy with day shift nurses reporting higher average self-efficacy than night shift nurses,  $t(138) = 2.626$ ,  $p = .010$ . The remaining analyses did not reveal statistically significant differences between the nurses given their shift – Hope,  $t(137) = -0.039$ ,  $p = .969$ , Resilience,  $t(135) = 1.090$ ,  $p = .268$ , Optimism,  $t(131) = 1.025$ ,  $p = .307$ , and PsyCap,  $t(123) = 1.582$ ,  $p = .116$ . Day shift employees have only statistically significant differences in their self-efficacy as compared to night shift employees.

## DISCUSSION AND RECOMMENDATIONS

### Generational Differences in PsyCap

The study is significant in finding that PsyCap and self-efficacy have statistically significant differences by generational cohorts. These findings support the findings of Staple (2014), in that PsyCap does vary significantly by generational cohorts with Baby Boomers having the highest levels of overall PsyCap. Descriptive statistics indicate that, on average, nurses from the Baby Boomer generation reported higher hope, self-efficacy, resilience, optimism, and overall PsyCap than Generation X or Millennial nurses. The findings indicate that Millennials have a slightly lower level of PsyCap, as compared to Baby Boomers and Generation X nurses. The findings of this study illustrate the need for new graduate nurses (NGNs), most often Millennials, to engage in PsyCap interventions. The nursing industry, in an effort to recruit and retain NGNs, conducts extensive research and training on the NGN. It is important that nursing leaders support NGNs in training initiatives to increase their self-efficacy, while incorporating psychological capital initiatives into orientation as well. In a study of new graduate fit, as it relates to



NGNs, seasoned nurses determined how well new graduates would “fit in” based on three themes – positive personal characteristics, open learning, and effective preceptors or mentors (Moore et al., 2013). With Millennials having a lower overall psychological capital and self-efficacy as compared to Generation X and Baby Boomers, PsyCap interventions may aid in NGNs overall ability to “fit in” by enhancing their ability to learn (increased self-efficacy or confidence), and to have positive personal characteristics (hope and optimism).

The nursing industry must also seek out and mentor Generation X employees, often mid-level nurses, as they too do not have the self-efficacy and PsyCap levels of those in the Baby Boomer generation. These results are practical in that more experience will increase confidence and self-efficacy. It is surprising, however, that the Baby Boomer generation does not have lower self-efficacy scores given the massive technology changes that have occurred in nursing practice (Porter-O-Grady, 2001) and the stereotype that Baby Boomers are not comfortable and lack self-efficacy with new technology as compared other generational cohorts (Boysen, 2016). The nursing industry must remember that NGNs are not the only employees in need of training and support, and should allocate resources to mid-level nurses as well.

Nurses are considered at high risk for burnout. Burnout of nurses threatens their own health, but can also impact the quality of patient care (Ding et al., 2015). PsyCap is negatively related to emotional exhaustion (Lashinger et al., 2012) and can have a direct and indirect effect on burnout (Ding et al., 2015). Retention of nurses is key to aiding in the nursing shortage (WHO, 2006). PsyCap interventions can mediate the role of coping styles with emotional exhaustion and burnout (Ding et al., 2015) and thus can be a tool for organizations in an effort to retain nursing staff. It should be noted that Baby Boomers have a higher perception of well-being and affective commitment (Brunetto, Farr-Wharton, & Shackock, 2011), thus PsyCap interventions may benefit Millennials and Gen Z the most.

“For an organization to fulfill its social contract to provide high-quality, cost-effective, and safe healthcare, it must satisfy the needs and manage the expectations of those who directly deliver these services; especially with the still-fluid stipulations of the Affordable Care Act (ACA)” (Piper, 2012). Understanding that the newest generation – Gen Z and Millennials – expect the workplace to offer work life balance, be a positive meaningful experience, and a place to develop personally through coaching and feedback is important to meeting their expectations (Piper, 2012). PsyCap seeks to develop a person’s hope, self-efficacy, resilience, and optimism, which in turn impacts their perception of the organization. For example, employees with higher psychological capital scores have better perceptions of learning organization dimensions (Little & Swayze, 2014; Sweet, 2012). Again, psychological capital interventions may be beneficial in meeting expectations, which in turn can assist in retention and the overall patient care experience.

PsyCap explained 38% of the variance in new nurses’ work engagement (Boamah & Laschinger, 2015) and is a predictor of job satisfaction (Luthans & Jensen, 2005). The newest generation of nurses have lower overall PsyCap scores. With job satisfaction and work engagement impacting organizational outcomes, it is essential for nursing organizations to recognize that PsyCap interventions are important to achieving excellence in patient care and other organizational goals. This is especially important today with complex reimbursement initiatives and the importance of managing patient perceptions.

### **Psychological Capital by Shift**

Day shift nurses have higher levels of self-efficacy than those on night shift. No significant differences existed with psychological capital, hope, optimism, and resilience by shift. One might presume that day shift nurses have higher levels of self-efficacy than those on night shift because of the limited contact night shift employees have with nursing administration and nurse leadership. The limited contact could result in less positive reward and feedback on their performance, which is important in building self-efficacy. Additional research is needed to understand why self-efficacy is lower on night shift than on day shift. Nursing leaders should be conscience and make extra efforts to ensure practices and procedures (to include reward, recognition, and feedback) are equivalent on night shift, as they are on day shift.

This study is limited in scope to one community hospital. It is not generalizable. Further research should be conducted to examine PsyCap between generations and shift. Qualitative research examining the PsyCap of nurses could help to design intervention initiatives specific to generational cohorts. Examining the relationship between self-efficacy and primary shift worked is needed in an effort to understand the reason that self-efficacy may be lower for night shift employees. The findings of these future studies could assist nursing administration and human resource professionals to develop training and development programs that would be tailored to specific cohorts (such as NGOs) that not only would develop nurses as professionals, but would also increase their psychological capital, hope, self-efficacy, resilience, and optimism. Overall, this study is significant in understanding that generational cohorts vary in PsyCap and self-efficacy, and self-efficacy is greater for nurses on day shift as compared to night shift.

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# **Categorizing Supervisor Reflections on Risks of Hiring Persons with Disabilities**

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*Although legislation prohibits employment discrimination related to disability such discrimination is regularly perpetuated and contributes to underemployment of persons with disabilities. I make the assertion that decision-maker's perceptions of risk shape their intention to hire, and actual hiring of, persons with disabilities. There is minimal qualitative research published regarding supervisors' views on hiring persons with disabilities. This shortcoming is addressed through my solicitation and of supervisor reflections on hiring and declining to hire persons with disabilities. I also map these reflections to categories of risk perception to generate insight on the nature of and form of supervisor risk perceptions.*

## **INTRODUCTION**

In-group perpetuation and out-group discrimination is common and frequently a mechanism of reducing potential harms and hazards of unknown social entities (Acker, 1990). In the context of human resource management and a 'performance-through-people' view of the organization, this discrimination occurs frequently in employment staffing decisions (Riley II, 2006; Stone & Williams, 1997). It is through staffing actions (attraction and selection) that organizational boundaries and corporate in-group identities are maintained (Wright & McMahan, 1992). Historically, we see that the 'decision to employ' goes against certain labour groups, such as aboriginal, female, elderly, and disabled, and thus these groups are labeled as 'underrepresented'. 'Disability' is one of the most common candidate characteristics used unfairly, and usually illegally, to refuse entry to an organization (Jackson, 2000). The result is systemic under-employment of persons with disabilities, which has negative impacts on the person, economy, and society (Social Development Canada, 2004).

There are legal provisions to allow for deliberate decisions to not hire persons with disabilities or otherwise accommodate the employment of persons with disabilities. There are also legal provisions to guard against unfair and/or discriminatory selection and accommodation decisions against disabled persons. However, in practical terms, many such decisions reflect the decision maker's ethical and social preferences, and business operation considerations.

Multiple factors are identified as possible, situation-sensitive explanations for discrimination (Stone, Stone & Dipboye, 1992). Research that crosses silos of such work on social (Bruyere, Erickson & Van Looy, 2004), legal (Williams, 2004), and financial explanations (Salkever, Shinogle & Purushothaman, 2000) is warranted to produce a better-fitting and better discrimination-mitigating model for employment practices related to disability.

Risk Perception (Lupton, 1999) is a theoretical lens that can lead to a more rich and nuanced understanding of staffing decisions. Research following both the Cognitive Calculation (counting-up risks) and Socio-cultural (risk constructions) perspectives have shown that organizational actor attitudes, decisions, and behaviours are influenced by the harms and hazards they perceive (Lupton, 1999).

It is reasonable to expect that staffing decisions are influenced by the potential for pain perceived by the decision-maker. Anecdotally speaking, pain can be felt in terms of business performance, leader approval/sanction, employee morale, and personal engagement and cognitive dissonance. The distributed and situational sources of perceived pain in this context helps explain why laws, financial impact, and social influence do not individually explain or mitigate discrimination behaviours. Risk Perception is also unlikely to be a one-shot solution. However, is likely to prove a more encompassing framework for explaining individual decision-maker choices to engage in unfair or illegal discrimination based on applicant disability.

Working in the exploring phase of the Human Resource Risk Management field development, as described by Becker and Smidt (2016), I investigate supervisor responses to an active presentation of hiring disabled persons as a potential risk condition and capture their expressions of perception and sense-making.

### **Literature Review**

Unpacking and understanding barriers for the employment of persons with disabilities (PWD) involves a number interrelated constructs, including risk, human resource risk management, and supervisor perceptions and practices for hiring persons with disabilities.

The broadest construct informing my study of PWD employment is Risk. This construct represents the range of dangers, harms, and inconveniences that may be perceived and mitigated or tolerated by an agent. Deborah Lupton (1999) describes in her book *Risk* three general lenses for describing risk. The first is Cognitive Calculation, which involves objective enumeration of hazards and calculation of consequences. Typically, higher magnitude consequences receive more attention and mitigation action. The second lens is Socio-Cultural, which involves recognizing that risks ebb and flow with time and context. For example, what was safe before is now dangerous, or dangerous there is safe here. The third lens is Governmentality, which means that state or authoritative actors may influence public awareness and perceptions of risk. For example, jurisdictional messaging regarding healthy living and dietary practices. Regarding the employment of PWD, all three lenses are appropriate considerations as employers may calculate the costs or consequences of a PWD hire, social influences and public sentiment may influence perceptions of supervisors towards PWD, and local governments may enact laws or fund public advocacy messaging regarding employment of PWD.

A related and more refined understanding of risk in the employment context comes from the emerging field of Human Resource Risk Management (HrRM). The development of this domain is recorded by Becker & Smidt (2016) and organized into loose, overlapping perspectives of “Organizational / HRM Practices & Risk”, “Human Resource Risks”, and “HRM & Risk Management” (p153). My reading of their reviewed articles suggests a simplified and more succinct categorization of HrRM as ‘people’ - risk associated with employees existing / acting within the workplace, and considered from a Supervisor / Co-worker perspective; ‘practices’ - risk associated with methods of managing employees, and considered from an HR System Design perspective; and ‘resource’ - risk associated with engaging people as a productive asset compared to other resources, and considered from an Organizational Systems perspective. Regarding the employment of PWD, all three constructs are appropriate considerations, but in this study I focus on risk from the People perspective.

Positive and negative perceptions and practices for hiring persons with disabilities are well-expressed in the literature. Two of the most prominent writers are Mukta Kulkarni (e.g., Kulkarni, 2012a; 2012b; Kulkarni & Kote, 2013, and Kulkarni & Lengnick-Hall, 2014) and Dianna L. Stone (e.g., Stone, 1997; Stone & Collela, 1996; Stone & Stone, 2015; Stone, Stone & Dipboye, 1992, and Stone-Romero, Stone & Lukaszewski, 2006). These authors, plus a number of others make plain the presence of negative attitudes and concerns of hiring managers towards the employment of PWD.

Legnick-Hall, Gaunt, and Kulkarni (2008) provide a strong description of the organizational barriers and plausible remedies for hiring persons with disabilities. My reading of their work suggests an emphasis on supervisor awareness and education as focal points for improving the workforce participation of persons with disabilities. Carvalho-Freitas, et al (2015) offer an important consideration – that ‘willingness’ is a requisite element. That is, while supervisors may become more aware of laws prohibiting discrimination on the basis of disability or learn of potential benefits of hiring persons with disabilities, they will only take action if they are willing to do so.

To contribute to the literature, my study integrates the above-noted work and offers a synthesis view of supervisor risk perceptions.

### **Conceptual Framework**

Baker, Ponniah & Smith (1998) outline a process of System Risk Management that includes a path progression of Risk Analysis -> Risk Evaluation -> Risk Consequences -> Risk Monitoring. In short, an actor becomes aware of a potential harm, assesses the magnitude of the harm and implements mitigations if feasible / desirable, experiences the consequences of the hazard manifesting (or not), and reflects on the result for the next time a risk is perceived.

An important role of my study is to solicit and surface supervisor perceptions of PWD hiring risk such that their perceptions and subsequent decisions and actions may be better understood from a risk perspective. To do this, I expand the ‘Risk Evaluation’ and Risk Consequences’ portion of the above path progression to better illustrate and capture perceptions. That is, Risk Evaluation grows to reflect risk lenses of a) Cognitive Calculation, b) Socio-cultural, and c) Governmentality. These lenses were introduced earlier in the literature review. Risk Consequence grows to reflect to risk categories of:

- **Performance:** Possibility for the output or productivity to decline when a PWD is hired / included in the work.
- **Team Dynamics:** Possibility for the work group to experience internal conflict or morale issues when a PWD is included.
- **Supervisor Duties:** Possibility for the supervisor to experience increased workload directly related to the accommodation and management of a PWD.
- **Supervisor-PWD Relationship:** Possibility for the supervisor to feel and/or enact a relationship obligation to the PWD not normally extended to other subordinates.

### **METHOD**

A semi-structured interview research method was utilized as it is the most appropriate way to capture broad descriptions of perceptions and responses. This is in alignment with suggestions of Bachiochi & Weiner, 2002 for the following reasons. First, the research is exploratory. My objective was to discover how supervisors perceive hiring PWD, the risks they consider, and the responses they action (if any). To my awareness, there is not presently a well-articulated guiding framework to test and in-fill. Second, open-ended questions allow research participants the opportunity to explain their feelings more fully. Participants are more able to share experiences and provide interpretations not anticipated by the researchers. Third, an interview research method provides an opportunity to obtain greater depth and richness of data than typically gained from questionnaire surveys.

I interviewed six supervisors from small and medium sized enterprises in Edmonton, Alberta, Canada. The supervisors were selected to participate as they were all involved in a business networking group that received regular advocacy from a disability service organization. Thus, they were in a position to reflect on recent opportunities to hire a PWD. The enterprises were diverse and included: cabinet making, construction, direct mailing, home security, housing, and registries.

The question protocol was based upon an extensive review of the literature on the employment of persons with disabilities. Questions covered the following issues: a) organizational profile including characteristics (industry, size, history), and actions (competitiveness, corporate social responsibility,

innovation), b) involvement in selection processes, c) personal and organizational influences on selection decisions, d) perceptions of PWD hiring promotion messages, and e) experiences hiring PWD. Interviews took place in participants' offices. Each participant was provided an advance copy of the interview themes and questions, and were encouraged to respond in an open-ended fashion.

My previous experience in interviewing supervisors and human resource professionals regarding disability discrimination led me to believe that participants would only speak candidly about their perceptions and actions when there was a mutual perception of trust and non-judgement. Conditions of anonymity were strictly maintained, and in most cases two or three relationship building conversations took place prior to the formal research interview. Interviews took place in participants' offices with no other people present.

Interviews ranged in length from 25 minutes to 60 minutes. All interviews were audio recorded and transcribed for analysis. My research team individually listened and read the interviews, and generated the results on a consensus / shared perception basis.

## RESULTS

An immediate finding is that of the six supervisors, only one had hired a PWD, three were considering making a hire, and two were not willing to consider making a hire. Thus, there is evidence that the 'risks' of hiring were perceived differently by the supervisors.

Preliminary analysis of the interviews reveals that supervisor perceptions of risks associated with PWD hiring relate mostly to the immediate operations and experiences of the supervisors. A tally of supervisor characterizations / dominant expressions according to several themes and categories are presented in Table 1. (Note: tallies may exceed '6' as some supervisors addressed multiple topics.

**TABLE 1**  
**CATEGORIZATION OF SUPERVISOR RISK PERCEPTIONS**

<b>PWD Hiring Experience</b>			
<b>'Will Not Hire' PWD</b>		<b>'Considering Hire' PWD</b>	
2		3	
<b>'Hired' PWD</b>		1	
<b>Risk Lens</b>			
<b>Cognitive Calculations</b>		<b>Socio-Cultural</b>	
6		0	
<b>Risk Categories</b>			
<b>Team Performance</b>	<b>Team Dynamics</b>	<b>Supervisor Duties</b>	<b>Supervisor-PWD Relationship</b>
1	1	4	2
<b>Risk Magnitude</b>			
<b>Low</b>		<b>Medium</b>	
1		3	
<b>High</b>		1	
<b>Expected Rewards</b>			
<b>Social / Societal</b>		<b>PWD Benefit</b>	
0		5	
<b>Company Benefit</b>		2	

All supervisors expressed risks perceptions in terms of quantifiable magnitude similar to a Cognitive Calculation guided by expressions of severity, probability, and consequence. Representative comments are:

- "I have to consider how often they will be working and the tasks they could do, and I really wonder if it will be worth it for anyone involved." (Supervisor 1)



- “It is just too much. I am already busy with my regular staff, and taking that on would be more than I can handle right now” (Supervisor 3)

- “I have to be really concerned about whether they would be hurt at the worksite” (Supervisor 4)

When explaining the potential consequences of hiring a PWD, supervisors framed their concerns largely as increase workload for themselves in managing the PWD. While impacts to team performance and team dynamics were also anticipated, supervisors generally felt that those effects would be minimized or kept within acceptable tolerances in part because of extra efforts they would make as supervisors.

Interestingly, some supervisors expressed concerns with the potential relationship between themselves and the PWD anticipating an increase in ‘requirement to be a friend or caretaker’ above what normal supervisor-employee relations involve. A representative comment is “I don’t know what they’re going to need, and I have a business to run. It’s easier for me to hire normal people where I don’t have to worry about special needs.” (Supervisor 5)

The general risk perception level in terms of magnitude is ‘Medium’, characterized by one supervisor as “big enough to duly consider but not so big as to generate an automatic no” (Supervisor 6). One supervisor expressed that “for current job expectations (entering client homes and installing cabinets) it’s not feasible but a coming company expansion and transition to some internal manufacturing process may change things”. (Supervisor 1)

Lastly, when examining the potential ‘rewards’ for taking on the perceived risks, few supervisors expressed that a PWD hire would involve a win for the organizations. For one supervisor that did hold that positive view (Supervisor 2), the win was related to helping the company and team ‘grow’ and ‘demonstrate compassion’ more than improved access to a purchasing demographic, community reputation, or operational advantage. Rather, in most cases the beneficiary of the hiring decision was seen to be the PWD because of access to work experiences and compensation. No supervisor mentioned that the hiring decision would have impact or extension to a broader societal good or social value. A representative comment is “It will be good for the person to get an opportunity to work” (Supervisor 1).

## **DISCUSSION**

Supervisors identified a PWD hire as a risky activity. Aligning to my broad HrRM categories, the supervisors felt the risk was associated primarily with the person (People), but also that the Practice of hiring ‘non-typical’ employees was a matter of general concern. As supervisors generally adopted a Cognitive Calculation view of the risk they consistently described the concerns or problems that they perceived with the hire, and that there were minimal positive rewards to them or the enterprise for taking on that risk.

I also discovered a clear supervisor preference for the involvement of an advocate in the employment relationship. This was expressed as the supervisors having access to a 3<sup>rd</sup> party influence and communication mechanism with the PWD in the event that a) work performance is a problem, b) termination is likely, or c) unexpected or unwanted PWD relational / caretaking needs emerge. The presence of the advocate was an important concern mitigation consideration.

I also discerned a generalizable pattern that supervisor proximity to persons with disabilities in social and personal life tempered their perceptions of risk and increased their willingness to accommodate. That is, through personal experience and exposure they had a greater appreciation for the potential benefit to the person with disability and tolerance of the potential complications.

## **Future Research**

Extension and elaborations of this research in several ways would be productive. First, the present study offers a limited number supervisor interviews. A more expanded study capturing risk perceptions of dozens of supervisors would lead to stronger findings and better generalizability. Further, as risks may be different in certain industries and according to nature of the disability, an expanded study focusing on one industry and disability condition pairing would be beneficial and help to articulate the ‘general case’.

Second, the supervisors used a variety of cliché's, rationales, and conjectures to legitimize their views and decisions for not hiring a PWD. A discourse analysis of these utterances would be helpful and determine if supervisors rely predominantly one form or another of legitimization (e.g. economic rationale vs. anecdote experience). This analysis could then inform strategies reshape the decision narrative.

Last, I noticed that most supervisors were positively inclined to hire a PWD if not for the perceived risks. This implies a disconnect between 'intention' and 'action' that is similar to many other management situations where a person would do X if not for Y. Further exploration of the mediating variables between intention and action (e.g. individual, social, or policy) would help target initiatives aim at mitigating risks and bridging that divide.

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# Organizational Trust Online: A Discursive Perspective

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*Trust is necessary for meaningful human existence and for various types of organizing, including business organizations, associations, charities, and, on a larger scale, the society itself. In this article, the focus is on organizational trust online – a specific form of trust that develops between individuals and organizations through interactions and various transactions conducted on the Internet. The author, following in the tradition that calls for building trust discursively, develops a theoretical basis for constructing organizational trust online and provides practical suggestions how to build organizational trust online and, consequently, promote establishing and building relationships with customers and prospective customers.*

## INTRODUCTION

Robert Putnam was among the first to draw attention to the decline in interpersonal relationships and trust and to call for Americans “to reconnect with one another” (2000, p. 28). Over the past several years, we Americans have been reconnecting with one another, although in a manner that Putnam in most likelihood did not have in mind when he made his statement – by means of mediated communication. Connecting and reconnecting in the virtual world is skyrocketing (Barnes, Lescault, & Wright, 2013; Colucci & Cho, 2014; McCorkindale & DiStaso, 2014), and the need to understand the new connections and reconnections is growing. But before we embark on the path of understanding connections and reconnections online, we need, first, to see the breadth and the reach of the virtual world.

### The Rise of the Virtual World

Virtual world is expanding at a high pace. The most recent joint report of the National Telecommunications and Information Administration [NTIA] and the Economics and Statistics Administration [ESA], published in 2013 lists the Census Bureau data about Americans’ use of the Internet: of those who have computers, 72% use the Internet every day; of this, 77% for personal communication, 66% to obtain general information, 53% for consumer services, and 53% for financial services. The report also indicates the relevance of mediated communication: “the data on frequency of Internet use and reliance on it for a range of activities appear to support the hypothesis that the Internet has become integral to American life” (“Exploring,” 2013, p. 17). Various other research also points to the Internet as a crucible of communication. Jennings, Blount, and Weatherly (2014) show a widespread use of social media both by individuals and organizations. McCorkindale and DiStaso (2014) also note ubiquitous use of social media. Barnes, Lescault, and Wright’s (2013) annual survey of Fortune 500 companies’ use of social media shows that 70% of Fortune 500 companies have Facebook accounts and 77% have Twitter accounts; 34% are now actively blogging, 77 percent maintain active Twitter accounts,

and 69 percent have YouTube accounts. Altimeter, an analyst company that conducts research on newest trends, provides data for 2014: 88% of organizations are undergoing some form of digital transformation – a type of organizational alignment that focuses on technology and business models with the aim of engaging digital customers in an effective manner (see Solis, 2014). Increased presence and growth of the virtual world requires attention and, as we will learn later, the cultivation of meaningful relationships that include trust. Let us now see the role that trust plays in human relationships and in human life.

### **The Relational Quality of Trust**

A relevant component of all human connections and relationships is trust. Trust is a part of the subtle ties that link us to other human beings and make us more human. Without trust human existence would be relegated to a survival mode. It is not surprising, therefore, that many authors write about the importance of trust and social connections for a fulfilling and meaningful life (see, e.g., Boyd, 2003; Fombrum, 1995; Fukuyama, 1995, 1999; House, Landis, & Umberson, 1988; Kasinitz & Rosenberg, 1996; Putnam, 2000; Seligman, 1997).

Trust is also a necessary component of business, various business-related transactions, and meaningful relationships in the business context (see, e.g., Barker & Camarata, 1998; Caldwell & Clapham, 2003; Child, 2001; Colquitt, Scott, & LePine, 2007; Garbarino & Johnson, 1999; Govindarajan & Gupta, 2001; Hosmer, 1995; McMillan et al., 2015; Reichheld & Scheffer, 2000; Sirdeshmukh, Singh, & Sabol, 2002; Torres & Bligh, 2012; Tyler, 2003). Botsman (2012) makes the case for trust as a currency of central importance for the *sharing economy* – a recent development within the new economy centered around cooperation and trusting relationships.

Trust is hard to build and maintain. With the exception of some very rare cases of high levels of initial trust (McKnight, Cummings, & Chervany, 1998), much time and interaction between the trustor and the trustee is needed for trust to develop (see Kodish, 2014; Lewicki, McAllister, & Bies, 1998; Morrow, Hansen, & Pearson, 2004). Furthermore, trust is fragile – it can be easily lost and, possibly, never rebuilt (Fukuyama, 1995, 1999; Lewis, 1999). The fragility of trust becomes especially evident in online interactions. While in real life the trustor and the trustee have an opportunity to build a trusting relationship using several channels, including face-to-face communication – the channel with the richest bandwidth (see, e.g., Hynes, 2015) – online interactions rely on channels that are less likely to provide or do not provide nonverbal and other cues that are typically present during face-to-face interactions. Lack of nonverbal and other cues makes building and maintaining trust online a more challenging endeavor. It also calls for developing a theoretical foundation that can serve as a basis for creating practical suggestions for building and maintaining trust online. In this article, we contend that communication theory and, specifically, narrative theory and rhetorical theory, can serve as the necessary theoretical foundation for developing and maintaining organizational trust online.

### **Definitions and Meanings**

*Trust Online.* Trust online is used in this article in its original meaning proposed by Boyd (2003) – as trust that exists in interactions and transactions conducted between organizations and individuals on the Internet. Since trust online can also include myriads of online interactions among individuals that do not include organizations, for the sake of clarity, the word “organizational” was added. Therefore, organizational trust online is trust that develops between organizations and individuals as a result of online communication and various interactions and transactions that take place on the Internet.

*Trust and distrust.* We use Lewicki, McAllister, and Bies’s (1998) definition of trust as “confident positive expectations regarding another’s conduct,” and distrust as “confident negative expectations regarding another’s conduct” (p. 439). We also use their view of the relationship between trust and distrust. While most authors deem trust and distrust opposites, Lewicki et al. (1998) believe that trust and distrust can exist simultaneously as the relationship develops over time. This suggests that building organizational trust online includes a dynamic component, which further supports the need for a theoretical foundation and a strategic and purposeful approach in order to avoid the negative impact of distrust.

*Trustor and trustee.* Trust presupposes a relationship and the existence of a trustor and a trustee (Hardin, 2001; Hosmer, 1995; Mayer, Davis, & Schoorman, 1995; Morrow, Hansen, & Pearson, 2004). For the purpose of this article, the trustor is an individual person accessing the Internet with the aim of communicating with an organization in order to obtain information, provide information, and/or transact business. The trustee is an organization that is actively engaged in digital transactions or a range of services and communication-based activities conducted via the Internet.

*Trust and trustworthiness.* The concepts of trust and trustworthiness are sometimes used interchangeably. Literature on trust, however, indicates a distinction between the two. Morrow, Hansen, & Pearson (2004), for example, write that trust is a belief, expectation, or confidence that the other party will not take advantage of one's vulnerabilities, whereas trustworthiness is the basis or reason behind that belief, expectation, or confidence. According to Hardin (2001), "trustworthiness commonly begets trust" (p. 17). Other authors (see, e.g., Kodish, 2007; Mishra, 1996; Six, 2003) also describe trustworthiness as a prerequisite or a foundation for developing trust. In this article, we follow the generally accepted view in literature on trust that trust and trustworthiness are related, yet distinct categories. We posit trustworthiness as a basis for the trustor's belief that the trustee is trustworthy because the trustee is exhibiting and/or communicating behaviors that instill trust.

*Discursive, Rhetorical, and Narrative.* In this text, we use the word *discursive* in accordance with extant meaning of discursive as applied in the concept of discursive organizations that refers both to communication events and the constitutive role of communication events in organizations (see, e.g., Cooren, 2004; Fairhurst & Putnam, 2004; Heracleous & Barrett, 2001; Heracleous & Hendry, 2000; Heracleous & Marshak 2004; Putnam & Fairhurst, 200; Taylor & Robichaud, 2004). Discursive, therefore, subsumes *rhetorical* and *narrative*, and pertains to both the actual communicative events and to their constitutive role in organizations. In the following section, we address the discursive nature of trust.

### **Trust as a Discursive Construction**

Trust has been conceptualized and defined in a variety of ways. Giddens (1991) views basic trust as a "protective cocoon" (p. 40). For Simmel (1950), trust is a fundamental attitude toward the other. Kramer, Brewer, & Hanna (1996) write that trust is a decision compatible with the expectations of ethical action from others. For Hosmer (1995), trust is a moral duty of the entrusted toward the trustor. The first theorist to conceptualize trust as a discursive construct was Boyd.

Boyd (2003) writes that building trust and trustworthiness is fundamentally rhetorical. He further writes that trust theory attests to the existence of a rhetorical situation that requires an appropriate discursive response. In this article, we use Boyd's postulation of trust as a rhetorical and discursive construct as a starting point. We then build upon this foundational idea by proposing a specific discursive approach to constructing organizational trust online based on the premises of narrative theory. The purpose of the endeavor to construct organizational trust online is to help build trust between individuals and organizations when conducting transactions and interacting on the Internet. Online communication, interactions, and transactions have considerably increased over the past years and are growing in relevance, role, and complexity (Barnes, Lescault, & Wright, 2013; Chafey, 2016; McCorkindale & DiStaso, 2014). Providing assistance to Internet users when navigating through the exorbitant volume and complexity of transactions and interactions in the virtual world is likely to be beneficial. Boyd (2003) writes:

"Determining a schema for the rhetorical construction of trust online will help make the Internet a more accessible place where users can make informed and reasonable decisions, appropriately balancing risk and opportunity to decide whether or not to take a trusting action" (p. 396).

Boyd's conceptualization of trust as a rhetorical and discursive construct and our aim to expand his conceptualization and provide practical suggestions has additional significance. Theoretically, Boyd's conceptualization of trust parallels the discursive school of thought and the discursive view of organizing. At the beginning of the 21st century, when Boyd (2003) postulated trust as a rhetorical construct, research on the organizing properties of discourse was beginning to advance (see, e.g., Heracleous & Barrett, 2001; Heracleous & Hendry, 2000; Putnam & Fairhurst, 2001). Over the past decade, the views of

organizing as a discursive endeavor have continued to develop (see, e.g., Cooren, 2004; Fairhurst & Putnam, 2004; Heracleous & Marshak 2004; Taylor & Robichaud, 2004). Boyd's conceptualization of trust as a discursive concept reflects the central principles of the discursive school of thought and contributes to the understanding of discourse as an inherent component of human action and human organizing. Research presented in this article, therefore, contributes to the theoretical understanding of the role of discourse in organizing.

Material in the article is organized in the following sequence. In the first section, in order to provide a foundation for understanding the role of trust in human relationships, organizing, and the functioning of community and society, an interdisciplinary review of research on trust is provided. The second section includes an explanation of pertinent concepts from narrative theory that will serve as a basis for developing ideas aimed at helping build organizational trust online. Specific ideas how to apply narrative theory in constructing organizational trust online are then presented. Final section contains concluding remarks.

## **RESEARCH ON TRUST**

Trust has been the focus of study in a variety of disciplines including psychology, sociology, political science, economics, moral philosophy, leadership, management studies, negotiation, labor-management relations, business, and communication. In order to capture more fully the meaning and implications of trust, the following review draws on literature on trust from a variety of disciplines. We start by reviewing literature that addresses the role of trust in a general sense and then specifically focus on organizational trust and the link between communication and trust.

### **Trust Writ Large**

Sztompka's (1999) intricate conceptualization presents trust as a relational, social, ethical, and existential phenomenon. He shows that trust permeates relationships and is a necessary component in all meaningful relationships. According to Sztompka, trust falls within the discourse of agency because it involves actively anticipating and facing an unknown future and committing oneself to action.

Luhmann (1979) also links trust with agency and an ethical imperative. He writes: "Trust accumulates as a kind of capital which opens up more opportunities for more extensive action but which must be continually used and tended and which commits the user to a trustworthy self-presentation, from which he can only escape with great difficulty" (p. 64). Similar to Sztompka (1999), Luhmann recognizes the importance of trust in society: "trust is not the sole foundation of the world, but a highly complex but nevertheless structured conception of the world could not be established without a fairly complex society, which in turn could not be established without trust" (1979, p. 94). He refers to trust as "the basic fact of social life" (p. 4) and mentions that a complete absence of trust would cause humans to become "prey to a vague sense of dread, to paralyzing fears" (p. 4).

Baier (1986) stresses the moral dimension of trust and the implicit duty the entrusted party has toward the trustor. For her, trust is "reliance on others' competence and willingness to look after, rather than harm, things one cares about which are entrusted to their care" (p. 259). Baier differentiates between moral and immoral trust. She also addresses the qualitative difference between trust and contractuality and stresses that trust is accompanied by risk and vulnerability.

Bok's (1978) conceptualization of trust is centered around veracity as the focal point of human existence and the functioning of society. According to Bok, a society whose members could not discern truthful messages from deceptive ones would collapse, and individual choice and survival would be imperiled because no one could have any expectations from others and every person would have to confirm everything by himself or herself.

Fukuyama (1995, 1999) links trust with social capital – an intangible value that, when in abundance, creates prosperity. For Fukuyama, trust is a commodity with a practical, economic value that is correlated with economic prosperity. For Fukuyama, human propensity to cooperate in groups has "a natural or genetic basis" (p. 168) and is, therefore, innate to human beings.

Inspired by Luhmann's (1978) notion that trust reduces complexity, Lewicki et al. (1998) present a multidimensional theoretical framework for trust that includes tensions between trust and distrust. They contend that trust and distrust are separate dimensions that can exist simultaneously as the relationship develops over time. Some elements "contribute to the growth and decline of trust," and other elements "contribute to the growth and decline of distrust" (p. 439). Lewicki et al. suggest that all these elements grow and develop through experiences in a variety of situations.

### **Organizational Trust**

The cognitive model of trust developed by McKnight, Cummings, & Chervany (1998) focuses on factors and processes that contribute to building high initial levels of trust. The authors start by addressing the paradox that extant research reveals: some research shows that trust develops gradually over time, starting from low levels of initial trust, while other research demonstrates that high levels of trust can be found in situations where coworkers did not know each other. McKnight et al. argue that high levels of initial trust may be explained by specific factors and processes and that they are an exception rather than the rule.

Mayer, Davis, & Schoorman (1995) develop a dyadic model of trust in an organizational context that includes both a trustor and a trustee. They start by defining trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). They then focus on the relational aspect of trust.

For Jones and George (1998), trust is an experience that arises through human interaction and is influenced by interacting with others. The authors begin by noting that the experience of trust is determined by the interplay of values, attitudes, moods, and emotions. They explain trust from a psychological perspective that focuses on the individual and show how trust evolves over time, the factors that lead to the dissolution of trust, and the ways in which trust affects interpersonal cooperation and teamwork.

Hosmer (1995) brings to the fore Kant's deontological approach: trust includes implicit moral duty that the trustor has toward the trustee. Trust is also a principle incorporated in "good" society, and, on a more pragmatic level, a likely precondition for performance of organizations. According to Hosmer, scholars on trust have reached a number of similar conclusions: (a) trusting individuals have optimistic expectations; (b) trust generally occurs under conditions of vulnerability; (c) trust is generally associated with willing, not forced cooperation; (d) trust is generally difficult to enforce; and (e) trust assumes an acknowledged or accepted duty to protect the rights and interests of others.

Reynolds's (1997) model how to promote trust is a combination of structural rules and behaviors that help build a context conducive for trust to emerge. He lists four principles of trust: competence, openness, reliability, and equity and links each principle with specific values, behaviors, and policies, such as promoting learning; choosing the right people; providing feedback and keeping employees informed; acting with integrity and making everyone accountable; ensuring decisive leadership and identifying employees' concerns.

Shaw (1997) developed a model of trust based on his long experience of working as a consultant. He focuses primarily on three prerequisites: achieving results, acting with integrity, and demonstrating concern, and suggests that having a rich assortment of stories or artifacts as visible symbols of trust is important.

Lewis (1999) views trust as a fragile intangible asset that can be damaged through inattention or that can be weak to start with because no effort was made to build trust. He lists eight conditions for the development of trust: priority mutual needs, personal relationships, joint leaders, shared objectives, safeguards, commitment, adaptable organizations, and continuity. If these eight conditions are satisfied in practice, trust will ensue.

Korsgaard, Brodt, and Whitener (2002) show the importance of open communication and of expressing concern for establishing trust. They found that openness can modify the negative outcome of a disagreement between an employee and a manager without impacting trust levels.



San Martin, Gutierrez, and Camarero (2004) describe and analyze the reasons why customers commit themselves to “a brand, an establishment, or a service supplier” (p. 55). They show a direct correlation between commitment and trust and propose a causal model of commitment in which trust plays a prominent role.

Torres and Bligh (2012) link trust in leaders with successful organizational performance. They found that the frequency of interaction and distance have a direct impact on perceived levels of trust, and most importantly, that the quality of interaction may be central for developing interpersonal trust in the workplace. One’s immediate managers are likely to be more trusted as a result of the frequency of interactions, whereas trust in the organization’s leader is less obvious, again, due to the distance and infrequent interactions between employees and top leaders.

Devos, Spini, and Schwartz (2002) focus on trust in institutions. They point out that value priorities are a critical predictor of institutional trust and that the levels of institutional trust are higher among those individuals who are religious or politically conservative. They also determined that levels of institutional trust correlated positively with values of stability, protection, and preservation of traditional practices.

### **Communication and Trust**

Extant research suggests that communication and trust are inherently linked and that various communication variables contribute to trust formation. For Butler and Cantrell (1994), task communication, career communication, and responsiveness promote trust.

Mishra and Morrissey’s (1990) study shows that sharing perceptions and feelings are one of the four factors needed for trust to arise. They also determined that open communication and sharing of critical information were related to trust.

Korsgaard, Brodt, and Whitener (2002) show the importance of open communication and of expressing concern. They write that a negative outcome of a disagreement between an employee and a manager does not necessarily result in low trust if managers used open communication and demonstrated concern.

Gilbert and Tang (1998) address the relevance of the informational content of what is being communicated. Information is valuable, and communication that provides increased levels of information is perceived as more relevant, which in turn impacts trust in a positive manner. They describe mentoring, informal network centrality, and work group cohesion as some of the possible means for establishing a continuous information flow.

Barker and Camarata (1998) show how a combination of communication patterns and prudent decisions can affect performance and create a positive working environment. They found that sharing of information and promoting openness and dialogue facilitated positive organizational transformation.

*Summary.* Review of trust literature reveals the multifaceted nature of trust and the role that trust plays in human relationships and organizing. Trust is a complex concept and a necessary component of all human relationships and organizing efforts. Any form of organizing, starting from small-scale organizing to organizing at the level of society, requires trust. Building and maintaining trust, therefore, is prudent. Over the past several decades, however, a concerning development has been taking place.

### **Erosion of Trust**

According to an increasing number of contemporary authors (Bennett, 1990; Fukuyama, 1995, 1999; Hardin, 2001; Putnam, 2000; Reina & Reina, 1999; Senge et al., 1999), various indications exist that trust *is* breaking down. Sztompka (1999) writes that trust is “a bet about the future contingent actions of others” (p. 25). In order to trust others, one has to believe that others will act in a trustworthy manner and also one has to be actively committed to action in situations characterized by varied levels of uncertainty. The belief that others will act in a trustworthy manner and one’s commitment to action, however, seem to have been shaken.

A number of unethical corporate practices has undermined public trust in corporations. The case of Enron seems like a distant past, but the ripple effects of weakened trust in organizations that Enron engendered can still be felt. The Lehman Brothers collapse (see Stevens & Buechler, 2013) also had a

negative impact on trust in organizations. The 2015 Volkswagen case and the scandals that involved several banks in 2016 further contributed to the diminishing of trust in organizations. Erosion of trust has a number of implications for communication, interaction, and agency.

An atmosphere of diminished levels of trust undermines sincerity, genuineness, and the joy of living and it also limits action (see Arnett & Arneson 1999, Luhmann, 1979; Sztompka, 1999). According to Arnett and Arneson (1999), in an environment of unreflective cynicism and mistrust “we fail to meet life on its own terms” (p. 16). They write that under conditions of “unnecessary interpersonal surveillance” (p. 16), when others’ words and actions are constantly being questioned, suspected, and judged, reality becomes distorted and action limited. According to Sztompka (1999), trust presupposes agency because it involves actively anticipating and facing an unknown future and committing oneself to action. For Luhmann (1979), trust is also a core component of agency. Luhmann writes that “trust accumulates as a kind of capital which opens up more opportunities for more extensive action but which must be continually used and tended” (p. 64).

*Summary.* The following tenets can be drawn from trust theory: (a) trust is relational and interactional; (b) trust is a necessary component of human relationships and organizing; (c) trust is hard to build and maintain; (d) trust presupposes agency; (e) trust and communication are interconnected; (f) erosion of trust has dire consequences. These tenets will serve as a basis for establishing the need for a discursive construction of organizational trust online later in this text. Specifically, we will propose a narrative approach when constructing organizational trust online due to the role that narratives play in human life. In the following section, we explain the relevance of narratives and their role in various aspects of human lives.

## NARRATIVE THEORY

Narratives permeate human existence and play a significant role in human lives. They form a powerful communicative and cultural web that impacts various facets of our lives. Narratives assist us on our path of individuation, identity development, and acculturation. They also help us create bonds with others; they convey messages of morals and moral behaviors; they help us make sense of the world around us, and they inspire action. The impact of narratives on human life has been noted by scholars and researchers.

The work of Campbell (1972), MacIntyre (1984), and Fisher (1984, 1989), respectively, shows that narratives are intrinsically linked with human existence and humanity. According to Campbell (1972), human life and human actions are linked with powerful narratives dominant in a particular culture. MacIntyre (1984) addresses the actuating and inspirational role of narratives when he writes that humans are story-telling beings in their “actions and practice, as well as in [their] fictions” (p. 201). Fisher (1984, 1989) draws attention to the central role of narratives in reasoning and decision making.

Many other authors also point out to a very special role of narratives in human lives. Some authors link narratives with sensemaking or meaning-making (see, e.g., Cooren, 2000; Greimas, 1987; Koschmann, 2005; Postman, 1999; Weick, 1995). Greimas (1987) explores the deep structure of narratives and the relationship between narratives and meaning-making within his general interest in meaning and discourse. For Greimas, a narrative is structured according to a limited number of universal forms that can also serve as a basis for making sense of various events and aspects of human life. Cooren, in answering the question, How is sense produced, follows Griemas’ central premise that narratives possess an organizing principle. Koschmann (2005) also stresses the sensemaking role of narratives: “People see their lives as a story and make sense of the world around them through the context of a narrative” (p. 2). Postman (1999) views narratives as a central sensemaking and action-inspiring tool. Weick, in his 1995 book on sensemaking writes that stories “are templates. . . . [that] explain . . . [and] energize” (p. 61).

Narratives have gained special attention in organizations. Barker and Gower (2010), for example, suggest that narratives fulfill the need of an increasingly diverse workplace and promote organizational communication. Eisenberg, Goodall, Jr., and Tretheway (2014) show the relevance of organizational

narratives for building organizational cultures and for taking action. Narratives can also impact the levels of trust in organizations, as illustrated by the following example described by Kodish and Pettegrew (2008).

Kodish & Pettegrew compare two narratives that have influenced customers' trust in two different organizations. In the first case, customers' trust was reinforced, whereas in the second case it was undermined. The first case involves Johnson & Johnson and the Tylenol crisis. In 1982, seven people died in Chicago after taking a very popular over-the-counter pain reliever Tylenol. Someone had tampered with Tylenol bottles and added a poisonous substance to the original content. The manufacturer of Tylenol, Johnson & Johnson, decided to act immediately and to show that customer safety was their primary concern. From a narrative perspective, they followed narrative reasoning and universal values that can be found in all major narratives – the values of preserving human life and safeguarding others. Johnson & Johnson withdrew all Tylenol bottles from the market and had a new, tamper-proof bottle, designed. By taking immediate and clearly understood measures that sent an unequivocal message to customers, "We care about you and your safety," Johnson & Johnson were able to maintain customers' trust and to reinforce and strengthen the foundation of their trusting relationships with customers. Several years later, in 1986, another organization had to deal with an unexpected crisis.

A mother informed the media that she had found pieces of glass in a jar of Gerber baby food. The baby was not hurt, but we can imagine the fear, the shock, and the concern of parents who were buying Gerber baby food. Unlike Johnson & Johnson whose board of directors followed narrative logic, Gerber's board of directors followed a different type of logic. They determined that there was no need for concern – their baby food was safe – and that they would not be withdrawing their product. In this case, the decision was based on logical rather than narrative reasoning. The conclusion of the board of directors was correct if we follow logic and logical reasoning. This is not, however, the logic that can abate human fears, and especially parents' fears. Parents reacted by switching to baby food made by other manufacturers. Furthermore, the story of Gerber food as unsafe continued to persist in Middle America for several decades despite the fact that Gerber baby food is very safe. Kodish & Pettegrew (2008) write: "The narrative structure possesses a magic of its own and a path that cannot be explained by facts, statistics, logic, or science" (p. 168).

### **Fisher's Narrative Paradigm**

Of special interest for the purpose of this article is Fisher's (1984; 1989) narrative paradigm – a multimodal and multifaceted model of communication, reasoning, decision making, and action. Disillusioned by the limitations of the dominant rational paradigm centered around logic and argumentation and inspired by MacIntyre's notion of *Homo narrans*, or the story-telling human being, Fisher developed a model centered around narration and narratives. For Fisher, narration includes words or actions, or a combination of the two "that have sequence and meaning for those who live, create, or interpret them" (p. 2). Narration, unlike the rationalistic world view and its linear, unidirectional, and argumentative nature, views human experience in its multifaceted, dialogic, dynamic, and multi-layered richness – as reason and emotion, intellect and imagination, fact and value. Another characteristic of the narrative paradigm that can help us understand its pervasiveness and its relevance for human beings is that it is acquired culturally, and is, therefore, shared by all members of a culture. The rational world paradigm, on the other hand, has to be learned. Let us now take a look at narratives as a tangible and discursive expression of the narrative paradigm.

A general characteristic of narratives is that they are holistic. They synthesize two rhetorical strands – the persuasive and the literary/aesthetic strand – and they include historical, situational, rational, and moral aspects. As a category, narratives are rather broad: they can be true or fictitious; they can be oral or written; and they can be public or private. Narratives are pervasive and common. According to Fisher, narrative as a mode of discourse in non-technical forms of communication is more common than the rational world paradigm. A relevant characteristic of narratives is their moral aspect which is expressed through narrative probability, narrative fidelity, and good reasons.

Two central components of narratives are *narrative probability* and *narrative fidelity*. Narrative probability refers to the coherency of a story, whereas narrative fidelity refers to the comparison that people make between the stories they experience with the stories they know are true. Another relevant component of Fisher's model are "good reasons," which refer to values and the overall ethical message of a narrative. Good reasons can take various forms depending on situations, genres, and media, and are influenced by history, biography, culture, and character.

*Summary.* Fisher's narrative paradigm draws attention to the manner in which human beings communicate, think, make sense of the world around them, reason, make decisions, and act. According to Fisher (1984, 1989), narratives and narrative reasoning are central to human existence. The centrality of narratives in human life suggests that various matters relevant to human beings, including trust, are likely to possess a narrative component.

## NARRATIVE CONSTRUCTION OF ORGANIZATIONAL TRUST ONLINE

As noted earlier, this text follows in the tradition of discursively constructing trust online (see Boyd, 2003). Boyd writes that trust tenets and trust characteristics create a rhetorical situation in Bitzer's (1968) terms that requires an appropriate response. Let us now see in more detail what Bitzer means by a rhetorical situation and what constitutes an appropriate response.

### Rhetorical Situation

A rhetorical situation is an emergency or a necessity that requires attention and an appropriate discursive response. For Bitzer, a rhetorical situation is a "natural context of persons, events, objects, relations, and an exigence which strongly invites utterance" (p. 5). Bitzer writes:

"The world presents objects to be known, puzzles to be resolved, complexities to be understood — hence the practical need for scientific inquiry and discourse; similarly, the world presents imperfections to be modified by means of discourse — hence the practical need for rhetorical investigation and discourse" (1968, p. 14).

It is important to note that for Bitzer, rhetorical situation is a reality rather than a sophistic or imaginary enterprise. The appropriate response, or in Bitzer's words, "fitting response" (1968, p. 6) to the rhetorical situation must also be grounded in reality. According to Bitzer, discourse created in response to a rhetorical situation should be purposeful, pragmatic, and transformative. It should also take into account the "constraints" that affect both the rhetorical situation and the response to the situation.

A rhetorical situation contains constraints or a variety of factors that can influence or constrain the rhetorical response -- both the decision and the action -- that are required for responding to the exigence. According to Bitzer (1968), constraints are made up of "persons, events, objects, and relations" (p. 8) that stem from "beliefs, attitudes, documents, facts, traditions, images, interests, motives . . ." (p. 8) and also the speaker's or writer's personal style and characteristics.

We argue that organizational trust online is a rhetorical situation that requires an appropriate discursive response. In the following paragraph we explain what makes organizational trust online a rhetorical situation.

First, the popularity of the Internet has grown tremendously. The number of organizations and individuals who are using the Internet for communication, interaction, and transactions has skyrocketed (see, e. g., Barnes, Lescault, & Wright, 2013; McCorkindale & DiStaso, 2014). The Internet exemplifies Bitzer's (1968) description of a rhetorical situation as a "natural context of persons, events, objects, relations" (p.5). Second, the Internet with its myriads of messages and interactions is a reality rather than a sophistic or imaginary enterprise, which meets Bitzer's criterion that a rhetorical situation must be a real rather than imaginary situation. The third reason why organizational trust online constitutes a rhetorical situation is the multifaceted nature of trust and the many functions and roles of trust in society, organizing, and relationships. Trust theory indicates that (a) trust is relational and interactional; (b) trust is a necessary component of relationships and all forms of organizing; (c) trust is hard to build and maintain; (d) trust presupposes agency; (e) trust and communication are inextricably linked; (f) erosion of trust has

dire consequences. The nature of trust and its role in human relationships meet Bitzer's criteria of a natural context of persons, relations, events, objects, and reality. Organizational trust online also contains "constraints" or various factors that influence a rhetorical situation and that stem from individual, cultural, social, and historical backgrounds of persons, events, objects, and relations.

*Summary.* The Internet with its numerous interactions and transactions is a reality that falls under the definition of a rhetorical situation in Bitzer's (1968) sense. The indispensable role of trust in human interactions and communication further supports postulating of communication, interaction, and transactions on the Internet as a rhetorical situation. According to Bitzer (1968), a rhetorical situation is an exigence that requires an appropriate or fitting discursive response. In the following paragraphs, departing from Boyd's (2003) initial idea of the rhetorical and discursive nature of trust online, we propose a specific appropriate or fitting response to the rhetorical situation created by the reality of the Internet and its myriads of interactions and transactions between individuals and organizations.

### **An Appropriate Discursive Response**

We argue that Fisher's (1984, 1989) narrative paradigm provides a sound theoretical foundation for constructing an appropriate response to the rhetorical situation created by the increasing number of interactions on the Internet. In the following paragraphs, we explain more specifically how Fisher's narrative paradigm can be utilized as a foundation for building organizational trust online.

Fisher's narrative paradigm presupposes the presence of narrative probability, or a coherent and complete story. It also presupposes the presence of narrative fidelity, or the comparison between the stories people experience with the stories they know are true. The third relevant component of the narrative paradigm are "good reasons," or ethical principles, values, and value-based archetypes that must be interwoven into the story in order for the story to be recognized as relatable, inspiring, and actionable. Translated into practical and pragmatic discourse, as required by Bitzer's (1968) model, messages online should be constructed according to narrative probability, or, in other words, they should be coherent and complete. This means that an organization needs to provide sufficient information about its purpose, vision, goals, staff, history, products, and practices that will enable the "audience" to gain a full understanding of what the organization does, how it functions, and what benefits it provides to its customers. The coherence and completeness requirement applies to both the verbal and visual parts of the message. The following case exemplifies the relevance of narrative probability expressed both verbally and visually.

In the summer of 2015, Chrysler decided to recall a number of vehicles due to a hacking threat. Its website provides general information about recalls. Specific information is provided for owners who are required to enter a VIN number in order to access the information (see "Chrysler," 2015). It is understandable that the creators of Chrysler's website wish to bring attention to beautiful and functional cars rather than to the recall, but a question is warranted: Does Chrysler provide sufficient information about recalls to prospective customers? Questions can also be asked about the webmaster's choice of font type and font size that is not easy to read, and about the terse content that does not provide detailed information. The question to ask, in view of the requirements of Fisher's narrative paradigm, is: Does the Chrysler website exemplify narrative probability? A dedication to narrative probability which calls for coherence and completeness is likely to contribute to creating trustworthiness, which is a necessary condition for trust to arise.

The second principle of Fisher's narrative paradigm – narrative fidelity – requires the stories to withstand the test of the comparison between the stories people experience and the stories that they know are true. In order to promote trustworthiness, the principle of narrative fidelity must be present in organizational messages. The following example illustrates the importance of narrative fidelity.

In 2011, the CEO of Starbucks, Howard Schultz, decided to take an unprecedented move and close down all Starbucks stores for three and a half hours in order to improve the levels of service and quality ("Starbucks Closing," 2011). Starbucks' competitors were delighted, gleefully hoping to win over Starbucks' customers, but to their surprise, Starbucks emerged from the unprecedented hiatus stronger. Closing down of the stores, despite the cost and the potential loss of customers, sent out a powerful

message that Starbucks places quality and service to customers above profits. The message resonated with the customers as true and reliable, and, consequently, contributed to Starbucks' trustworthiness.

The third major component of Fisher's narrative paradigm -- the concept of "good reasons" -- calls for an inclusion of values and an overall ethical stance. Organizational messages should not only be truthful and honest; they should also include caring, understanding, and humanity. Information about Gerber baby food that the company provided during the crisis, as described earlier in this text, was true and factual, but it lacked "good reasons" -- values of caring and of humanity and, thus, failed to resonate with the customers.

Let us now summarize what organizations can do to contribute, on their part, to higher levels of trust on the Internet. In order to ensure that they are contributing to the creation of trust online, organizations need to ask and answer truthfully the following questions:

- Are all of our messages coherent, complete, true, and ethical?
- Are we providing sufficient information to the customers?
- Are our efforts sufficiently personal rather than cold and detached?
- To what extent can our customers relate to our "story"?
- Are all our efforts when communicating and conducting transactions on the Internet aligned?
- Are we providing goods or services that we promised?
- Do the experiences of customers match the description of our goods or services?
- How are we treating our customers?
- What type of messages are we sending?
- Do the messages reflect our code of ethics and the organizational character and reputation?

#### *Responsibility for Building Trust*

Trust is relational and dynamic rather than unidimensional. Ideally, organizational efforts aimed at developing trust would be complemented by customers' and prospective customers' messages and efforts. In view of the specificity of the nature of interactions on the Internet, we argue that the responsibility for building trusting relationships with customers rests with organizations. Modern-day customers are well informed (Denning, 2011; Merchant, 2012) and empowered (Coleman, Chandler, & Jian, 2012; Bruhn, Schoenmueller, & Schäfer, 2012), which suggests that their Internet messages are likely to contain well-informed and meaningful content. To a certain extent, well-informed and meaningful content may satisfy some but not all of the principles of the narrative paradigm that calls for coherent, complete, true, and ethical messages. Modern-day customers are also a disparate group with varied interests and goals. Expecting of them to make an effort at building trust online would not be realistic. Just as the responsibility for building relationships with customers rests with organizations (see Kodish & Pettegrew, 2008), we argue that trust building, similarly, is the responsibility of organizations.

## **CONCLUSION**

In this article, we posit organizational trust online, a specific type of trust that develops between individuals and organizations on the Internet, as a discursive construct and draw attention to the discursive, narrative, and rhetorical nature of organizational trust online. The starting point for postulating organizational trust online as a discursive construct was Boyd's (2003) conceptualization of trust online and his call for discursively constructing this specific type of trust. Inspired by Boyd's idea, a theoretical foundation for understanding and building organizational trust online was developed and practical suggestions were provided. Specifically, Fisher's (1984; 1989) narrative paradigm, Bitzer's (1968) concept of a rhetorical situation, and an overall discursive framework (Boyd, 2003; Cooren, 2000; Eisenberg, Goodall, Jr., and Tretheway, 2014; Greimas, 1987; Koschmann, 2005; MacIntyre, 1984; Postman, 1999; Weick, 1995) were applied as a basis for building a theoretical foundation for constructing organizational trust online and for developing practical suggestions. Narrative theory was selected because it provides holistic insights into the ways human beings communicate, think, make

decisions, and take action. Bitzer's concept of a rhetorical situation was selected because it highlights the discursive aspect of events and human actions. The overall discursive framework of the article draws attention to communication as constitutive of all organizing efforts.

At the theoretical level, the article reflects the central principles of the discursive school of thought (see, e.g., Cooren, 2004; Fairhurst & Putnam, 2004; Heracleous & Barrett, 2001; Heracleous & Marshak 2004; Heracleous & Hendry, 2000; Putnam & Fairhurst, 2001; Taylor & Robichaud, 2004) and contributes to the understanding of organizing as a discursive endeavor. Ideas presented in this article have also practical implications. At the practical level, suggestions provided in the article have an applicable and actionable potential and can help organizations build trust online and, consequently, promote establishing and building relationships with customers and prospective customers.

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# **Should I Leave or Not? The Role of LMX and Organizational Climate in Organizational Citizenship Behavior and Turnover Relationship**

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*This study attempts to investigate the complex nature of the relationship between organizational citizenship behavior and turnover intentions. We argue that leader member exchange and organizational climate will moderate the relationship between organizational citizenship behavior and turnover intentions. The results of hierarchical regression analysis conducted on the data obtained from 216 employees working in the retail industry provide support to the hypothesized relationships. Implications for management practice and future research directions are discussed.*

## **INTRODUCTION**

Workplace behaviors that are critical to organizational performance have intrigued scholars and practitioners alike for decades. One such behavior that is discretionary, not formally recognized or rewarded, is termed as Organizational citizenship behavior. (Organ, 1988; Van Dyne, Graham, & Dienesch, 1994; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). It has been demonstrated that this behavior is highly valuable to the effective functioning of the organization (Podsakoff, Whiting., Podsakoff, & Blume, 2009; Van Dyne, Graham, & Dienesch, 1994). Arguably, it is one of most extensively studied topics in organizational behavior. On the account of importance that OCB commands, researchers have linked it with several vital outcomes such as rewards (Allen, 2006), performance judgements (Allen & Rush, 1998), social capital (Bolino, Turnley, & Bloodgood, 2002), turnover (Chen, Hui, & Segó, 1998), organizational effectiveness (Walz & Niehoff, 2000), productivity (MacKenzie, Podsakoff, & Fetter, 1991), customer satisfaction (Yen & Niehoff, 2004), task performance, etc. (Rapp, Bachrach, & Rapp, 2013). One such relationship that has intrigued researchers is OCB and turnover relationship. Turnover is an important organizational phenomenon (Mor Barack, Nissly, & Levin, 2001), and for the organizations to be competitive, the need to retain high performing employees is immense (Younge & Marx, 2015). Scholars in the past have studied turnover as it represents a salient organizational problem because of the numerous costs associated with it (Mitrovska & Eftimov, 2016; Griffeth, Hom, Gaertner, 2000). The consequences of turnover include resources spent on recruiting, selecting, and socializing new personnel. Additionally, if the departed employees were working on the interdependent tasks with other colleagues in the unit, some of the work may come to an abrupt halt (Staw, 1980). It can have a negative impact on efficiency (Alexander, Bloom, & Nuchols, 1994), sales

(Kacmar, Andrews, Van Rooy, Steilberg, & Cerrone, 2006; McElroy, Morrow, & Rude, 2001), and productivity (Huselid, 1995; Shaw, Gupta, & Delery, 2005).

Despite the importance of OCB and turnover for the effectiveness of an organization, limited research exists on the dynamics that govern this relationship. For instance, Chen (2005) reported that OCB explained more variance in employee turnover as compared to job satisfaction and organizational commitment. In a meta-analysis, Podsakoff et al. (2009) indicated a weak negative relationship between OCB and turnover intention, and suggested the requirement to examine contextual variables to further understand the nature of OCB and turnover intentions relationship. This was echoed in the study by Khalid, Jusoff, Ismail, Kassim, & Rahman (2009) as results demonstrated gender to be the moderator of the negative relationship between OCB and turnover. Taken together, it is critical to explore further the contingencies that have a potential to promote or restrict turnover among employees that engage in OCBs. In this paper, we argue that the direction of OCB-turnover intention relationship will depend on specific contextual factors involved. As such, the main contribution of this study is to investigate the factors that govern the nature of the OCB -turnover relationship. This research is an attempt to answer the call made by scholars (Podsakoff et al., 2009; Khalid et al., 2009) for further understanding the complexities associated with OCB- turnover relationship.

### **Organizational Citizenship Behavior and Turnover Intentions**

Research focusing on behavioral antecedents of turnover has been limited (Chen et al., 1998). Most the studies investigating the impact of behaviors such as lateness, tardiness, and absenteeism on turnover intentions did not find those to be good predictors of turnover (Benson & Pond, 1987; Rosse, 1988). Chen et al. (1998) suggested that a reason for such inconclusive results is that these behaviors are forms of avoidance or withdrawal behaviors, which are non-discretionary in nature and tied to the organizational reward system. On the other hand, behaviors such as OCB have a potential to impact turnover intentions mainly because of the fact that these behaviors are discretionary in nature. The main premise behind this argument is behavioral intentions that represent dissatisfaction with the organization should deter people from engaging in pro-social behaviors.

Preliminary research focusing on OCB- turnover intention has shown promising results. For example, Aryee and Chai (2001) found a negative correlation between OCB and turnover intentions. Chen et al. (1998) demonstrated evidence of weak-negative relationship between OCB and actual turnover. The study indicated a positive relationship between OCB and turnover intention. In addition, Dalal (2005) conducted a meta- analysis and reported a moderately negative relationship between OCB and counterproductive work behaviors. In an effort to extricate OCB research, Konovsky & Organ (1996) have suggested that contextual factors should have precedence over dispositional ones. It is consistent with the views of a majority of organizational scholars who emphasize the importance of contextual factors over dispositional variables (Davis-Blake & Pfeffer, 1989; Sharoni, Tziner, Fin, Schultz, & Zilberman, 2012). Therefore, the purpose of this study is to focus on two contextual factors - Leader member exchange (Graen & Uhl-Bien, 1995) and Organizational climate (James & James, 1989), which have the potential to affect OCB and turnover intentions relationship. The choice of leader member exchange (LMX) and organizational climate is consistent with prior research as these variables have been studied as contextual variables in many important organizational outcomes such as safety performance (Smith-Crowe, Burke, & Landis, 2003), affective commitment (Buch, 2015), organizational citizenship behavior (Hofmann, Morgeson, & Gerras, 2003), role overload (Tordera, González-Romá, Peiró, 2008), and follower resilience etc. (Smith, 2015). In this study, we propose that employees who engage in OCBs and perceive their relationship with the supervisor to be high quality and the organizational climate to be supportive, are less likely to leave. On the other hand, if employees who engage in OCB but feel that they do not receive required support and that the organizational climate is unfavorable, are likely to quit.

## **HYPOTHESES**

### **Leader Member Exchange**

LMX is a leadership theory characterized by a unique emphasis on leader and follower dyads (Graen & Uhl-Bien, 1995). It is based on the premise that a supervisor has different relationships or patterns of behavior with each subordinate within the same workgroup (Gerstner & Day, 1997). With some of the subordinates, leaders develop high quality LMX relationships in which reciprocal exchanges go beyond what is formally required in the organization whereas with the other subordinates, low quality LMX relationships are formed that are limited to carry out the tasks required by the formal contracts (Liden & Graen, 1980). High quality LMX is characterized by higher levels of trust, liking, commitment and respect (Graen & Uhl-Bien, 1995).

Dienesch and Liden (1986) suggest that LMX is a multidimensional construct and assert that LMX relationships can build in various ways, and these are primarily based on three varying amounts of “currencies of exchange” (p. 625). The currencies of exchange are characterized by task-related behaviors, loyalty to each other, and mutual liking. The quality of exchange might depend on one, two, or all the three dimensions (Dienesch & Liden, 1986). Research has shown that quality of leader member exchange is a better predictor of organizational outcomes as compared to traits and behaviors of supervisors. An exchange relationship between each subordinate and supervisor is unique and develops over time. This relationship is categorized as high LMX relationship (in-group) or low LMX exchange (out-group). High LMX includes relationship aspects and low LMX is typically characterized by “exchanges” based on work tasks (Dansereau, Graen, & Haga, 1975; Northouse, 2010).

Subordinates that share high-LMX relationship are more likely than those in low LMX relationships to receive challenging task assignments, training opportunities, resources, information and support (Liden, Wayne & Sparrowe, 2000; Scandura, Graen & Novak, 1986). Subordinates with high quality LMX relationships may perform better because of the added support, feedback, resources and opportunities provided to them (Feldman, 1986). In addition, leniency bias appears to inflate performance ratings for employees with high-quality LMX relationships. However, in low quality LMX relationships, leaders rate members strictly according to established performance standards (Duarte, Goodson & Klich, 1994; Heneman, Greenberger, & Anonyuo, 1989).

Since organizations use performance based criteria for promotions and other rewards, each employee within the same workgroup can realize which employees are receiving advantages because of supervisor’s affinity towards them (high LMX). Even if a low-LMX subordinate frequently exhibits OCBs, by comparing what he receives and what others (high LMX) subordinates receive, feelings of dissatisfaction may arise. Moreover, research has shown that high-quality leader-member exchanges are related to important organizational outcomes such as less employee turnover (Graen, Liden, & Hoel, 1982), subordinate satisfaction, and greater organizational commitment (Graen, Novak, & Sommerkamp, 1982; Scandura & Graen, 1984). Therefore, when employees share a high LMX with a supervisor, they will be less likely to leave the organization because of all the privileges associated with high LMX. Thus, we hypothesize:

*Hypothesis 1: Leader member exchange will moderate the relationship between organizational citizenship behavior and turnover intentions, such that the relationship will be more negative for high-LMX employees.*

### **Organizational Climate**

Perhaps one of the most critical factors of a workplace that can help employees succeed is the climate. Organizational climate depicts an individual’s perception about the work environment which includes shared perceptions of organizational events, practices, procedures and behaviors that organizations reward and expect (Pullig, Joseph, Maxham, Joseph, & Hair, 2002). The way in which individuals perceive organizational climate dictates how they interpret events, predict outcomes, and evaluate the appropriateness of their subsequent actions (Jones & James, 1979). Previous research has

shown that climate perceptions are related to critical outcomes such as leader behavior, turnover intentions (Rousseau, 1988; Rentsch, 1990), job satisfaction (Mathieu, Hoffman, & Farr, 1993; James & Tetrick, 1986; James & Jones, 1980) and individual job performance (Brown & Leigh, 1996; Pritchard & Karasick, 1973). In addition, climate has been reported to have an impact on OCB (Cilla, 2011; Shin, 2012). Organizational theorists have debated extensively about the construct of organizational climate. It has been projected in the literature as a multidimensional concept and scholars have called for a more context specific approach to study climate (Schneider & Reichers, 1983; Griffin & Mathieu, 1997). Schneider (1990, 2000) suggests that the dimensions of organizational climate will differ depending on the purpose of the investigation and the criterion of interest, and that general measures of organizational climate will contain dimensions that are not relevant for each specific study.

Our conceptualization of climate for the current study is consistent with the James and James (1989) hierarchical model of meaning in organizations, which assumed the general factor of 'psychological climate'. The model projects organizational climate as perceptions of employees about their environment and the way they cognitively assess the environment through schemas derived from work related values (James & James, 1989). The concept of psychological climate emanates from the assumption that variables underlying valuations of the work environment dictate whether an individual will evaluate his work environment to be adverse or beneficial. (James & James, 1989).

The general factor proposed by James and James (1989) has four dimensions: 1) Leader support and facilitation, 2) Role stress and lack of harmony, 3) Job challenge and autonomy, and 4) Work group cooperation, warmth, and friendliness. Since the dimension of leader support and facilitation was explained by variables such as leader trust, facilitation, liking and interaction (James & James, 1989), it has been described as a dimension that is similar to the construct of LMX quality to a major extent (Coglister & Schriesheim, 2000). As such, we did not consider the dimension of leader support and facilitation in our study because of its conceptual overlap and lack of clear distinction with LMX quality.

The literature demonstrates that organizational climate is paramount in enhancing organizational commitment and improving performance (Patterson, Warr and West, 2004; Fu & Deshpande, 2012). Specifically, climate that is characterized by high group cooperation is related to higher levels of OCB and reduced employee turnover. For instance, Whiteoak (2007) examined the impact of various group characteristics including group cohesion on goal commitment and turnover. The results demonstrated higher levels of workgroup cooperation was related to reduction in turnover. Cohen, Ben-Tura, & Vashdi (2012) investigated moderating effects of group cohesiveness on the relationship between in role and extra role behaviors. The results showed group cohesiveness was an important moderator in the prediction of OCB.

The level of job autonomy given to employees is a critical component of organizational climate. Job autonomy can be defined as the degree of control a worker has over his or her own immediate scheduling and tasks (Liu, Spector, & Jex, 2005). Job autonomy is associated with turnover intention among workers. Spector's (1986) meta-analysis on the effect of perceived autonomy showed that greater perceived autonomy decreased the likelihood of a worker quitting his or her job. Galletta, Portoghese, & Battistelli (2011) utilized a sample of 442 nurses, and found that affective commitment mediated the relationship between job autonomy and turnover intentions. Similarly, Harr & Spell (2009) reported that job autonomy moderated the negative relationship between distributive justice and turnover intentions. Ozer (2011) investigated the moderating role of task autonomy in the relationship between OCB and job performance and found that under high levels of task autonomy, OCB was positively related to job performance. The study conducted by Hwang and Chang (2009) demonstrated that work climate negatively influenced the turnover intentions. More specifically, the 'work group friendliness and warmth' was the strongest predictor of intent to leave.

The final component of organizational climate in our study is role stress and lack of harmony. Role related stress in the workplace includes role conflict, role ambiguity, and role overload (James & James, 1989; Soderfeldt, Soderfeldt, & Warg, 1995; Blankertz & Robinson, 1997), and has been related to both behavioral and psychological job withdrawal (Bedeain & Armenakis, 1981). Role conflict and role ambiguity were reported to have a positive impact on turnover but the relationship was mediated by job

satisfaction and physical symptoms (Schuler, 1982; Kemery, Mossholder, & Bedeian, 1987). In addition, Mor Barak et al. (2001) conducted a meta-analysis and reported that role stress, availability of other employment opportunities, low organizational and social commitment, job dissatisfaction, and lack of social support were strongest predictors of turnover or intention to leave. Kim and Stoner (2008) also confirmed that role stress and social support had an interactive effect on turnover intention. Similarly, Amin and Akbar (2013) have emphasized the importance of harmonious relationship between coworkers to promote employee retention.

Stress associated with one's role in the organizational has been investigated in the context of OCB. One on hand, Eatough, Chang, Miloslavic, and Johnson (2011) conducted a meta-analysis to determine the effects of occupational role stressors on OCB and found two critical role stressors--role ambiguity and role conflict--had significant negative impact on OCB, while on the other hand, Bolino & Turnley (2005) found that higher OCB lead to increased job stress. Mosadeghrad, Ferlie, & Rosenberg (2011) utilized a sample of health care industry workers and demonstrated that job stress had a positive impact on turnover intentions of employees. Clearly, none of the studies have examined the joint effects of OCB and climate on turnover intention. It is imperative to understand the reaction of an employee who exhibits citizenship behaviors and perceives the climate to be characterized by job challenge and autonomy; work group cooperation, friendliness, and warmth; role stress and lack of harmony. This leads to –

*Hypothesis 2 (a): The relationship between organizational citizenship behavior and turnover intentions will be more negative in a climate that is characterized by a high level of job challenge and autonomy, work group cooperation, warmth, and friendliness.*

*Hypothesis 2 (b): The relationship between organizational citizenship behavior and turnover intentions will be more positive in the climate characterized by high role stress and lack of harmony.*

## **METHOD**

The sample used for this study was composed of employees working in the retail sector across various organizations in the southern United States. A web-based questionnaire was utilized for the study. The URL containing the questionnaire was sent to 277 employees. A total of 231 responses were received; however, 15 were not included in the analysis due to lack of response to more than half of the items in the questionnaire. Thus, 216 usable responses were included in the final analysis for the study, which resulted in the final response rate of 77.9%. The non-response bias didn't affect the results as the response rate of study was more than 70 % (Singleton & Straits, 2005). The average age of participants was 29.67 years and their average tenure in the organization was 5.32 years. The percentage of male respondents in our study was 67%.

The survey questionnaire was hosted online on a third-party website where no personally identifiable data were collected from any of the respondents. As suggested by Dillman (1978), participants were explained regarding the focus of the study and the confidentiality of their responses. The importance of their participation to the study was also emphasized. This was done to improve the quality of data and the response rate. Participation in the study was voluntary and the participants could withdraw their participation at any time during the process of completing the survey.

## **Instruments**

### *Organizational Citizenship Behavior*

OCB was measured using a 20-item scale developed by Niehoff and Moorman (1993). The employees reported how frequently they exhibited the behaviors mentioned in the scale ranging from 1 (never) to 6 (always). The Cronbach's alpha for the scale was 0.83.

### Turnover Intentions

The construct was measured using a four-item scale adapted from Hunt, Osborn, & Martin (1981). Participants responded to the items using a Likert-type scale that was unique to each item in the scale. For example, one of the items in the scale was, ‘If you were completely free to choose, would you prefer or not prefer working for this organization?’ The corresponding answers to this were – 1. Prefer very much to continue working for this organization 2. Prefer to work here 3. Don’t care either way 4. Prefer not to work here 5. Prefer very much not to continue working for this organization. The Cronbach’s alpha for the scale was 0.86.

### Leader Member Exchange

Quality of leader-member exchange was assessed using seven items which were adapted from Scandura and Graen (1984). The LMX7 measure as suggested by Graen and Uhl-Bien (1995) used a Likert-type scale which had various anchors specific to each item being used. For example, one of the item was, ‘How effective would you characterize your working relationship with your supervisor?’ The anchors for this item ranged from 1 (Extremely effective) to 5 (Extremely ineffective). Internal consistency (Cronbach’s alpha) reliability was 0.81.

### Organizational Climate

To measure organizational climate, a psychological climate inventory (PC) adapted from James and James (1989) was used. Participants indicated the degree to which they felt each of the 13 items were representative of their organization on a 5-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The scale consists of three factors: job challenge & autonomy; work group cooperation, friendliness & warmth; role stress & lack of harmony.

## RESULTS

Descriptive statistics for our study are shown in Table 1. Cronbach’s alpha values of all the scales are described along the diagonal in the table and are greater than the threshold of .70 established by Nunally (1978).

TABLE 1

		M	SD	1	2	3	4	5	6
1	TI	2.64	0.71	<b>0.86</b>					
2	OCB	4.27	0.54	-0.23	<b>0.83</b>				
3	LMX	4.38	0.76	-0.47**	0.51	<b>0.81</b>			
4	JCA	4.71	0.61	-0.32*	0.39**	0.19*	<b>0.84</b>		
5	WCFW	4.77	0.79	-0.26	0.44**	0.46**	0.34**	<b>0.78</b>	
6	RSLH	4.24	0.81	0.38	0.21*	-0.28*	-0.18	-0.39	<b>0.89</b>

\*\*p < 0.01 (2-tailed); \*p < 0.05 (2-tailed); N=216

Notes: Diagonal items represents reliability of constructs

TI= Turnover Intentions; OCB= Organizational Citizenship Behavior; LMX= Leader member exchange, JCA=Job Challenge & Autonomy; WCFW= Work group cooperation, friendliness, and warmth; RSLH= Role Stress and Lack of Harmony

In order to test for construct validity, we performed convergent validity and discriminant validity analysis. Convergent validity is the degree to which items of the same construct correlate to the construct (Campbell & Fiske, 1959). We used SmartPLS software to extract the factor loadings and cross loadings of all indicator items to their latent constructs. The results in Table 2 demonstrate that all items loaded on their respective construct from a lower limit of 0.56 to an upper limit of 0.92. In our results, each item’s



factor loading on its own construct was significant with all factor loading greater than 0.56 (t values > 3.31). The factor loading shown in Table 2 demonstrates the convergent validity measures for the latent constructs used in our study.

**TABLE 2  
CONVERGENT VALIDITY**

	LMX	TI	OCB	JCA	WCFW	RSLH
LMX 1	0.57					
LMX 2	0.63					
LMX 3	0.64					
LMX 4	0.81					
LMX 5	0.83					
LMX 6	0.61					
LMX 7	0.69					
TI 1		0.63				
TI 2		0.78				
TI 3		0.92				
TI 4		0.83				
OCB 1			0.76			
OCB 2			0.81			
OCB 3			0.78			
OCB 4			0.85			
OCB 5			0.80			
OCB 6			0.87			
OCB 7			0.71			
OCB 8			0.59			
OCB 9			0.73			
OCB 10			0.76			
OCB 11			0.89			
OCB 12			0.82			
OCB 13			0.74			
OCB 14			0.67			
OCB 15			0.91			
OCB 16			0.89			
OCB 17			0.77			
OCB 18			0.68			
OCB 19			0.82			
OCB 20			0.76			
JCA 1				0.75		
JCA 2				0.79		
JCA 3				0.81		
WCFW 1					0.81	
WCFW 2					0.78	
WCFW 3					0.64	

Discriminant validity is the degree to which items differentiate between constructs or measure different constructs (Campbell & Fiske, 1959). It was assessed by a method suggested by Fornell and Larcker (1981). Table 3 indicates the result of discriminant validity of measured scales. The bolded numbers in matrix diagonal, representing the square root of AVEs, are greater in all cases than off diagonal elements in their corresponding row and column, which supports the discriminate validity of the scales used.

**TABLE 3  
DISCRIMINANT VALIDITY**

Variables	1	2	3	4	5	6
1. TI	<b>0.73</b>					
2. OCB	-0.23	<b>0.64</b>				
3. LMX	-0.47**	0.51	<b>0.59</b>			
4. JCA	-0.32*	0.39**	0.19*	<b>0.77</b>		
5. WCFW	-0.26**	0.44**	0.46**	0.34**	<b>0.81</b>	
6. RSLH	0.38	0.21*	-0.28*	-0.18	-0.39	<b>0.65</b>

\*\*p < 0.01 (2-tailed); \*p < 0.05 (2-tailed) N=216

Hypotheses for this study were tested using various sets of hierarchical regression analysis.

Age and work experience served as the control variables in the hierarchical regression and were entered in the first block for all the models.

Hypothesis1 was tested using the regression model containing leader organizational citizenship behavior, LMX, turnover intentions as independent, moderating, and dependent variables respectively. The hypothesis suggested moderating effect of LMX in the relationship between organizational citizenship behavior and turnover intentions. To test the hypothesis, turnover was entered as a dependent variable in the regression analysis. We entered other variables in a series of steps. The predictor variable OCB and LMX were entered in the second block. In order to examine the moderating effect of LMX, the interaction term (OCB\*LMX) was created and entered as the third block. To reduce multicollinearity, all scores were mean-centered throughout the analysis. The results in Table 4 were significant when the interaction termed was introduced ( $\beta = -0.34, p < .05$ ). As such, the results provided strong support for the moderating effect of LMX.

**TABLE 4  
RESULTS OF HIERARCHIAL REGRESSION MODEL INVOLVING – TURNOVER INTENTION: DEPENDENT VARIABLE; ORAGNIZATIONAL CITIZENSHIP BEHAVIOR: INDEPENDENT VARIABLE; LMX: MODERATING VARIABLE**

Dependent Variable	Predictor Variable	Std Coefficient Beta
TI	AGE	0.05
	WORK EX	0.07
	OCB	-0.11
	LMX	0.21*
	OCB*LMX	-0.34*
	R square	0.22
	Adjusted R square	0.21

\* p<0.05 (2-tailed); \*\* p<0.01 (2-tailed)

Hypothesis 2 (a) predicted that the relationship between OCB and turnover will be moderated by organizational climate. We anticipated that the relationship between OCB and turnover will be more negative in a climate that is characterized as high on job challenge and autonomy as compared to a climate which is low on the dimension. The results shown in Table 5 demonstrated that job challenge and autonomy moderated the relationship between OCB and turnover, as the interaction term OCB\*JCA was significant ( $\beta = -.29$ ,  $p < .01$ ). In addition, we examined another organizational climate dimension, workgroup cooperation, warmth, and friendliness as a moderator of the relationship between OCB and turnover intentions. As indicated, in Table 6., the results for the interaction term OCB\*WCFW ( $\beta = -.42$ ,  $p < .001$ ) provide support to the hypothesized relationship.

**TABLE 5**  
**RESULTS OF HIERARCHIAL REGRESSION MODEL INVOLVING – TURNOVER INTENTION: DEPENDENT VARIABLE; ORAGNIZATIONAL CITIZENSHIP BEHAVIOR: INDEPENDENT VARIABLE; JOB CHALLENGE AND AUTONOMY: MODERATING VARIABLE**

Dependent Variable	Predictor Variable	Std Coefficient Beta
TI	AGE	0.11
	WORK EX	-0.03
	OCB	-0.14
	JCA	-0.19**
	OCB*JCA	-0.29**
	R square	0.22
	Adjusted R square	0.20

\*  $p < 0.05$  (2-tailed); \*\*  $p < 0.01$ , (2-tailed)

**TABLE 6**  
**RESULTS OF HIERARCHIAL REGRESSION MODEL INVOLVING – TURNOVER INTENTION: DEPENDENT VARIABLE; ORAGNIZATIONAL CITIZENSHIP BEHAVIOR: INDEPENDENT VARIABLE; WORKGROUP COOPERATION, FRIENDLINESS AND WARMTH: MODERATING VARIABLE**

Dependent Variable	Predictor Variable	Std Coefficient Beta
TI	AGE	0.05
	WORK EX	-0.02
	OCB	-0.27
	WCFW	0.23***
	OCB*WCFW	-0.42***
	R square	0.29
	Adjusted R square	0.27

\*  $p < 0.05$  (2-tailed); \*\*  $p < 0.01$ ; p < 0.001\*\*\* (2-tailed)

Hypothesis 2(b) predicted that the relationship between OCB and turnover is moderated by organizational climate such that this relationship will be more positive for a climate that is high on role

stress and lack of harmony. The results described in Table 7 showed a significant moderating effect for the interaction term OCB\*RSLH ( $\beta = .21, p < 0.01$ ). Overall, our results demonstrated support for both hypotheses.

**TABLE 7**  
**RESULTS OF HIERARCHIAL REGRESSION MODEL INVOLVING – TURNOVER INTENTION: DEPENDENT VARIABLE; ORAGNIZATIONAL CITIZENSHIP BEHAVIOR: INDEPENDENT VARIABLE; ROLE STRESS AND LACK OF HARMONY: MODERATING VARIABLE**

Dependent Variable	Predictor Variable	Std Coefficient Beta
TI	AGE	-0.08
	WORK EX	-0.06
	OCB	0.17
	RSLH	0.09
	OCB*RSLH	.21**
	R square	0.32
	Adjusted R square	0.31

\*  $p < 0.05$  (2-tailed); \*\*  $p < 0.01$ , (2-tailed)

## DISCUSSION AND IMPLICATION

This paper extends the current literature on organizational citizenship behavior and turnover. We found that OCBs were negatively related to turnover intentions in the climate that was characterized by job challenge, autonomy, work group cooperation, warmth, and friendliness. In addition, OCBs were found to be positively related to turnover intentions in the climate that had high levels of role stress and lack of harmony. Our results are consistent with the research that was conducted by Podsakoff et al. (2009) and indicated a negative relationship between OCB and turnover intentions. Furthermore, we have demonstrated that organizational climate is a moderator of the relationship between OCBs and turnover intentions.

Another interesting finding of our study is that LMX served as a moderator in the relationship between OCB and turnover intentions. We found that for high LMX employees, OCB was negatively related to turnover intentions. It suggests that when employees engage in OCB and receive the required support from their supervisors, they feel that they are being valued so they are not inclined to leave. On the contrary, when employee share a low LMX with supervisors, they feel that their efforts and pro-social behaviors are not valued in the organization. This stimulates the feeling of dissatisfaction; and intentions of leaving the workplace are likely to develop.

Our study has some crucial implications for management practice. First, supervisors should design impartial and objective systems when assigning jobs, duties, and responsibilities. The reasons behind why one gets some resources while others do not should be clearly underscored so that differences are understood by every employee, which, in turn, will obviate any misunderstandings between supervisor and their subordinates. Second, the supervisor should strive to maintain a good working relationship with all the employees, more specifically, employees who regularly engage in OCBs. This good working relationship can be achieved through promoting an environment of more informal interaction between supervisors and subordinates. Finally, managers should strive to keep a watch on employees and offer them personal guidance and counselling to reduce stress and to promote harmony in the workplace. The

study has two major limitations. First, the research design was cross-sectional, so we cannot infer the causation among the variables based on results. A longitudinal design is recommended to establish causality. Second, a survey was the only method used to collect data for the study. Therefore, our results may be affected by the common method variance.

## CONCLUSION AND FUTURE RESEARCH

It is crucial that managers in the current workforce recognize contextual factors that impact employees who conduct OCB. Employers find it beneficial to have employees who exhibit OCB as these behaviors are positively related to performance outcomes such as task performance (Podsakoff et al., 2009). Given the value of these OCB-exhibiting employees, it is important to examine factors that impact turnover intentions amongst these employees. This paper examined two contextual factors (LMX and Organizational Climate) that impact the OCB-turnover intentions relationship. Our contribution lies in explaining the specific conditions in which OCB may have a positive or negative impact on turnover intentions. Precisely, our study shows that high LMX relationships and favorable organizational climate can be instrumental in retaining employees that perform OCB frequently. This study would be beneficial to employers who are pursuing ways to minimize turnover of OCB-exhibiting employees. Employers can therefore implement policies and programs to encourage high LMX relationships and establish a favorable organizational climate to increase the retention of employees that employers don't wish to lose. This study also focused on OCB- turnover intentions from the individual level which is consistent with Schnake and Dumler (2003) that considers OCB to be at the individual level. It is the combined OCB from a group perspective that may affect a department, division, or organization in terms of turnover intentions (Khalid et al., 2009).

This paper provides the foundation for some interesting avenues for future research. Future studies should explore the impact of interventions designed to change the organizational climate on reducing the turnover intentions. In addition, research has suggested that job embeddedness is an important predictor of turnover intentions (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Examining the nature of this relationship in the presence of OCBs is likely to yield some interesting results. Ang, Van Dyne, and Begley (2003) found that a difference exists in the OCB exhibited by local employees as opposed to foreign employees. It is suggested that further research be done to see if the impact of the contextual factors affecting the OCB- turnover intentions relationship is different if we consider employee characteristics such as nationality and marital status. This study was conducted using a sample of the population from the southern United States, so there is an issue of generalizability beyond the US that can be addressed with replicative studies in other parts of the world.

In conclusion, this study posits that both leader member exchange and organizational climate play a vital role in OCB and turnover intentions relationship. This paper extends and supports the stream of research that emphasizes the importance of contextual variables over dispositional factors while studying the behavioral dynamics associated with turnover.

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# **“Mirror Organization: Toward Establishing a Link between Representative Bureaucracy and Employee Ownership Perception”**

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*Public sector organizations within multi-ethnic settings are facing the challenge of ethnic tension. One of the measures adopted globally to mitigate these tensions in the public sector is the implementation of representative bureaucracies that mirror ethnic composition within society. Although this measure has been successful to some extent, studies suggest that there is increasing tension arising from ethnic discrimination. This review paper charts a new course in psychological ownership perception and representative bureaucracy theories by attempting to establish a link between ethnic representation and employee' ownership perception. Propositions based on a critical review of existing literature are presented to enable further empirical investigations.*

## **INTRODUCTION**

Public sector organizations are contending with issues of promoting employees' perception of organizational ownership in multi ethnic societies (Ng & Sears, 2014). This is premised on the fact that monetary incentives alone are no longer the driving force for employees perception (Olckers & Enslin, 2016). Irrespective of monetary incentives, employees who perceive themselves as being discriminated against as a result of their ethnicity tend to feel demoralised and lose confidence in the system (Brown, 1999). Although this problem persists for both public and private sectors, the implications tend to be more severe in public sector bureaucracies (Oberfield, 2016).

Private sector organizations can initiate organizational ownership schemes that may improve employees' shared interest in an organization (Wagner et al., 2003). This is because the structure of private sector organizations allows managers to make certain formal commitments that bestow certain rights and responsibilities on the employees (Wagner et al., 2003). This is usually not the case for public sector bureaucracies; they are established and managed on behalf of the public by the government (Gera, 2016), and may be unable to implement formal employee ownership schemes. This has led to the problem

of how to influence employees' perception of organizational ownership in the public sector (Brown, 1999).

Employee ownership perception refers to an employee's personal attachment to an organization which results in employees' feeling and behaving like they own the organization (Peng & Pierce, 2015). Such feelings result in positive behavioural outcomes such as job satisfaction, increased commitment, and lower job turnover (Olckers & Enslin, 2016). As a way of promoting employee ownership perception in the public sector, some governments, especially in the USA, Canada and UK have resorted to diversity management strategies aimed at recruiting employees who mirror the demographic composition of the society where they are located (Andrews & Ashworth, 2015; Choi & Rainey, 2014; Ng & Sears, 2014). These diversity management strategies are important not only for improved performance, but for fostering a socially responsible and inclusive organization (Pepple, 2016).

The relevance of this review paper is emphasised because of continued conflict in public-sector organizations that are linked to ethnic rivalry (R. Andrews & Ashworth, 2015). Thus, this raises questions whether implementing a representative bureaucracy in itself, especially ethnic diversity will influence employees perception of organizational ownership (Andrews & Ashworth, 2015). This study posits that one of the ways to influence ownership perception is the 'mirror organization' climate. The concept of 'mirror organization' is a terminology introduced by this study to diversity management discourse to represent an organization that reflects the social characteristics of the society in its employee composition (Marvel & Resh, 2015; Meier, 1975). Mirror organization climate encompasses relational processes within an organization that engenders a sense of belonging and psychological attachment amongst employees to their organization (Milliken, Schipani, Bishara, & Prado, 2015).

This review paper extends Pierce, Kostova, and Dirks' (2003) psychological ownership theory by linking employee ownership perception to representative bureaucracy. Psychological ownership theory is used to explain the component of employee ownership perception. The mirror organization climate perspective makes propositions as to how support from colleagues, interpersonal fairness, and leader-member exchange provide a linkage between employee ownership perception and perceived ethnic representation.

This review paper is structured as follows: first, a brief discussion is presented on the existing strategies that governments across the world are taking to ensure representative bureaucracy. Second, the paper presents discussions on the theoretical underpinning. This provides a literature review on the meaning of psychological ownership and it contributes a unique perspective on how employee ownership perception emerges using social exchange theory. In the third section, this paper establishes the rationale for linking perceived ethnic representation to employee ownership perception. Finally, the paper discusses limitations of this review and make recommendations for further empirical research.

### **Representative Bureaucracy**

Public sector organizations are constantly seeking ways to ensure representation of diverse groups of the population in its employees' composition (Lippert-Rasmussen, 2008). Their aim is to ensure proportional representation of the diverse groups of the population in their employee composition. Evidence of this is the US federal workforce which has over 44% of its population as minorities (Choi & Rainey, 2014). As another illustration, the local authorities of Birmingham in the UK have continued to make conscious efforts to reflect the demographic composition of its population in the employment outlay (Lippert-Rasmussen, 2008). In Nigeria, the government introduced the Federal Character Commission to manage issues of under representation of various states in the Federal Civil Service (Mustapha, 2009). Similarly, the Scottish parliament has recently introduced a Race Equality Framework to mitigate racism and promote representativeness in public sector organizations (Robertson, 2016).

Prior studies on organizational representation in the public sector have focused on ethnic diversity implementation as an affirmative action activity (Lippert-Rasmussen 2008; Turgeon & Gagnon, 2013), others have explored its influence on perceptions of organizational justice and language abstraction (Roberson & Stevens, 2006), organizational performance (Choi & Rainey, 2010), and inclusion (Andrews & Ashworth, 2015). Other studies on ethnic diversity focus on how ethnic stratification influences

employees' attainment to authority (Smith & Elliott, 2002), and organizational commitment (Messarra, 2014).

Whereas one of the major reasons for ensuring a representative bureaucracy is to foster an inclusive climate where everyone feels a sense of belonging (Pepple, 2016), there is currently no literature explaining the relational perspectives upon which such can occur. This study contributes to existing organizational representation literature by highlighting a relational perspective for linking perceived ethnic representation to employee ownership perception.

### **Theoretical Underpinning**

This study uses psychological ownership theory to examine whether perceived ethnic representation (PER) (i.e. equal numerical representation of the various ethnic groups within the employee composition of the organization) will influence employees' ownership perception. Psychological ownership theory posits that ownership is a means of defining one's self, one's possession, and territorial boundary, and the ability of an individual or group to control a target results in the feeling of sense of ownership (Pierce, Tatiana, & Dirks, 2003). Psychology of possession is experienced by people; such that people sometimes define themselves by what they possess (Hou, Hsu, & Wu, 2009; Peng & Pierce, 2015). Possession may be material or immaterial and the effect of ownership perception may be reflected in people's behavioural, emotional and psychological patterns (Peng & Pierce, 2015).

### **Psychological Ownership Theory**

Psychological ownership perception is rooted in employee efficacy, self-identity, and having a place (Peng & Pierce, 2015). Employee efficacy is used to explain the need for the individual to have control over his possession, while self-identity underpins that possessions serve as a means of self-identity; this is because of the value placed on such object or possession (Peng & Pierce, 2015). Having a place explains the need for individuals to own a territory (Peng & Pierce, 2015). In order to use psychological ownership theory, the object or organization should be controllable by the individual (Peng & Pierce, 2015). Also, the individuals should be able to invest themselves in what they feel that they own and as a result, become emotionally attached to their possession (Peng & Pierce, 2015).

There exists a cause and effect relationship between perception of ownership and the target object (Jussila, Tarkiainen, Sarstedt, & Hair, 2015). This is summarised by Jussila et al. (2015) as the stimulation and activation effect. For Jussila et al. (2015, p. 124), 'need activation and arousal are among the motivational forces that drive individuals to use possessions, think of them, observe them, care for them, and when required, to defend them'. In this review paper, the roots to psychological ownership are conceptualised as employee perception in line with Peng & Pierce (2015) as follows: efficacy, as employee's self-efficacy; self-identity, as employee's self-identity; and having a place or territoriality, as employee's voice.

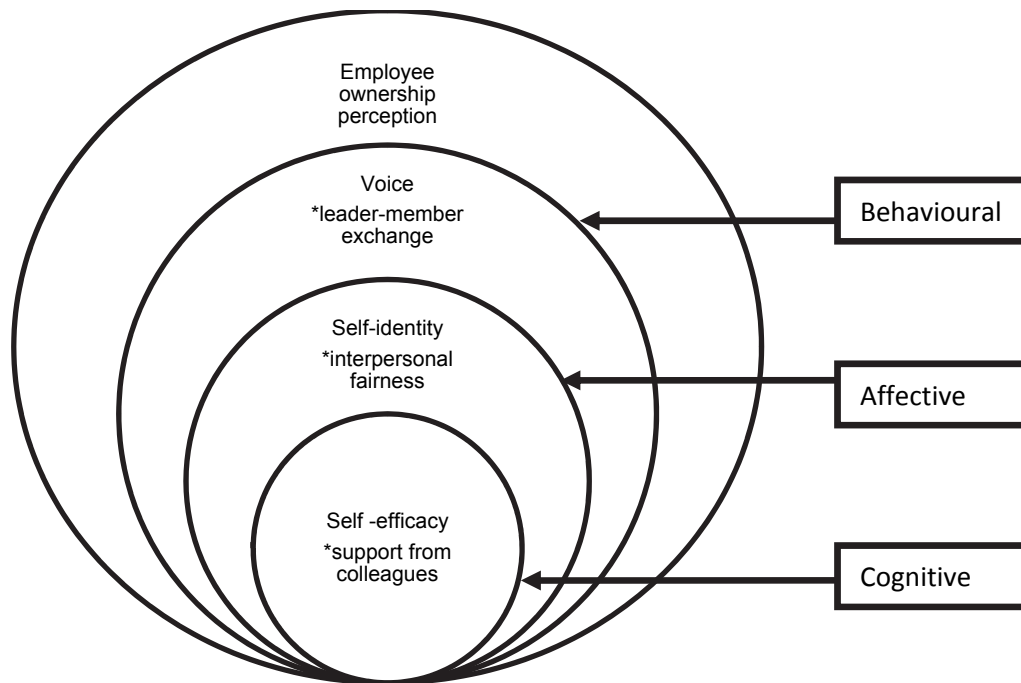
### *Dimensions of Employee Ownership Perception*

Psychological ownership is evidenced by employees' self-efficacy, self-identity and voice. This study provides a conceptual model that suggests that psychological ownership evolves from three components such as the cognitive, affective and behavioural components (Wagner, Parker, & Christiansen, 2003). The study posits that all three components are required for ownership perception to emerge. The cognitive component may lead to the affective, and the affective component to the behavioural component. Cognitive and affective levels are more covert, while the behavioural are overt.

Linking the conceptual model of organizational ownership perception dimensions to the psychological ownership components, the cognitive component is located at the self-efficacy level in Figure 1. Employee cognitions are feelings that they are able succeed in their task as a result of the support system within the organization (Hsieh & Wang, 2016). The affective component is used to explain self-identity; it highlights employees' identification with the organization as a result of their feelings of being treated fairly at work (Hsieh & Wang, 2016). Employees' cognitive and affective feelings lead them to behave as owners of the organization (Wagner et al., 2003). One of such actions

includes employees' willingness to make constructive contributions to the progress of the organization otherwise referred to in this study as employee voice. In summary, employees that feel like owners of the organization believe that support is available, feel like that they are treated fairly, and make positive contributions for the improvement of their work.

**FIGURE 1**  
**DIMENSIONS OF EMPLOYEE OWNERSHIP PERCEPTION BASED ON THE LITERATURE REVIEW IN THIS STUDY**



### **Social Exchange Theory (SET) and the Emergence of Employee Ownership Perception**

Building on the above definitions of employee ownership perception, influencing employees' ownership perception requires an understanding of between employee and colleagues, as well as supervisor or manager. Employees' ownership perception results as a trade-off between the employee, colleagues and supervisor or manager (Cook, Cheshire, Rice & Nakagawa, 2013). Employees are regarded as members of the organization, while supervisors and managers are regarded as leaders (Wang, Gan, & Wu, 2016). Thus, employees' ownership perception involves a social trade-off between member vs member and leader vs members. The leader provides an enabling environment that fosters open communication in exchange for employees' contribution to the growth and development of the organization. While members or colleagues provide supportive work environments for their team mates.

Social exchange theory (SET) provides literature on various actions and relationships that influence employees' role on their job (Wang et al 2016), and hence appropriate for explaining the relationship between perceived ethnic representation at work and employees' ownership perception. SET is used to explain actions and relationships that are interdependent and conditioned on the actions of another (Emerson, 1976). Within workplace settings, SET explains employees' reaction as a result of organizational antecedents such as rules and norms of exchange, resources exchange, and relationships that emerge exchange (Cropanzano & Mitchell, 2005).

For Cropanzano and Mitchell (2005), rules and norms of exchange explain the reciprocal relationship that may occur such as trust, loyalty and mutual commitments as a result of the rules, guidelines that are agreed by parties in the relationship. The resources of exchange consider how employees' reactions are

influenced by socio-economic exchange such as love, status, information, money, goods, and services (Cropanzano & Mitchell, 2005; Foa & Foa, 1974). The third foundation of social exchange relationships emanates from employees when they perceive that their employers initiate programmes that care for the employees (Cropanzano & Wright, 2001).

#### *Member-member Exchange and Employee Self-efficacy*

Self-efficacy perception relates to the employee's feeling of importance to the organization (Galvin, Lange, & Ashforth, 2015), and creative ability or competence as a result organizational context and individual values (Rice, 2006). Creativity refers to the employees' perceived ability to initiate and implement new and useful ideas (Heinze, Shapira, Rogers, & Senker, 2009), and it may sometimes be founded upon life, society, and culture (Furlong, 2009). Employee self-efficacy in this study focuses on efficacy as a social construct that examines employees' responses to the organization's environment (for example ethnic and religious composition (Rice, 2006). This is because organizational environment is a key influence for employee creativity (Gumusluoglu & Ilsev, 2009).

In explaining the emergence of self-efficacy, this study suggests that the perception of support from colleagues is important to the extent that it the amount of effort or contribution an employee makes to improve the organization (Pajares, 2002). In the light of the conceptualisation of employee ownership perception in this paper, member-member exchange explains the extent to which support from colleagues affects employees' efficacy.

**Proposition 1:** Support from colleagues is positively related to an employee's perception of self-efficacy.

#### *Leader-member Exchange and Employee Self-identity*

The self-identity component of employee ownership perception studies the employees' sense of belongingness to the organization (Asatryan & Oh, 2008). In satisfying self-identity perception need, employees desire in-group inclusion while maintaining their ethnic identity (Chattaraman & Lennon, 2008; Sorrentino, Seligman, & Battista, 2007). Self-identity therefore, requires an optimal distinctiveness (Sorrentino et al., 2007), where the employee sees themselves as being part of the organization, and yet as a representative of their various ethnic groups (Johns, 2004; Ries, Hein, Pihu, & Armenta, 2012). Recognising that employees' ethnic groups share common characteristics among themselves also forms part of self-identity (Weisskirch, 2005). It has been argued that ethnic identities are significant sources of self-identification (Doan & Stephan, 2006), and self-identification may result to ownership psychology (Asatryan & Oh, 2008).

Findings from previous studies show that employees' self-identity is influenced by their identifying with the organization when the organization's corporate code of ethics supports the equal employee, and the responsible employee policies (Winkler, 2012). Irrespective of hierarchical structures within the organization and other categorisation, organizations that downplay differences between employees in their codes of ethics and communicates same, creates a sense of company community (Fairclough, 2003).

A common concept underpinning self-identity suggested by Yang, Johnson, Zhang, Spector, and Xu (2013) and Winkler (2012) is the issue of interpersonal fairness: a situation where an employee perceives the organization as treating everyone equally and with respect. Existing studies show that interpersonal fairness enables employees to focus attention on getting work done and reduces conflicts arising from attribution (Bies & Moag, 1986; Cropanzano & Mitchell, 2005; Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). In considering employee ownership perception conceptualisation in this review paper, employee self-identity emerges when the leader treats every member of the organization fairly. Such fair treatment is referred to in this paper as interpersonal fairness.

**Proposition 2:** Interpersonal fairness is positively related to an employee's perception of self-identity.

### *Leader-member Exchange and Employee Voice*

Contributions from employees are key to the survival of any organization, hence the need for organizations to foster a climate that will encourage employees to contribute voluntarily to policies and programmes, as well provide feedback (Milliken et al., 2015). Employee' voice is defined as actions, principles, and practices that highlight the need for employees to constructively challenge with a view of improving rather than merely criticising work (Farh, Zhong, & Organ, 2004; Van Dyne & LePine, 1998; Wang et al., 2016).

The importance of employee' voice for the sustainability of organizations have received increased attention in recent studies for example, Wang et al. (2016) suggests that leader member exchange influences employees' voice. For Hsiung (2012), authentic leadership influences employees' voice, while Janssen and Gao (2015) notes that responsive supervisors and perceived employee status are motivators of employee' voice. Similarly, Bowen and Blackmon (2003) defined employees' voice as opening the channel of communication within the organization to empower the employees to creatively and innovatively contribute to the success of the organization.

Although existing literature has examined the impact of leader-member exchange on employee perception, Wang et al. (2016) call for studies considering this relationship in the light of social exchange theory as against the role theory or leader-member theory used. This paper will contribute to existing literature in this regard; in addition to utilising social exchange theory, the paper introduces the component of member-member relationship as key in the formation of employee ownership perception. Within leader-member exchange relationship the leader and member shares 'mutual trust, respect, reciprocal influence, loyalty, liking and sense of obligation to one another' (Wang et al., 2016, p. 606).

**Proposition 3:** Leader-member exchange is positively related to an employee' voice.

### **Establishing a Rationale for Linking Perceived Ethnic Representation to Employee Ownership Perception**

Evidence from existing literature suggests that the relationship between perceived ethnic representation and employee ownership perception may be regarded as either inconsistent or mixed (Alesina & Ferrara, 2005). Thus, the need for establishing an alternative means to achieve employees' ownership perception within representative organization has become essential. To establish this link, this paper calls for future studies that examine the mediating effects of support from colleagues, interpersonal fairness and leader-member exchange. Evidence from existing literature suggests that these variables have a strong positive relationship with employee psychological ownership perception. Therefore, this paper incorporates them as mediating variables.

Further rationale for introducing the mediating variables is that within diverse ethnic settings, cultural perspective supports highly collectivist values (Adisa, Osabutey, Gbadamosi, Nickson, & Nickson, 2016). Thus in line with Welbourne, Gangadharan, and Sariol (2015), employees within multicultural societies that support high collectivism, demonstrates greater social support for each other (Miner, Settles, Pratt & Hyatt, & Brady, 2012). Also, social support within an organization has been observed to prohibit other relational challenges such interpersonal unfairness, workplace incivility, and discrimination (Welbourne et al., 2015). This review paper, therefore, suggests that employees that perceive their organizations to be a fair representation of the various ethnic groups in the society may support each other, treat each other fairly, and have a supportive leader-member exchange. The rationale thus suggests the following propositions:

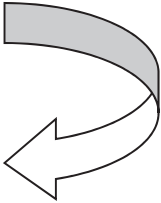
**Proposition 4:** Support from colleagues, interpersonal fairness, and leader-member exchange mediates the positive relationship between perceived ethnic representation (PER) and employee ownership perception (EOP), such that the relationship between PER and EOP is stronger when representation is perceived to be balanced.

This paper focuses on employee perception of ownership using Pierce et al's. (2003) psychological ownership theory. According to Pierce et al. (2003), employees' perception of psychological ownership is



achieved when they feel a sense of self-efficacy, self-identity, and voice in the organization. The reason for focusing on psychological ownership theory is because of its suitability to explain the relationship between perceived representativeness and employees' perception of organizational ownership. Table 1 provides a relational framework explaining the relationship between PER and EOP.

**TABLE 1**  
**RELATIONAL FRAMEWORK EXPLAINING THE RELATIONSHIP BETWEEN PER AND EOP**  
**BASED ON THE LITERATURE REVIEW IN THIS STUDY**

	<b>Employee Ownership Perception</b>	
<b>Self-efficacy</b>	<i>Self-identity</i>	<b>Voice</b>
<b>Support from Colleagues</b>	<b>Interpersonal fairness</b>	<b>Leader-member exchange</b>
Willingness to share ideas Task and target within employee capacity	Procedural justice Interactional justice  Interpersonal justice	Mutual trust  Mutual respect  Reciprocal influence Loyalty
		
<p><b>Perceived ethnic representation</b></p> <p>Greater support Lesser discrimination Workplace civility</p>		
<b>Low EOP</b>	<b>High EOP</b>	

## DISCUSSION AND CONCLUSION

This review paper highlights the contribution of this study within two key theories of diversity management and organizational behaviour discourse. Within the diversity management literature, the study extends organizational representativeness theory by attempting to establish a relational for linking PER and EOP. This takes representativeness discourse from the normative perspective to the relational perspective.

The second contribution of this review paper is in the extension of psychological ownership theory discourse. In line with the existing trend of discussions on the antecedents of psychological ownership, this review paper adapts social exchange theory to explain the relational processes within a representative organization upon which psychological ownership may emerge. The propositions made in this review paper are novel, and provide the basis for further empirical analysis. Further analysis will determine the mediating roles of support from colleagues, interpersonal fairness, and leader-member exchange on the relationships between PER and EOP.

It is important to note that the presentation of discussions in the paper has focussed on how the mediators relate to the components of EOP that best suits their effects, for example, how support from colleagues interact with employee self-efficacy, how interpersonal fairness interact with employee self-identity and how leader-member exchange interact with employees' voice. Findings from future empirical

analysis however will provide the overall effect of each of the mediators on EOP as well as the various other components of EOP.

The model presented in Figures 1 provides a unique insight into reconceptualising psychological ownership. It highlights the components of psychological ownership, and attempts to explain how it component relates to cognitive, affective and behavioural aspects of an employee. Thus, further contribution to existing psychological ownership discourse.

In addition, this paper further contributes to psychological ownership literature discourse by explaining how psychological ownership perception emerges on two levels. The levels are discussed under the member-member exchange and the leader-member exchange levels. The member-member exchange explains relationships at the job level, while leader-member exchange explains relationship organization based levels. In addition, the relational perspectives enable the explanation of the relationships that results into the outcomes of employees' psychological ownership (employee voice, organizational self-identity, and employee self-efficacy). Member-member exchange highlights a key aspect of the leader member exchange discuss that has not been given full attention in extant studies.

In discussing organizational diversity, this paper focuses on the component of ethnicity. This is premised on the fact that within empirical settings with diverse ethnicities, employees experience more organizational conflict as a result of societal ethnic struggles that have trickled into the organizations (Eposi & Orock, 2012). The relational framework explaining the link between PER and EOP further provides insight into the need for organizations to understand the importance of PER to employees. Future empirical studies are solicited to determine the following: first, whether EOP is higher within organizations with higher PER, secondly, whether EOP is higher within organizations that implements employee ownership schemes than those without.

This review provides a foundation for empirical studies aimed at investigating propositions on the relationships between perceived ethnic representation and employee ownership perception. The trend of discussions has been presented within a global context. This is in line with ensuring that this review paper serves a wider audience. Presenting this review paper in this manner; makes it a valuable resource for future empirical studies within collectivist and diverse ethnic settings.

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## **Personal Interpersonal Capacity: A Moderated-Mediation Model for Student Success**

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*The purpose of the paper is to add to the emotional intelligence (EI) literature, focusing on the social emotional competence (SEC) paradigm, by proposing a development framework and diagnostic tool, called personal interpersonal capacity (PIC). PIC helps explain the mechanisms whereby EI influences performance through four interrelated factors that reduce conflict and increase communication. We discuss the theoretical rationale for the model, four interrelated factors (self-awareness, consideration of others, connecting with others, and influence orientation), potential factor archetypes, and moderating and mediating mechanisms through which personal interpersonal capacity operates. We conclude by identifying model implications and future empirical propositions.*

## INTRODUCTION

According to the most recent job outlook survey by the National Association of Colleges and Employers (NACE, 2016), there is a relatively stable list of skills employers want in new college graduates with nine out of the ten of those desired skills being interpersonal or intrapersonal in nature. In addition to employers, educators have emphasized learning social and emotional knowledge and skills to help engage and respond to an increasingly complex environment (Hoffman, 2009; Kanoy, 2011; Oberst, Gallifa, Farriols, & Vilaregut, 2009). The challenge, therefore, is for students to develop deeper capacities of awareness, connection, and consideration to influence social change. Personal interpersonal capacity (PIC) model may serve as a potential a framework to inform high impact practices that support student identity development, engagement, belonging, and responsible leadership.

In this paper, we will explore the literature on emotional intelligence (EI), consider the PIC factors, and develop the PIC model. The concept of PIC extends the existing conceptualizations of EI by considering it from a development perspective, building on the social emotional competence literature of EI, to propose a framework for student success. The focus of the PIC model is the desirable, sustainable enhancement of social and emotional capacity, through the intentional use of emotional and social behaviors that lead to effective performance. We view PIC, as more than a set of skills, but as a potential developmental framework and diagnostic tool that may be particularly effective with students in higher education. PIC extends the conversation about the importance of social and emotional competencies by considering a theoretical framework for development, a diagnostic tool for goal frustration, and an examination of how the factors interrelate through a moderated-mediation model.

## LITERATURE REVIEW

### Emotional Intelligence

There are various definitions and conceptualizations of emotional intelligence (EI), but broadly speaking, EI is a constellation of abilities, skills, and traits to better recognize and regulate one's emotions and the emotions of others toward successful social adaptation (Seal & Andrews-Brown, 2010). Authors vary in the degree that they focus on EI as (a) an innate ability (on one side of the spectrum), or (b) a set of learned traits (on the other side of the spectrum). Mayer, Salovey, Caruso, and Sitarenios (2003) identify EI as a set of cognitive abilities relating to emotion perception, emotion facilitation, understanding emotions, and emotion management, which are thought of as ability (i.e., heredity based) emotional intelligence. Other authors have posited that EI is "a set of non-cognitive traits, competencies, and motivational variables that are linked to interpersonal success" (Schlegel, Grandjean, & Scherer, 2013; p. 249), and are thought of as trait (i.e., experience based) emotional intelligence. To help resolve some of the variances in conceptions, Cherniss (2010) proposed labeling trait emotional intelligence models as emotional social competence (ESC) and ability emotional intelligence models as EI. Schlegel et al. (2013) confirmed the distinctions, identifying the components shared by various ESC models (i.e., expressivity, sensitivity, emotional abilities, and self-control) and the differences between EI and ESC (i.e., performance-based scales, including emotion recognition) to support the distinct focus areas. For our purposes, the PIC model extends the ESC conceptualization of EI, defining personal interpersonal capacity as a set of skills and behaviors, developed through experience.

The value of EI in general, and ESC in particular, may be seen in its effects on outcomes including leadership behavior and managerial performance (Cote, Lopez, Salovey, & Miners, 2010), higher self-esteem and overall well-being (Nelis et al., 2011), and improved relationships at work (Oberst et al., 2009). These benefits are not limited to professionals, as several studies have demonstrated the positive impact of EI and ESC on student learning, personal development, social integration, effective collaboration, leadership development and academic achievement in the college experience (Gerli, Bonesso, Comacchio, & Pizzi, 2014; Smith, 2009; Wyatt & Bloemkr, 2013; Vandervoort, 2006).

Expanding on the benefits for higher education, increasing social emotional competence may help students navigate the social and emotional challenges that are inherent in the transition to college and may

mitigate the difficulties colleges and universities face, including risk-taking behaviors and student persistence (Hu & Kuh, 2002; Kezar, 2007, Rivers et al., 2013). In the case of risk-taking behavior, the period of late adolescence or emerging adulthood (ages 17 – 25 years) is considered by some to be one of the most important stages in development, as it is the time when an individual's identity, including self-views, perceived views of others, and essential personality characteristics, is formed (Sokol, 2009). It is also a period marked by increased engagement in risky behaviors, such as promiscuous sexual activity, use of illicit substances, and heavy drinking (Rivers et al., 2013). Although traditional thought has regarded self-esteem as an indicator of engagement in risky behaviors, Rivers et al. (2013) suggested that EI should also be taken into consideration, as it is "positively related to healthy personal and social functioning and academic success among college students" (p. 173). In the case of retention, Tinto (1987) identifies social integration to be as important as academic integration in student persistence (e.g., a student who attends college continuously from enrollment until degree completion). Increased persistence is found with students who feel a sense of belonging and motivation (Harper, Morrow & Ackerman, 2012) and researchers cite disconnectedness as a key element in retention conversations (Fleming, 2012; Holmes, Ebbers, Robinson, & Mugenda, 2007; Hurtado, Sáenz, Espinosa, Cabrera & Cerna, 2007). Therefore, given the importance and the critical age of transitioning from adolescence to adulthood, our conceptualization of personal interpersonal capacity and the development of emotional and social competence may be key elements to student success.

Although the importance of EI and ESC is established, the evidence on improving social and emotional knowledge and skills is still emerging. For example, Nelis et al. (2011) found that intensive training and follow-up resulted in improved levels of ESC, having a long-term effect on psychological well-being, subjective health, quality of social relationships, and employability. Similarly, Galal, Carr-Lopez, Seal, Scott, and Lopez (2012) examined the short-term impact of a role-play exercise on student emotional social competence with results indicating improvement in connection to others and influence orientation. In addition, Patti, Holzer, Stern, and Brackett (2012) found that personal and professional coaching improved the self-awareness, emotion management, social awareness, and relationship management of schoolteachers and administrative leaders. Seal and Miguel (2013) reported high levels of satisfaction with a peer-coaching program for students, finding that students identified new knowledge and behaviors from the intervention to improve social skills. Scott, Whiddon, Brown, and Weeks (2015) reported that a leadership development course demonstrated improved leadership qualities and how students viewed their own leadership style. In sum, these intervention studies indicate the potential value of emotional social competence development programs. Furthermore, it seems appropriate that higher education institutions facilitate interventions such as these, in an effort to positively, affect academic outcomes, identify development, and life achievement to foster overall student success.

## **PERSONAL INTERPERSONAL CAPACITY**

Personal interpersonal capacity is the individual potential to recognize and regulate emotional information and behaviors to achieve individual goals through social interactions. As discussed earlier, PIC extends the ESC paradigms proposed by Cherniss (2010) and Schlegel et al. (2013), which identified a set of behaviors, distinct from general intelligence that involves a person's interaction with oneself and others in successfully resolving personal-interpersonal challenges. The model is comprised of four interrelated factors: (1) self-awareness; (2) consideration of others; (3) connection to others; and (4) influencing change. The purpose of the PIC model is to provide a framework to facilitate building and assessing student capacity to recognize emotional cues, process emotional information, and utilize emotional knowledge to adapt to social challenges. The underlying assumption is that those who develop their capacity to understand themselves, evaluate the world around them, build meaningful relationships, and foster positive changes will increase meaningful communication and reduce dysfunctional conflict in goal attainment. Therefore, the PIC model is both a diagnostic tool, providing insights regarding potential obstacles to goals, as well as a developmental guide, suggesting areas of strength and opportunity.



The PIC model evolved from a series of iterative models, exploring social emotional development. To begin, Seal, Naumann, Scott, and Royce-Davis (2010) argued that student success not only depends on educational achievements, but also on the extent to which students can gauge their emotions. Specifically, the concept of social and emotional development (SED) examined the capacity to use “emotional information, behaviors, and traits to facilitate desired social outcomes” (Seal, Naumann, Scott, & Royce-Davis, 2010; p. 2). The SED model, which derived from theories of social intelligence and emotional intelligence, was comprised of four factors: self-awareness, consideration of others, connection to others, and impacting change. The purpose of the SED model was to gain a deeper understanding of students’ ability to recognize and process emotional cues and information, and to use that information to adapt to social challenges. In essence, students who have a higher capacity for understanding the implications of their emotions will potentially perform better in social situations in school and work. An important aspect of the SED model is that it drew from the evidence that competence (i.e., the ability to do something successfully), can be developed. Since students can learn to become emotionally self-aware, perhaps other social and emotional characteristics are developable as well. After the SED model was introduced, Seal, Beauchamp, Miguel, and Scott (2011) developed the Social Emotional Development Inventory (SED-I) which was a student-centric survey instrument for social and emotional competence (SEC), demonstrating acceptable reliability and evidence of validity (Seal et al., 2011).

Soon after the promising results of the above-mentioned study, the SEC model evolved into the Social Emotional Competence Development (SECD) model, which expanded the definition of social emotional development to “the enhancement of individual capacity to recognize and regulate emotional information and behaviors to facilitate desirable social outcomes” (Seal & Miguel, 2013, p. 29). Since the SECD model focused on the development of social and emotional competencies, the authors implemented a peer-coaching program in the hopes of developing student social and emotional capacity (previously referred to as competence).

More recently, researchers aimed to minimize the gap between social emotional learning and professional soft skills, since those skills are highly relevant for current student academic experience and the major part of subsequent post-college professional life (Seal et al., 2015). The SED-I was revised into the Personal-Interpersonal Capacity Assessment (PICA) for several reasons. First, researchers thought that the revision was necessary to ensure that the questionnaire more fully captured the variables in the theoretical model. In addition, the PICA model served as a more straightforward distinction between personal-interpersonal capacity and emotional intelligence. Finally, the new model placed a higher emphasis on the interrelations of factors and development of factors rather than preconceived levels of scoring of competence, to avoid some of the self-report bias of measurement. Personal-interpersonal capacity is “the increase in emotional knowledge capacity and social behavioral options to achieve desirable, sustainable outcomes” (Seal et al., 2015; p. 4). The authors posited that students who can develop the capacity to understand themselves in terms of their relationships with others will foster positive change in their personal, social, and professional lives.

### **Personal Interpersonal Capacity Factors**

As discussed, the PIC concept is based on four factors: (1) self-awareness—the knowledge and understanding of one’s emotions and talents; (2) consideration of others—the regard for the person and situation before thinking and acting; (3) connection to others—the ease and effort in developing rapport and closeness with others; and (4) influence orientation—the propensity to seek leadership opportunities and move others toward change.

Self-awareness (or accurate self-knowledge) is defined as the knowledge and understanding of one’s emotions and aptitudes. That is, accurate self-knowledge includes the dimensions of emotional self-awareness and accurate aptitude assessment. Emotional self-awareness consists of knowing your current moods and feelings (or accurate identification) and recognizing the triggers for your emotions (or accurate attribution). Accurate aptitude assessment consists of an accurate assessment of power and dependency (or understanding strengths and weaknesses) and understanding one’s attitudes (or preferences).

Consideration of others (or regard for others) is defined as the regard for the person and situation before thinking and acting. That is, regard for others includes the dimensions of empathy and self-monitoring. Empathy includes feeling (and understanding) what others are feeling as well as discerning the relative importance (or value) of those reactions. Self-monitoring consists of sensitivity to expressive behaviors of others (e.g., recognizing cues) and modifying self-presentations (i.e., regulating or changing self-behavior).

Connection to others (or building meaningful relationships) is defined as the ease and effort in developing rapport and closeness with others. Specifically, it includes the dimensions of sociability and intimacy. Sociability is the comfort (or ease) in establishing relationships as well as the energy (or effort) spent in maintaining relationships. Intimacy is the mutual exchange of thoughts and feelings (or rapport) and the level of honesty and trust (or closeness) in the relationship.

Influence orientation (or effecting change) is the propensity to seek leadership opportunities and the inclination to move others toward change. It includes the dimensions of initiative and inspiration. Initiative includes seeking leadership roles (or positions) as well as deliberate displays of leadership behaviors. Inspiration is the ability to motivate (arouse action in others) as well as self-efficacy (confidence in leading others).

### **Personal Interpersonal Archetypes**

To understand the different factors of the PIC model, it helps to consider each as a specific archetype. Archetypes provide the opportunity for succinct description of expected commonalities in human expression as devices to recognize patterns in human behavior. The following examples represent what it would look like if a person were to score high on one factor but lower on the remaining three. To provide a more illustrative picture, we base the archetypes are based on characters from a well-known literary reference, the Harry Potter series by J. K. Rowling. Each character described below exhibits one of the four factors. Following each character description is an example of how this archetype might present itself in a higher education setting.

#### *Self-Awareness: Hermione Granger*

Hermione is a highly driven girl who knows what she wants. She studies hard, is capable of speaking up for herself, and is aware of her strengths and limitations. In a scene at the end of the second installment of the series, Harry tells Hermione that she is better at magic than he is, to which she responds, “[I may be book smart and clever, but] there are more important things, like friendship and bravery” (Rowling, 1998, p. 286). However, Hermione is often perceived as being inconsiderate to those who are not close to her. Because she is so smart, she will often dominate a conversation or answer all the questions a teacher asks, not allowing her fellow classmates a chance to speak. As a result of her “know-it-all” attitude, she is often disliked by many of her peers and has a hard time building connections. Additionally, some of the other students look down on her for her lower-class status (having ‘muggle’ or human parents), which further promotes her isolation from fellow classmates. Whether it be because of her attitude, or the perception of her by others, her inability to connect with others makes it difficult for her to be viewed as a leader or have influence with others.

As an example, a student overly focused on self-awareness (a natural occurrence for those in late adolescence transitioning to college), may appear aloof and feel isolated, leading to miscommunication and conflict. Therefore, specific interventions to help students connect to others is critical. In fact, we see this in the orientation process of institutions, in attempts to connect student together with the explicit assumption that this will help ease their transition to college.

#### *Consideration: Harry Potter*

Harry grew up in a non-magical household and is just now learning of his abilities, and therefore has little awareness or understanding of who he is and his role in the world. Prior to joining the magic community, his legal guardians (and only human contact) treated him like he was less than human. Harry’s lifelong experience of being ignored and disregarded result in his increased consideration for

others. He is able to understand the feelings of others, show compassion, and differentiate the value of their responses. After Ron befriends Harry on the train to Hogwarts, Harry notices Ron's disappointment at being unable to purchase goods from the snack cart and orders enough treats for the both of them, without making Ron feel awkward or ashamed in the process. As a prophesied character, Harry faces unique challenges. Although Harry wants to be seen as the same as his fellow classmates, he is not, indicating Harry's lack of positional awareness. Students' perceptions of Harry made it difficult for him to make genuine connections with others. Therefore, his lack of self-awareness and limited connections to others inhibits his ability to influence his peers.

A student overly emphasizing consideration of others, may be a desire to please others and lose a sense of personal identity. One strategy would be to help the student build capacity in self-awareness, to counterbalance (or at least understand) the need to please and develop his or her own identity, distinct from others. We often see this play out through academic advising and (when appropriate) counseling services.

#### *Connectedness: Ron Weasley*

Ron grew up in a home with six siblings and he is the youngest of four boys, all of whom have very distinct personalities. Consequently, Ron's connectedness with others is increased as a result of growing up in a large family with many siblings. Ron is able to engage in relationships that are built on trust, and can easily join into social situations with diverse groups. This is evidenced by the ease in which he builds rapport and forms close friendships with Harry and Hermione; two individuals from backgrounds quite dissimilar from each other and his own. However, Ron often struggles with self-awareness as he tries to develop his own personality and define his identity that is distinct from his older siblings. His consideration for others is also limited, as he tends to make comments without thinking of the consequences and lacks the forethought to see how his words may affect others, particularly those of the opposite sex. Ron seldom takes the initiative to take on leadership roles and often tries (unsuccessfully) to convince his friends to refrain from their heroic activities.

Connection to others relates directly to feelings of connectedness and belonging (which is critical to college successes), but this archetype might over engage, fostering groupthink (and a failure to realistically appraise options). To counterbalance, having opportunities for developing influence, moving from followership to leadership, may be beneficial.

#### *Influence: Draco Malfoy*

Draco comes from a family of money and power. He watches his father for cues on how to think and behave. Instead of formulating his own opinions about the world, he resorts to statements that start with "my father..." Draco has no consideration for others, as he says and does whatever he wants, with little regard for the feelings or desires of others. The relationships that he has are built on money, power, and fear, emulating rapport or closeness. However, because of his family's money and power, as well as his own natural inclination toward taking initiative, Draco has high influence on his fellow classmates. His father's contributions to the school have afforded Draco a prestigious position, and Draco regularly makes threats of 'telling his father' about things that displease him.

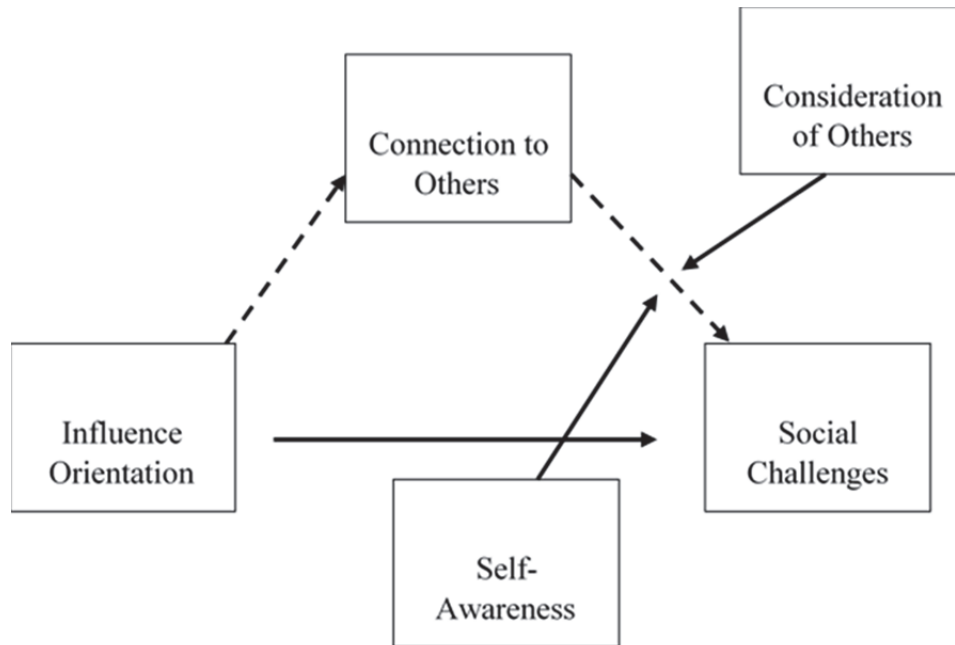
Students who focus exclusively on influence strategies, without the requisite attention to self-awareness, consideration or connection, may be seen as a bully or tyrant, getting what they want (at least superficially) in the short term, but failing to develop long-term strategies for success. A suggestion for this archetype may be greater attention to building relationships, as well as attention to both self-awareness and consideration of others.

### **Personal Interpersonal Capacity Model**

The PIC factors interact in a model that proposes that the ability to influence a social situation is dependent on one's connection to the person (or persons) involved, which is in turn either strengthened or diminished by how well individuals understand themselves and those around them. More specifically, we propose that the impact of influence orientation on a desirable social outcome is mediated by the strength

of the connection to the target, and the magnitude of the effect is moderated by self-awareness and consideration of others. In other words, one must act through people (mediation), but the strength of that action (moderation) is affected by knowledge of oneself and of others (please see Figure 1 below).

**FIGURE 1  
CONCEPTUAL PIC MODERATED MEDIATION MODEL**



As an integrative model, PIC provides a theoretical framework for understanding student behavior and for planning potential interventions by focusing on student competencies. The model examines the capacity of individuals to recognize and regulate emotional information and behaviors to facilitate desirable social outcomes. Those who develop their capacity to understand themselves, evaluate the world around them, build meaningful relationships, and foster positive changes may increase meaningful communication and reduce dysfunctional conflict, contributing toward successful goal attainment.

The first component of our model examines individuals' influence orientation and the interpersonal mechanism through which it affects outcomes. Influence is a key factor in higher education development. According to the most recent job outlook survey by the National Association of Colleges and Employers (2016), having strong influence/leadership skills was the top attribute that employers seek on a candidate's resume. Specifically, our model proposes that connection to others mediates the relationship between influence orientation and outcomes. That is, in order for individuals to influence others toward change and achieve desired outcomes, they need to be able to connect with others. As noted earlier, connection to others involves establishing and maintaining relationships (e.g., through communication and trust) whereas influence orientation involves moving others toward change (e.g., through leadership).

Establishing a connection with others before moving them toward change is critical for a couple of reasons. First, communicating thoughts and emotions with the other party are thought to contribute to experiencing a connection with that person, and, as a result, is associated with feelings of interpersonal closeness (Reis & Sprecher, 2009). Being in-sync with the other party's feelings may lead to being in-sync with influential behaviors. Second, having a connection with a person exerting influence helps reduce the uncertainty associated with a proposed change.

Most research on connections with others has been examined in the education literature (Faranda & Clarke, 2004; Smart, Kelley & Conant, 2003). Smart et al. (2003) found that professors who develop a

good rapport with their students enjoy a higher level of class participation, student motivation, and personal satisfaction. In a subsequent study, Faranda and Clarke (2004) broadened the scope of analysis by asking students to express, in their own words, the most important qualities in outstanding teaching. The researchers found that rapport, defined as the ability to maintain positive relationships, was critical to students. Given that teaching is a form of influence, we expect that experiencing a connection with others will be a key mediating factor between influence and outcomes in other influence contexts as well.

In addition to the education field, some research has examined the relationship between connections to others and outcomes in the customer service literature. Establishing long-term relationships with customers is a key competitive advantage in today's workplace, especially for customer service organizations. For instance, in one study, rapport was positively associated with relationship quality in dental services (Ali & Ndubisi, 2011). Similarly, Athanasopoulou and Giovanis (2015) found that rapport between doctors and patients was positively associated with patient loyalty. The authors explained their findings by stating that the critical factor in establishing a quality relationship is having a close, enjoyable connection with the other party. This finding may be particularly important in the context of one party engaging in efforts to influence the other where a connection with others may help them see the rightness of one's influence. In a higher education development context, students should be more likely to exert influence over a person or situation when they experience a connection with the person. A student wishing to be the leader of a campus club should first make an effort toward developing a connection with members through exchanges that foster rapport, communication, and trust.

*Proposition 1: Connection to others will mediate the relationship between influence orientation and desired outcomes.*

We also expect that the magnitude of the relationship of connection to others to desired outcomes is moderated by the next two key components of our model: self-awareness and consideration of others. First, recall that self-awareness, a foundation of EI (Hopkins & Yonker, 2015), involves the knowledge and understanding of one's emotions and aptitudes. Research has found a positive relationship between EI and desired workplace outcomes such as leadership effectiveness (Lopes, Grewal, Kadis, Gall, & Salovey, 2006; Walter, Cole, & Humphrey, 2011), leader influence (Taylor, 2010), performance (Young & Dulewicz, 2007), and teamwork (Farh, Seo, & Tesluk, 2012). Given self-awareness has been considered a hallmark component of EI (Hopkins & Yonker, 2015), we expect it to exert similar effects on outcomes in the higher education development area.

Self-awareness is an especially relevant skill for higher education development. Recent research has found that, once in the workforce, employees generally rate their own abilities significantly more favorably than others rate them (Heidemeier & Moser, 2009). Sheldon, Dunning, and Ames (2014) found this effect to be particularly common among low performers. In three studies of professional students, the authors found that the least skilled were more likely to disparage the accuracy or relevance of feedback given to them regarding their deficits.

Sheldon et al.'s (2014) results highlight the need for self-awareness research in a development context:

Accurate self-assessment is not an outcome people can just assume developing managers will attain on their own. Left to their own devices, some people will overstate their social abilities because their deficits in these abilities are invisible to them. In particular, those lowest in emotional intelligence may be largely unaware of their deficits and yet remain skilled at dismissing feedback to the contrary. Consequently, the emotionally least skilled may benefit most not simply from receiving feedback on their EI, but from receiving it in a way that mitigates their defensiveness and propels them toward constructive development (135).

Given the importance of self-awareness in a development context, we suggest that identifying ways that self-awareness is used to attain desired outcomes is critical. In particular, we expect that those with a high level of self-awareness will be better able to tap into a connection to others to achieve their goals. There is some research in the educational administration field pointing to a positive relationship between

self-awareness and connection to others. Case study research on education administrators has found that self-aware administrative leaders tend to have better relationships with colleagues (Patti et al., 2012).

Research on the relationship between self-awareness and connection to others is also beginning to emerge in the management field. Hernandez, Luthanen, Ramsel, and Osatuke (2015) found that managers who had higher levels of self-awareness received more positive ratings of workgroup climate from their subordinates. Their measure of workgroup climate contained some items involving maintaining relationships that appear similar to the connection to others construct in the PIC model. The authors explained their findings by suggesting that self-aware bosses tend to be well attuned to their feelings, and, as a result, are less likely to permit their negative experiences such as burnout to affect their relationships with their workgroups. Further, the researchers argued that self-aware bosses likely assign added personal resources to monitor their actions and the effects that those actions have on their relationships with others (Hernandez et al., 2015).

Extending the self-awareness-connection to others results found in the educational administration (Patti et al., 2012) and management (Hernandez et al., 2015) fields, we propose that college students with high levels of self-awareness will have a stronger relationship between their connection to others and desired outcomes such as goal attainment in communication, leadership, team building, career development, stress management, and relationships. College students who understand their strengths and are aware of their emotions should be better able to maintain the kinds of positive connections that will help them achieve goals.

*Proposition 2: Self-awareness will moderate the relationship between connection to others and outcomes such that when self-awareness is high, the relationship between connection to others and desired outcomes (e.g., goal attainment in communication, leadership, team building, career development, stress management, and relationships) will be stronger.*

In addition to knowledge of oneself (self-awareness), we propose that knowledge of others (consideration) should also affect the power of the relationship between connection to others and desired outcomes. As mentioned previously, consideration of others involves the regard for the person and situation before thinking and acting. Such empathy includes feeling (and understanding) the emotions of others, as well as discerning the relative importance (or value) of those reactions.

As Goleman (2000) has argued, when individuals lack consideration for others or empathy, the likelihood of them having favorable relationships with others decreases. Research in the management area has found that teams lacking empathy experience higher levels of relationship conflicts (Ayoko, Callan, & Hartel, 2008). Some evidence of a positive relationship between consideration of others and a connection with others has been reported in the medical literature. For instance, one study using qualitative data found that doctors' empathy skills were positively associated with a good rapport between doctors and patients (Norfolk, Birdi, & Walsh, 2007). The authors recommended that doctors undergo training where they learn to reach an accurate understanding of patients' thoughts and feelings in order to establish a positive relationship with them.

As noted earlier, in addition to empathy, another component of consideration of others involves self-monitoring, which consists of sensitivity to expressive behaviors of others (e.g., recognizing cues) and modifying self-presentations (i.e., regulating or changing self-behavior). Individuals who engage in a high level of self-monitoring tend to devote energy to talking about the other person and expressing the appropriate emotions to facilitate positive interactions (Bhardwaj, Qureshi, Konrad, & Lee, 2016). A recent study on cohorts of college students found that when socializing with casual acquaintances, those who engaged in a high level of self-monitoring added positive value to the relationship, at least in the beginning, which led the other party to want to continue to socialize with them (Bhardwaj et al., 2016). Taking together the existing research on empathy and self-monitoring, we expect that a college student that exhibits consideration of others is more likely to enjoy a connection with others that will lead to beneficial outcomes.

*Proposition 3: Consideration of others will moderate the relationship between connection to others and outcomes such that when consideration of others is high, the relationship between connection to*

others and desired outcomes (e.g., goal attainment in communication, leadership, team building, career development, stress management, and relationships) will be stronger.

In summary, we propose that the impact of influence orientation on a desirable social outcome is mediated by the strength of the connection to the target, and the magnitude of the effect is moderated by self-awareness and consideration of others.

## DISCUSSION

The purpose of our paper was to extend the EI literature, specifically the social emotional competence branch, by proposing a model for higher education, called personal interpersonal capacity (PIC) that provides a development framework and diagnostic tool for student success. After reviewing some of the germinal literature in the field, we explained the model's four factors: self-awareness, consideration, connection, and influence orientation. We introduced archetypes of each factor, offered examples of characters from the Harry Potter series, and discussed how each factor would be applicable to a campus setting. We identified the mediating and moderating mechanisms through which personal interpersonal capacity positively effects desired developmental outcomes and offered propositions for empirical testing.

In summary, PIC is a development framework and diagnostic tool for higher education that follows the social emotional competence (SEC) branch of EI to explain and predict student success. The model assumption is that students who develop their personal-interpersonal capacity may reduce dysfunctional conflict and improve meaningful communication as they work to student success.

Building on the current paper, future research could examine how social, cultural, and economic factors influence a student's development, the impact of PIC on issues of student diversity and inclusion, and the psychometric properties of the new personal-interpersonal capacity assessment instrument.

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# Exploring the Structure of Job Satisfaction and Its Impact on the Satisfaction-Performance Relationship

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*This research assessed the structure of job satisfaction and examined its impact on the satisfaction-performance relationship. Seventy-five employees of a midwestern university completed a survey assessing global job satisfaction, job cognitions, negative job affect, and positive job affect. Supervisors of these employees rated their job performance, organizational citizenship behaviors focused on the organization (OCB-O), and organizational citizenship behaviors focused on individuals (OCB-I). Positive job affect was positively related to both in-role performance and OCB-Os. Job cognitions and positive job affect had positive relations with OCB-Is. A three-way interaction between global job satisfaction, job cognitions, and negative job affect predicted OCB-Is.*

## INTRODUCTION

Job satisfaction is typically regarded as an attitude, however few studies on job satisfaction have investigated properties of attitudes, such as attitude structure, that are studied by social and political psychologists (Brief, 1998). It is generally agreed that an attitude is an evaluative tendency toward a stimulus object along a dimension of favor/disfavor and that an attitude develops as direct and indirect experiences provide information about an attitude object, including cognitive and affective information (Eagly & Chaiken, 1993). According to this framework, job satisfaction can be considered a general evaluative tendency toward one's job that has a structure of associated mental representations that may include beliefs about one's job (i.e., job cognitions; e.g., perceiving that your job provides you with a variety of things to do) and emotions associated with one's job (i.e., job affect; e.g., feeling worried about your job).

Attitude structure, the consistency between one's overall attitude and its cognitive and affective components, has been associated with numerous outcomes that are indicative of attitude strength (Chaiken, Pomerantz, & Giner-Sorolla, 1995; Norman, 1975; Prislin, 1996; Rosenberg, 1956; Wagner, Lavine, & McBride, 1997). Strong attitudes are durable and impact information processing and behavior (Krosnick & Petty, 1995). Thus, attitude structure may help to explain whether job satisfaction will be related to important organizational behaviors, such as in-role job performance and organizational citizenship behaviors (OCB).

### Cognitive and Affective Components of Job Satisfaction

Theories of job satisfaction often diverge from contemporary attitude theory in defining attitude. Specifically, job satisfaction is often designated as an affective (i.e., emotional) reaction to one's job (Locke, 1976). The assumption that attitude and affect are isomorphic also existed in past theories of

attitude (Fishbein & Ajzen, 1975; Rosenberg, 1956). However, research suggests that in some cases attitudes can have cognitive and/or behavioral foundations and may have no affective basis (Eagly & Chaiken, 1993; Zanna & Rempel, 1988; Zajonc, 1980). Thus, the definition of job satisfaction should make a distinction between the overall evaluation of the job (global job satisfaction) and the beliefs and emotions associated with the job. Recent theories of job satisfaction have made progress in making these distinctions between the components of an attitude (Brief, 1998; Weiss & Cropanzano, 1996).

Organ and Near (1985) proposed that standard job satisfaction measures tend to focus on the cognitive, rather than the affective foundations of attitudes. Brief and Roberson (1989) tested this proposition empirically and found that different measures of job satisfaction vary in the extent that they capture the cognitive and affective components of attitude. Recognizing that measures of job satisfaction tend to have affective or cognitive foundations, Organ and Near (1985) questioned whether affectively-loaded job satisfaction and cognitively-loaded job satisfaction might have distinct effects on work behavior.

Research has investigated the extent to which OCB can be predicted by job affect and job cognition. A number of studies have found that the cognitive component of job satisfaction predicts OCBs better than the affective component (Moorman, 1991; Organ & Konovsky, 1989; Williams & Anderson, 1991). It has been suggested that because OCBs are discretionary behaviors they are associated with cognitive processes, such as those described in Adam's (1965) equity theory (Organ, 1997). However, some studies have found that OCBs are uniquely predicted by both the cognitive and affective components of job satisfaction (Kemery, Bedeian, & Zacur, 1996) or by the affective component and not by the cognitive component (George, 1991). One rationale for the association between job affect and OCBs is that individuals with a positive mood are more likely to exhibit helping behaviors than individuals with a neutral or negative mood (Lee & Allen, 2002).

Lee and Allen (2002) found that the cognitive component of job satisfaction predicts OCBs focused on the organization (OCB-O) better than the affective component, whereas affective components of job satisfaction predict OCBs focused on individuals (OCB-I) better than the cognitive component. Although these findings support a promising explanation for the relationship between the affect and cognitive components of job satisfaction and OCBs, further research is needed to confidently draw conclusions about this phenomenon. Williams and Anderson (1991) also assessed OCB-Is and OCB-Os but found that the cognitive component had unique relationships with both OCB-Is and OCB-Os whereas the affective component did not. Furthermore, there are other potential explanations for the mixed findings on the relationship between job satisfaction and OCBs that may compliment Lee and Allen's (2002) findings. In particular, the structure of job attitudes may moderate the extent to which they are related to OCBs. That is, one's global job attitude (i.e., his or her overall evaluation of job satisfaction) may be more related to OCBs when it consistent with its cognitive and affective structure.

### **Attitude Structure and Attitude Strength**

Assessing the structure of job satisfaction may help explain when job satisfaction is associated with important organizational behaviors. An attitude's structure is one property that is believed to determine whether that attitude would be characterized as strong, that is, stable over time, resistant to change, and related to information processing and behavior (Eagly & Chaiken, 1995; Krosnick & Petty, 1995). Two properties of attitude structure have been delineated as indicators of attitude strength: *evaluative-cognitive consistency* (consistency between the overall attitude and beliefs about the attitude object) and *evaluative-affective consistency* (consistency between the overall attitude and emotions associated with the attitude object) (Eagly & Chaiken, 1993).

Research investigating the effects of attitude structure supports the assertion that structurally-consistent attitudes are more durable and have greater influence on information processing and behavior than structurally-inconsistent attitudes. Rosenberg (1956) found that individuals with greater evaluative-cognitive consistency had attitudes that were stable over time and more resistant to persuasive appeals. Norman (1975) replicated and extended this line of research by demonstrating that evaluative-cognitive

consistency was also positively associated to the correspondence between one's attitude and one's behavior.

Evaluative-affective consistency was found to be uniquely related to attitude stability, when controlling for evaluative-cognitive consistency (Prislin, 1996). The joint effects of evaluative-cognitive consistency and evaluative-affective consistency have also been investigated. Research suggests that attitudes that are evaluatively consistent with *either* beliefs or emotions (or both) are more stable over time (Chaiken, Pomerantz, & Giner-Sorolla, 1995) and more likely to result in selective exposure to attitude-congruent information (Wagner, Lavine, & McBride, 1997) than attitudes that are inconsistent with beliefs *and* emotions. In sum, these findings suggest that research on attitude structure should examine both evaluative-cognitive and evaluative-affective consistency.

When an attitude is activated by relevant cues, beliefs and emotions associated with that attitude tend to be activated also (Eagly & Chaiken, 1996). Attitudes with a consistent structure should also demonstrate greater effects on information processing because they possess supportive information that may be used to actively refute new counterattitudinal information and to elaborate on new proattitudinal information (Chaiken, Pomerantz, & Giner-Sorolla, 1995; Wood, Rhodes, & Biek, 1995). Thus, the relationship between attitude structure and attitude strength may be associated with findings that working knowledge (the amount of attitude-relevant information a person can retrieve from memory) and direct experience with the attitude object are positively related to the durability of an attitude and its impact on information processing and behavior (Fazio, 1989; Woods, Rhodes, & Biek, 1995).

As stated previously, the concept of attitude structure has received limited attention in research on job satisfaction. In two studies, Schleicher, Watt, and Greguras (2004) found that the cognitive component of job satisfaction had a greater relationship with in-role job performance when it had greater consistency with the affective component of job satisfaction. In further research, Schleicher, Smith, Casper, Watt, and Greguras (2015), found that the structural consistency of job satisfaction, as defined by a composite of consistency between overall evaluation, cognitive satisfaction, and affective satisfaction, moderated relations between job satisfaction and various organizational behaviors, including, performance, organizational citizenship behavior, and turnover intentions. Their findings suggest that relations between job satisfaction and organizational behaviors is stronger when there is greater structural consistency in the elements of job satisfaction.

### **The Current Research**

The present study investigated the structure of job satisfaction by assessing four components of this attitude: global job satisfaction (an overall evaluation of one's job), job cognitions (beliefs about the characteristics of one's job), negative job affect (emotional reactions to one's job associated with displeasure), and positive job affect (emotional reactions to one's job associated with arousal). Past research on attitude structure has been criticized for using different response formats to measure distinct components of an attitude's structure (Crites, Fabrigar, & Petty, 1994). In order to control for measurement artifacts that may have contributed to differences in the components of attitude structure in past research, existing measures of the cognitive and affective components of job satisfaction were modified to provide a consistent response format. These measures were used to calculate three kinds of attitude structure: evaluative-cognitive, evaluative-negative affect, and evaluative-positive affect.

Three aspects of job performance were examined in this research: in-role performance (performance of tasks prescribed by the job), OCB-O (performance of discretionary, prosocial behaviors focused on the organization), and OCB-I (performance of discretionary, prosocial behaviors focused on individuals). It was hypothesized that global job satisfaction would predict aspects of job performance better when it was associated with consistent cognitive and affective structures. For instance, it was also predicted that global job satisfaction would have a stronger relationship with dimensions of job performance when it is associated with favorable job cognitions and low levels of negative job affect than when it has other patterns of structure. Furthermore, it was predicted that, global job satisfaction would have a stronger relationship with dimensions of job performance when it is associated with favorable job cognitions and high levels of positive job affect than when it has other patterns of structure. By examining facets of

affective satisfaction and organizational citizenship behaviors were examined, the current research was designed to extend the research conducted by Schleicher and her colleagues (Schleicher et al., 2002, Schleicher et al. 2015)

## **METHOD**

### **Participants and Procedure**

Non-academic employees at a medium-sized midwestern university were randomly sampled and mailed a request to participate in research on job satisfaction. This survey assessed global job satisfaction, job cognitions, negative job affect, and positive job affect. Participants were given five dollars for completing the survey and informed that they would receive another five dollars for having their supervisors complete a separate survey assessing job performance. The job satisfaction survey was completed by 126 participants, consisting of 45 male and 80 female respondents. The mean tenure of these respondents was 11 years with a range of two months to 35.3 years on the job. Information regarding job classification was also collected and indicated that 38.4% held office or administrative support positions, 19.2% were in administrative management, 9.6% had maintenance positions, 9.6% worked in education services, 8.8% listed themselves in the 'other' category, 8% were in computer technologies and the remaining 6% held positions in human resource, food service, social or health services, or financial management.

A second survey assessing job performance was mailed six weeks later to participants who completed the job satisfaction survey. Participants were told to have their immediate supervisor complete this survey and return it to the investigators. Completed surveys were returned for 75 participants (24 male and 51 female) or 60% of those who responded to the job satisfaction survey. The mean tenure of participants with job performance ratings was 11 years, with a range from 3 months to 32.1 years. Once again, the majority held administrative positions as either support (48%) or management (12%). The remainder of the sample with job performance ratings included 10.7% in maintenance, 6.7% in education services, 8% listed themselves as 'other', 6.7% were in computer technologies, and the remaining 8% were in financial management, food service, or social and health services.

### **Measures**

#### *Global Job Satisfaction*

Participants rated global job satisfaction with 4 survey items. Three items were semantic differential scales (bad/good, negative/positive, unfavorable/favorable) asking respondents to evaluate his/her job, as a whole on a nine-point response scale (-4 to +4). The fourth item asked respondents to rate the quality of their job on a response scale with 11 points prescaled for favorableness (Ironson & Smith, 1981), including: 1 = "Best Imaginable," 2 = "Excellent," 3 = "Highly Favorable," 4 = "Good," 5 = "Satisfactory," 6 = "Neutral," 7 = "Poor," 8 = "Bad," 9 = "Very Bad," 10 = "Terrible," 11 = "Worst Imaginable" (reverse coded). The four items assessing global job satisfaction exhibited internal-consistency reliability,  $\alpha = .92$ .

#### *Job Cognitions*

Participants rated their agreement with 20 statements describing characteristics of their job that were identified by Dawis and Lofquist (1984) as important job outcomes. Examples include: "My job allows me to make use of my abilities," "I receive recognition for the work I do," and "My job provides me with friendship." Respondents used a seven-point response scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Mildly Disagree," 4 = "Neutral," 5 = "Mildly Agree," 6 = "Agree," 7 = "Strongly Agree." The twenty items assessing job cognitions exhibited internal-consistency reliability,  $\alpha = .93$ .

#### *Negative Job Affect*

Participants rated 10 items describing emotional states identified by Watson and Tellegen (1985) as indicators of negative affect (i.e., emotions associated with displeasure). The emotional states used to

indicate negative job affect included angry, content (reverse-coded), worried, calm (reverse-coded), tense, relaxed (reverse-coded), miserable, cheerful (reverse-coded), anxious, and confident (reverse-coded). The emotions rated were preceded by the phrase, "My job makes me feel..." Respondents used a seven-point response scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Mildly Disagree," 4 = "Neutral," 5 = "Mildly Agree," 6 = "Agree," 7 = "Strongly Agree." The ten items assessing negative job affect exhibited internal-consistency reliability,  $\alpha = .91$ .

#### *Positive Job Affect*

Participants rated 10 items describing emotional states identified by Watson and Tellegen (1985) as indicators of positive affect (i.e., emotions associated with arousal). The emotional states used to indicate positive job affect included motivated, tired (reverse-coded), full of energy, assertive, timid (reverse-coded), fatigued (reverse-coded), alert, irritated (reverse-coded), lively, and incompetent (reverse-coded). The emotions rated were preceded by the phrase, "My job makes me feel..." Respondents used a seven-point response scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Mildly Disagree," 4 = "Neutral," 5 = "Mildly Agree," 6 = "Agree," 7 = "Strongly Agree." The ten items assessing negative job affect exhibited internal-consistency reliability,  $\alpha = .85$ .

#### *In-Role Job Performance*

Participants' supervisors rated four items, developed by Williams and Anderson (1991), assessing in-role job performance (i.e., performance of behaviors associated with prescribed job duties.) Examples include, "He/She adequately completes assigned duties," and "He/She performs tasks that are expected of him/her." Respondents used a seven-point response scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Mildly Disagree," 4 = "Neutral," 5 = "Mildly Agree," 6 = "Agree," 7 = "Strongly Agree." The four items assessing in-role job performance exhibited internal-consistency reliability,  $\alpha = .91$ .

#### *Organizational Citizenship Behaviors Focused on the Organization (OCB-O)*

Participants' supervisors rated four items, developed by Williams and Anderson (1991), assessing discretionary, prosocial behaviors directed toward the organization. Examples include, "His/Her attendance at work is above the norm," and "He/She follows informal rules designed to maintain order." Respondents used a seven-point response scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Mildly Disagree," 4 = "Neutral," 5 = "Mildly Agree," 6 = "Agree," 7 = "Strongly Agree." The four items assessing OCB-O exhibited internal-consistency reliability,  $\alpha = .71$ .

#### *Organizational Citizenship Behaviors Focused on Individuals (OCB-I)*

Participants' supervisors rated four items, developed by Williams and Anderson (1991), assessing discretionary, prosocial behaviors directed toward individuals. Examples include, "He/She helps others who have been absent," and "He/She passes along information to co-workers." Respondents used a seven-point response scale, where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Mildly Disagree," 4 = "Neutral," 5 = "Mildly Agree," 6 = "Agree," 7 = "Strongly Agree." The four items assessing OCB-I exhibited internal-consistency reliability,  $\alpha = .84$ .

## RESULTS

### Preliminary Analyses

Preliminary analyses were conducted to assess how well the assumptions of multiple regression and correlational analyses were met. The variables were examined for normality (e.g., skewness and kurtosis), linearity, and homoscedasticity. All variables exhibited significant non-normality: negative job affect was positively skewed whereas global job satisfaction, job cognitions, positive job affect, in-role job performance, OCB-O, and OCB-I were negatively skewed. In order to normalize the variables, square root transformations were performed, with negatively skewed variables being reflected before and after calculating the square root (Tabachnick & Fidell, 1983). All variables were successfully normalized by the transformations and were used in all subsequent analyses.

To determine the influence of heteroscedasticity and linearity, scatterplots of residuals and Y predicted scores were examined. After all transformations were made, variables exhibited relations that were linear in nature and demonstrated homoscedasticity. Thus, after conducting transformations of the variables it was determined that the assumptions of multiple regression and correlational analyses were met.

Means, standard deviations, and correlations of the variables studied are displayed in Table 1. In order to control for extraneous relationships between components of job satisfaction and job performance, the relations between gender, job tenure, and organizational tenure and the primary variables of this study were examined. Job and organizational tenure were not significantly related to components of job satisfaction and job performance. Gender was significantly related to negative job affect and OCB-I and also had marginally-significant relations ( $p < .15$ ) with job cognitions, positive job affect, and in-role performance. Thus, gender was adopted as a control variable in subsequent analyses.

Standard multiple regression analyses were conducted to examine the unique relations between the components of job satisfaction and job performance (see Table 2). In-role job performance was regressed on gender, global job satisfaction, job cognitions, negative job affect, and positive job affect. In combination, the components of job satisfaction explained 13% of the variance in in-role job performance. Positive job affect and negative job affect both had unique, *positive relations* with in-role performance ( $\beta = .66, p < .01$  and  $\beta = .58, p < .01$ , respectively). Negative job affect appears to have a suppression effect in this analysis given the extremely low correlation between negative job affect and in-role performance and the high correlations amongst the components of job satisfaction.

**TABLE 1**  
**MEANS, STANDARD DEVIATIONS, AND CORRELATIONS OF STUDY VARIABLES**

Variables	M	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. Gender	--	--	--							
2. Global Job Satisfaction	4.66	.28	.16	--						
3. Job Cognitions	5.84	.32	.17	.61**	--					
4. Negative Job Affect	1.63	.26	-.27*	-.53**	-.59**	--				
5. Positive Job Affect	6.37	.22	.17	.62**	.69**	-.79**	--			
6. Job Performance	6.67	.25	.17	.13	.16	.00	.24*	--		
7. OCB-O	6.73	.25	.04	.03	.17	-.05	.23*	.69**	--	
8. OCB-I	6.68	.28	.24*	.18	.33**	-.08	.25*	.78**	.64**	--

*Note.* OCB-O = Organizational Citizenship Behaviors with Organizational Focus; OCB-I = Organizational Citizenship Behaviors with Individual Focus. Gender: -1 = Male, 1 = Female.  $N = 75$ . \*  $p < .05$ , \*\*  $p < .01$ .

**TABLE 2**  
**ANALYSIS OF COMBINED AND UNIQUE RELATIONS OF JOB ATTITUDE COMPONENTS**  
**AND JOB BEHAVIORS**

Predictors	Job Performance		OCB-O		OCB-I	
	$\beta$	Adj. $R^2$	$\beta$	Adj. $R^2$	$\beta$	Adj. $R^2$
Gender	.21		.05		.25*	
Global Job Satisfaction	-.01		-.20		-.05	
Job Cognitions	.02		.12		.31*	
Negative Job Affect	.58**		.35		.44*	
Positive Job Affect	.66**		.54*		.37	
		.13*		.06		.15**

*Note.* OCB-O = Organizational Citizenship Behaviors with Organizational Focus; OCB-I = Organizational Citizenship Behaviors with Individual Focus. Gender: -1 = Male, 1 = Female.  $N = 75$ . \*  $p < .05$ , \*\*  $p < .01$ .

OCB-O was regressed on gender, global job satisfaction, job cognitions, negative job affect, and positive job affect. In combination, the components of job satisfaction did not significantly predict OCB-O. This unexpected result is likely to be caused by limitations of statistical power that were exaggerated by the high intercorrelations amongst the predictors. As can be seen in Table 2, the only component of job satisfaction with a significant zero-order correlation with OCB-O was positive job affect ( $r = .23, p < .05$ ).

OCB-I was also regressed on gender, global job satisfaction, job cognitions, negative job affect, and positive job affect. In combination, the components of job satisfaction predicted 15% of the variance in OCB-I. Gender, job cognitions, and negative job affect had unique relations with in-role performance ( $\beta = .25, p < .01, \beta = .31, p < .01$ , and  $\beta = .44, p < .01$ , respectively). Again, the low correlation between negative job affect and OCB-I and the high correlations amongst the components of job satisfaction suggest that negative job affect is a suppressor variable in this equation.

### Testing the Moderating Effects of Attitude Structure on the Job Satisfaction-Performance Relationship

Hierarchical regression analyses were conducted to evaluate the hypothesis that attitude structure would moderate the relationship between global job satisfaction and job performance. The components of job satisfaction were centered by subtracting each individual's (transformed) composite score from the mean of that (transformed) variable. Centering variables is a method of reducing the multicollinearity between variables and their cross-product terms (Aiken & West, 1991).

It was predicted that global job satisfaction would have a stronger relationship with dimensions of job performance when it is associated with favorable job cognitions and low levels of negative job affect than when it has other patterns of structure. Three regression equations were calculated to test this hypothesis with each dimension of job performance (i.e., in-role performance, OCB-O, and OCB-I). First, global job satisfaction, job cognitions, negative job affect and gender were entered individually into the equation. The second step involved entering all two-way interactions for the components of job satisfaction (i.e., global job satisfaction x job cognitions, global job satisfaction x negative job affect, and job cognitions x negative job affect). Finally, the three-way interaction between global job satisfaction, job cognitions, and negative job affect was entered on the third step. As shown in Table 3, the three-way interaction between job satisfaction components was only significant for OCB-I. Thus, our hypothesis was not supported for in-role performance or OCB-O.



**TABLE 3**  
**ANALYSIS OF INTERACTIVE EFFECTS OF JOB COGNITIONS AND NEGATIVE JOB AFFECT ON RELATIONS BETWEEN GLOBAL JOB SATISFACTION AND JOB BEHAVIORS**

<i>Predictors</i>	<i>Job Performance</i>		<i>OCB-O</i>		<i>OCB-I</i>	
	$\Delta R^2$	<i>Adj. R</i> <sup>2</sup>	$\Delta R^2$	<i>Adj. R</i> <sup>2</sup>	$\Delta R^2$	<i>Adj. R</i> <sup>2</sup>
<i>Step 1: Gender, Global Job Satisfaction, Job Cognitions, Negative Job Affect</i>	.08	.02	.04	.00	.17**	.13**
<i>Step 2: Global Job Satisfaction x Job Cognitions, Global Job Satisfaction x Negative Job Affect, Job Cognitions x Negative Job Affect</i>	.01	.00	.02	.00	.02	.11*
<i>Step 3: Global Job Satisfaction x Job Cognitions x Negative Job Affect</i>	.00	.00	.01	.00	.06*	.16*

*Note.* OCB-O = Organizational Citizenship Behaviors with Organizational Focus; OCB-I = Organizational Citizenship Behaviors with Individual Focus. Gender: -1 = Male, 1 = Female. *N* = 75. \* *p* < .05, \*\* *p* < .01.

Follow-up analyses for the significant three-way interaction were conducted using Aiken and West's (1991) approach to interpreting multiple regression interactions. Four regression equations were calculated in which OCB-I was regressed on global job satisfaction, gender, and transformations of job cognitions and negative job affect at one standard deviation above and below their mean values. When job cognitions were high and negative job affect was low, the relationship between global job satisfaction and OCB-I was significant ( $\beta = .57, p < .05$ ). No significant relations between global job satisfaction and OCB-I were found with high job cognitions and high negative job affect ( $\beta = -.31, ns$ ), with low job cognitions and high negative job affect ( $\beta = -.10, ns$ ), or with low job cognitions and low negative affect ( $\beta = -.60, ns$ ). This pattern of findings is consistent with this hypothesis.

It was also predicted that global job satisfaction would have a stronger relationship with dimensions of job performance when it is associated with favorable job cognitions and high levels of positive job affect than when it has other patterns of structure. Three regression equations were calculated to test this hypothesis with each dimension of job performance (i.e., in-role performance, OCB-O, and OCB-I). First global job satisfaction, job cognitions, positive job affect, and gender were entered individually into the equation. The second step involved entering all two-way interactions for the components of job satisfaction (i.e., global job satisfaction x job cognitions, global job satisfaction x positive job affect, and job cognitions x positive job affect). Finally, the three-way interaction between global job satisfaction, job cognitions, and positive job affect was entered on the third step. As shown in Table 4, none of the three-way interactions between job satisfaction components were significant. Thus, this hypothesis was not supported.

**TABLE 4**  
**ANALYSIS OF INTERACTIVE EFFECTS OF JOB COGNITIONS AND POSITIVE JOB AFFECT ON RELATIONS BETWEEN GLOBAL JOB SATISFACTION AND JOB BEHAVIORS**

<i>Predictors</i>	<i>Job Performance</i>		<i>OCB-O</i>		<i>OCB-I</i>	
	$\Delta R^2$	<i>Adj. R<sup>2</sup></i>	$\Delta R^2$	<i>Adj. R<sup>2</sup></i>	$\Delta R^2$	<i>Adj. R<sup>2</sup></i>
<i>Step 1: Gender, Global Job Satisfaction, Job Cognitions, Positive Job Affect</i>	.07	.02	.08	.02	.16*	.10*
<i>Step 2: Global Job Satisfaction x Job Cognitions, Global Job Satisfaction x Positive Job Affect, Job Cognitions x Positive Job Affect</i>	.01	.00	.02	.00	.02	.08
<i>Step 3: Global Job Satisfaction x Job Cognitions x Positive Job Affect</i>	.00	.00	.01	.00	.03	.10

*Note.* OCB-O = Organizational Citizenship Behaviors with Organizational Focus; OCB-I = Organizational Citizenship Behaviors with Individual Focus. Gender: -1 = Male, 1 = Female. *N* = 75. \* *p* < .05, \*\* *p* < .01.

## DISCUSSION

The findings of the present study provide some preliminary support for the hypothesis that the structure of job satisfaction moderates its relationship with job performance. Global job satisfaction had a significant, positive relationship with OCB-I when individuals also possessed favorable job cognitions and experienced low amounts of negative job affect; whereas global job satisfaction did not predict OCB-I when job cognitions and negative job affect had a less consistent attitude structure. However, this three-way interaction was not found for OCB-O or in-role performance. It also did not emerge when examining the interactive effects of global job satisfaction, job cognitions, and positive job affect on in-role performance, OCB-O, and OCB-I.

Past research on the cognitive and affective components of job satisfaction has focused on their differential validity for predicting OCBs. In the present study, the best predictor of in-role performance and OCB-O was positive job affect. Job cognition was the best (independent) predictor of OCB-I. These findings are not very consistent with others studies examining the relationship between OCBs and the cognitive and affective components of research (Kemery, Bedeian, & Zacur, 1996; Lee & Allen, 2002; Moorman, 1991; Organ & Konovsky, 1989; Williams & Anderson, 1991). However, there is not a lot of consistency between any of the studies on this topic. The pattern of findings from different studies suggests that relations between OCBs and the cognitive and affective components of job satisfaction may be more complicated than previously believed.

The concept of attitude structure suggests that individuals may differ in the extent to which the global attitude is supported by cognitive and affective bases. These differences are believed to affect whether an attitude will predict relevant behaviors, such that attitudes with more consistent structure are more predictive of behaviors than attitudes with less consistent structure (Eagly & Chaiken, 1993). These individual differences in attitude structure could be the result of personality differences associated with cognitive and affective tendencies (e.g., need for cognition, neuroticism, and extraversion). Furthermore, different aspects of job context may differentially evoke affective and cognitive experiences. The perspective that individuals may differ in the extent to which their job satisfaction is based on cognitive

and/or affective bases does not contradict the belief that some organizational behaviors are cognitively-driven while others are affectively-driven. Rather, it compliments this idea and provides a rationale for the mixed findings of research on this topic.

Although the present study attempted to avoid a number of methodological problems of past research (i.e., inconsistent scaling of cognition and affect, the use of difference scores to calculate attitude structure), there are some weaknesses of this study that are worth noting. First, the sample size of this study was relatively low and did not provide a very powerful test of the hypotheses. Furthermore, the components of job satisfaction and job performance were notable skewed, suggesting that impression management may have played a role in participants' ratings of job satisfaction and their supervisors' ratings of performance. Also, having participants request performance ratings from their supervisors may have resulted in a restricted range on the job performance variables if those participants with low job performance did not return performance ratings.

Despite these weaknesses, the findings of this study and Schleicher et al. (2002) provide support for the idea that attitude structure moderates the satisfaction-performance relationship. Thus, examining the structure of job satisfaction may be a promising avenue for future research. More studies are needed to draw confident conclusions about the effects of attitude structure on job satisfaction and its correlates. Future research should examine the attitude structure of facets of job satisfaction (e.g., pay satisfaction, coworker satisfaction, satisfaction with the work itself) and how these structures might influence organizational behavior. Finally, examining dispositional and situational influences on the structure of job satisfaction would further our understanding of why individuals differ in the extent to which their job satisfaction has cognitive and/or affective bases.

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# **Ex-Post Rationalisation in Business Decision Making: Objective Performance and Subjective Satisfaction**

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*Business decision making theory and practice mostly focus on either normative prescriptions and/or descriptive analyses of decision making behaviour, decision making situations and contexts, decision making criteria, and decision making heuristics. Much lesser frequently, emphasis is placed on the problem, whether the actual outcomes and results of decision making processes, measured by “objective” indicators are in line with the subjective satisfaction of the decision makers with their efforts, commitment and performance. Various empirical findings, however, suggest that “objective performance” and “subjective satisfaction” with the procedures and the outcomes of decision making are not at all positively related. A field study and a laboratory experiment, hereto, show mixed findings, as reported in this paper.*

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## **INTRODUCTION**

Decision making in people’s private life as well as in organisations and businesses has played a preeminent role likewise for scholars and practitioners.

Decisions, from a “rational” perspective, can be characterised as deliberate choices among given alternatives under problem specific goals in order to identify the optimal option, mostly under uncertain circumstances (Eisenführ et al., 2010). The postulate of rational decision making attitudes has been heavily challenged by a series of recent research findings, mostly resulting from behavioural and experimental economics approaches (Altmann & Falk, 2009) (Kahneman, 2012) (Ockenfels, 2009) (Popper, 2002) (Selten, 1998) (Simon, 1997). As a tentative result it seems to be obvious that neither “private” decisions nor business decisions can be subject to “complete” rationality in terms of the “homo oeconomicus” model. In point of fact, empirical evidence has demonstrated that decision making behaviour – and thus decision making outcomes – are subject to influences like emotions, cognitive limitations, lack of information, norms and values, etc. Those “restrictions” lead to “suboptimal” decision making results, which more or less deviate from intended “ideal” outcomes and quite often from desired performance (Neuert et al., 2015).

Interestingly, the subjective perception of individual decision makers' satisfaction with their results and the objective performance of decision making processes quite often differ tremendously (Neuert, 1987) (Woschank, 2017).

The individual satisfaction refers to the decision maker's contentedness with and his subjective expectation of the decision making process outcomes, whereas the objective decision making performance is linked to interpersonally measureable indicators like forecast precision, profitability numbers, growth rates, improvement measures, etc.

This paper especially investigates the research question, whether, and if so, how, subjective satisfaction and objective performance in decision making appear in line or diverge from each other, and, given the latter, to which extent and based on what reasons it can be stated and explained.

## **THEORETICAL FRAMEWORK**

Equally, in "profane" publications as well as in the scholarly and scientific literature, there are numerous examples of contradicting subjective performance evaluation and objective outcomes of "competitive" events, games, sports contests, exams, etc. For instance, professional soccer players may assess their individual performance in a game far above average, even though the result of the game has been negative for the own team and a number of sports journalists have evaluated the individual players' appearance as significantly below average (Zorn, 2008). Likewise, managing directors and CEOs may consider their individual capabilities and managerial performance as excellent, whereas their company's profitability measures indicate the opposite (Mai & Retting, 2011).

Also, quite often it can be observed that there is a remarkable difference between the competitors' immediate satisfaction with their performance and their evaluation of that very performance, after a certain time has elapsed (Srinivasan & Ratchford, 1991).

In this context the question strongly arises, why those kinds of discrepancies actually exist and how they can be explained by sound cause-effect-presumptions.

First of all, it might be useful to take a look at major theoretical models of decision making theory in competitive environments. Prescriptive models of decision making theory assume that eventually human behaviour tends to maximise individual profits, benefits and utility, based on the underlying hypothesis of rational conduct (Neuert, 2005). In contrast, descriptive theories of decision making try to answer the question, how decisions are made in reality and why they have been made in the observed and evident manners (Bamberg et al., 2008).

This means that prescriptive rational decision making theory would not allow for any discrepancy between subjective evaluation and objective outcomes of decision making processes. Obviously, only descriptive models of decision making theory maybe pertinent to explain the above mentioned "anomaly" of diverging assessments between subjective satisfaction and objective performance. Moreover, a theoretical model has to be found, which can also explain the "over-time-variation" of this phenomenon.

The existing economic and social science literature provides various theoretical approaches for this problem complex. In particular, Leon Festinger's theory of cognitive dissonance may deliver robust and sound foundations to outline a plausible theory of subjective and objective performance dissonance and to develop an appropriate empirical research design (Festinger, 1989).

According to Festinger, the disappointment of expectations leads to a state of subjectively felt dissonance and psychological discomfort. This causes perceptions of inconsistencies and dissatisfaction, which ultimately leads to attempts determined to reduce those inconsistencies and to re-establish an individual's cognitive equilibrium. As a consequence, the "actor" changes his perception of his performance and tries to "harmonise" the objective outcomes with his subjective expectations and desires. Quite often the subjective impressions are adapted to the objective measures in order to regain cognitive consistency (Homburg & Rudolph, 1997).

More generally, the theoretical framework explains that cognitive dissonance evolves whenever at least two cognitive "subjects" we experience (i.e. thoughts, convictions, attitudes, perceptions) hardly or

not at all comply with each other. In this sense, cognitive dissonance can be characterised as an aversive motivational status, which induces the individual to remove this sentiment (Betsch et al., 2011).

This particular theoretical framework can be used, in our view, to explain the above mentioned discrepancies between subjective performance evaluation and satisfaction, and objective outcomes of socio-economic decision making processes.

## **BASIC HYPOTHESES**

The authors conducted and published two research projects dealing with the relationship of decision making behaviour and decision making outcomes. Both studies were based on the notion that specific elements of decision making behaviour positively contribute to improved and/or high decision making performance. The independent variables, reflecting decision making behaviour, were comprised of a set of criteria, which determine various degrees of decision making rationality (i.e. goal orientation, information orientation, process organisation, utilisation of heuristics, outcomes assessment and reflection). It was also considered that imperfect degrees of decision making behaviour are caused by bounded “rationality capabilities” (Neuert, 1987) (Woschank, 2017).

The dependent variables mirror the decision making performance results, likewise including objective measures (i.e. profitability) and subjective satisfaction (in form of individuals’ self-evaluation solely) (Neuert, 1987) (Woschank, 2017).

Whereas one of the research projects utilised a laboratory experimental methodology, the other one applied a mixed method approach, conducting a field ex-post-facto experiment and a validating lab experiment (Neuert, 1987) (Woschank, 2017).

Conspicuously, there were discrepancies being observed between the subjective evaluation and satisfaction and the objective performance comparing the lab experimental results with the field experimental outcomes. The lab experiments did not show any “harmonisation” between subjectivity and objectivity. In contrast, the field experiment showed a significant alignment between subjectivity and objectivity (Neuert, 1987) (Woschank, 2017). Even though the “classical” epistemology of critical rationalism (Popper, 2002) requires a theoretical foundation being developed before their empirical scrutiny, it can be argued, in our case, that our theory of limited rational decision making and its adjacent experimental investigation have provided sound insights, leading to our “derivative theory” of contradicting objective and subjective performance assessment (Häring, 2017).

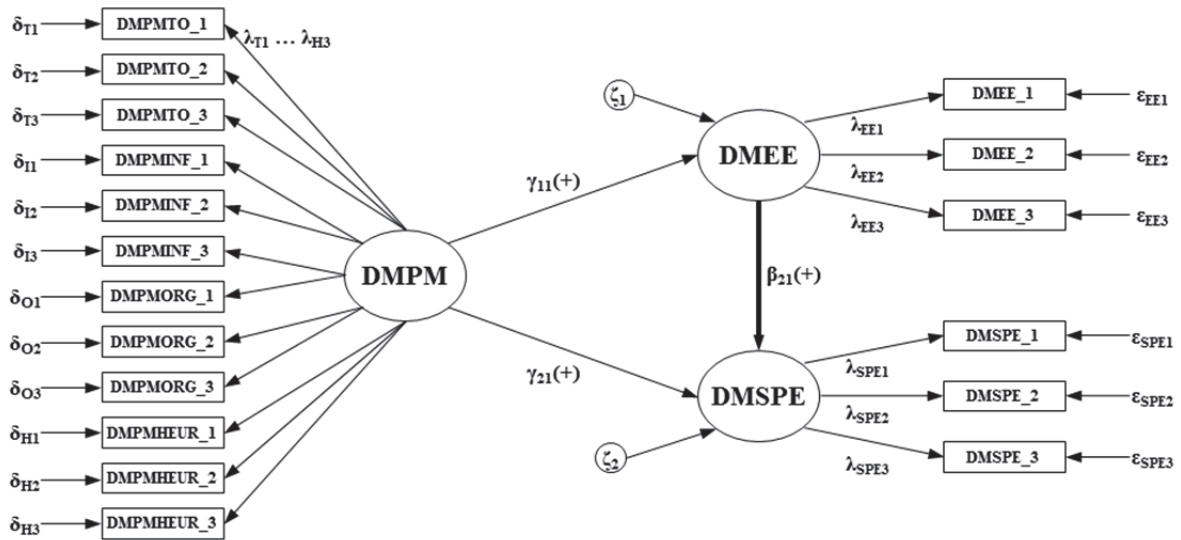
The theoretical modelling of those empirical observations can be outlined as follows:

- Decision making performance and outcomes are influenced by decision making behaviour elements.
- Decision making performance and outcomes are measured by objective factors and by subjective evaluation and satisfaction with the decision making behaviour and the decision making results.
- Objective performance and subjective satisfaction/evaluation do or do not differ.

The theoretical model can be depicted as follows (Figure 1):



**FIGURE 1**  
**THEORETICAL MODEL (Woschank, 2017)**



**Abbreviations**

*DMPM: Independent variable decision making process maturity (indicators DMPMTO\_1 ... DMPMHEUR\_3)*

*DMEE: Dependent variable decision making economic efficiency (indicators DMEE\_1 ... DMEE\_2)*

*DMSPE: Dependent variable decision making socio-psychological efficiency (indicators DMSPE\_1 ... DMSPE\_3)*

Based on the diverging results between the laboratory experiment and the ex-post-facto field study the following basic hypotheses can be formulated:

- H<sub>B1</sub>: Objective performance and subjective satisfaction are in line in ex-post-facto evaluation situations of the decision maker (time gap between decision conduct and evaluation juncture).
- H<sub>B2</sub>: The alignment is based on the decision maker's ex-post-rationalisation of his subjective performance evaluation.
- H<sub>B3</sub>: Objective performance and subjective satisfaction diverge in real time evaluation situations of the decision maker (no time gap between decision conduct and evaluation juncture; objective outcomes are still unknown).
- H<sub>B4</sub>: The real time situation context does not allow for any subjective evaluation adaptation.

Our theoretical framework and hypotheses modelling is comprised of the theory of cognitive dissonance and self-justification in combination with explanatory conjectures of real time and non-real time evaluation contexts.

In the following, the empirical research design for hypotheses testing will be described and the research findings will be reported.

**RESEARCH DESIGN**

The research projects referred to above, investigated the relationship between varying elements of decision making behaviour and decision making outcomes. The decision making results were measured on the one hand by objective economic indicators comprised of cost efficiency, product quality measures, precision of contract fulfilment in the first project resp. degree of goal achievement and profitability measures in the second project. On the other hand in both projects subjective satisfaction assessment and self-evaluation were conducted via questionnaires filled in by the decision makers. In both research projects, laboratory experimental designs were used as research tools. The research samples in both lab

experiments consisted of advanced students and practitioners. The test subjects had to fulfil specific decision making tasks, whose outcomes could be clearly assigned to varying decision making attitudes.

At the end of each decision making task treatment, the test subjects had to fill in the self-evaluation questionnaire without knowing the objective outcomes of their efforts. Within the first project, also a field survey of a sample of practitioners was conducted concerning a specific real world decision making problem, which they had been performing between a minimum of 6 and a maximum of eighteen months ago. Via a questionnaire they had to assess their own performance from a subjective point of view and, in addition, they had to report the actual objective outcomes of the decision making process.

This research approach allowed for a comparison of the two laboratory experimental results on the one hand, and for a comparison between the laboratory experimental results and the ex-post-facto field experimental results on the other hand.

The sample sizes amounted to ca. 300 advanced students and to ca. 100 professionals in the first project, and to 138 professionals in the field experiment and 122 professionals and advanced students in the lab experiment in the second project (Neuert, 1987) (Woschank, 2017).

The laboratory experiment in the first project ultimately provided a sample size of 160 experimental cases results for the objective economic performance measures and for the subjective self-evaluation as well (Neuert, 1987).

In the second project the lab experiment provided 56 objective performance measures and an equal number of subjective self-evaluations. The field experiment provided 138 cases results for both (Woschank, 2017).

The data sets were subject to statistical procedures in terms of frequencies, correlation and regression analyses, and a non-parametric group comparison test. The prerequisites for the statistical procedures were provided via a structural equation modelling process through SmartPLS.

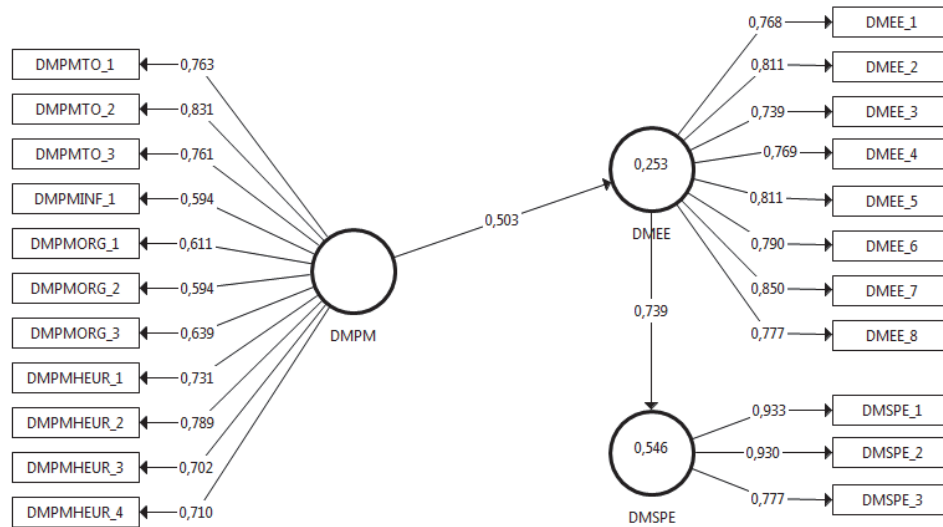
In the following the main research results will be documented.

## **MAJOR FINDINGS**

In order to test our first basic hypothesis HB1 [Objective performance and subjective satisfaction are in line in ex-post-facto evaluation situations of the decision maker (time gap between decision conduct and evaluation juncture)], we conducted path analyses within the structural equation model providing the coefficients of determination ( $R^2$ ) between decision making behaviour variables and economic decision making outcome variables on the one hand and subjective evaluation outcomes on the other hand.

Finally, the  $R^2$ 's between the objective (economic) outcomes and the subjective outcomes were subject to a correlation and regression analysis. At first, the results of the ex-post-facto field experiment are reported. The findings are as follows (Figure 2):

**FIGURE 2**  
**RESEARCH RESULTS (FIELD STUDY) (Woschank, 2017)**



Investigated effect	Std. path coefficient	R <sup>2</sup>	p-value
DMEE → DMSPE	0.739	0.546	0.000

**Abbreviations**

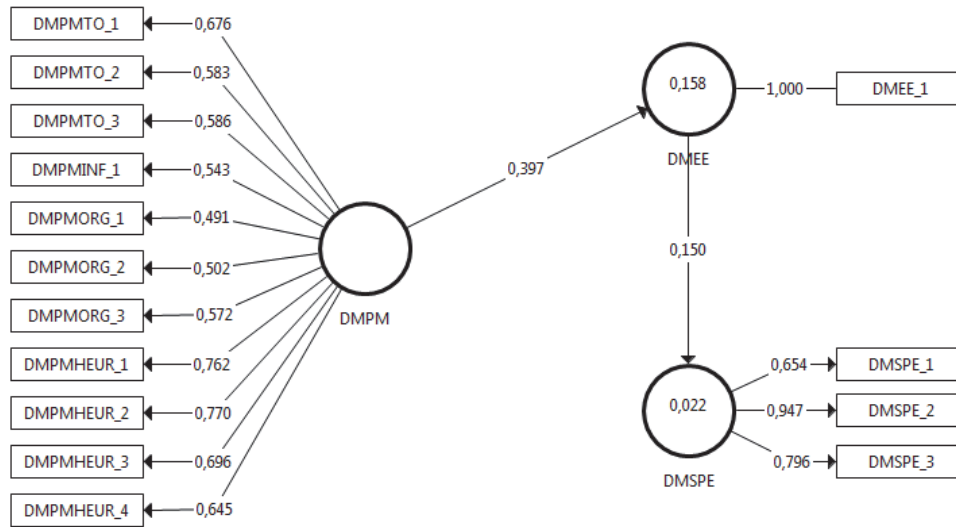
*DMPM: Independent variable decision making process maturity (indicators DMPMTO\_1 ... DMPMHEUR\_4)*  
*DMEE: Dependent variable decision making economic efficiency (indicators DMEE\_1 ... DMEE\_8)*  
*DMSPE: Dependent variable decision making socio-psychological efficiency (indicators DMSPE\_1 ... DMSPE\_3)*

The statistical procedures provided an R<sup>2</sup> finding between the objective economic results and the subjective self-evaluation of 0.546, explaining to a high extent the variation of the objectivity and the subjectivity by each other. The R<sup>2</sup> is highly significant (Woschank, 2017).

The statistical findings also tentatively support our basic hypothesis H<sub>B2</sub> [The alignment is based on the decision maker’s ex-post-rationalisation of his subjective performance evaluation]. The reason for this can be seen in the fact that the underlying decision making task had occurred at least six months ago, which allowed for the ex-post-harmonisation in order to re-establish the equilibrium of the cognitive consistence.

In order to test our basic hypothesis H<sub>B3</sub> [Objective performance and subjective satisfaction diverge in real time evaluation situations of the decision maker (no time gap between decision conduct and evaluation juncture; objective outcomes are still unknown)] we also conducted a path analysis within the structural equation model, providing the coefficients of determination (R<sup>2</sup>) between decision making behaviour variables and economic decision making outcome variables on the one hand and subjective evaluation outcomes on the other hand for the validating laboratory experiment. Finally, the R<sup>2</sup>’s between the objective (economic) outcomes and the subjective outcomes were again subject to a correlation and regression analysis. The findings are as follows (Figure 3):

**FIGURE 3**  
**RESEARCH RESULTS (LABORATORY EXPERIMENT) (Woschank, 2017)**



Investigated effect	Std. path coefficient	R <sup>2</sup>	p-value
DMEE → DMSPE	0.150	0.022	0.513

**Abbreviations**

*DMPM: Independent variable decision making process maturity (indicators DMPMTO\_1 ... DMPMHEUR\_4)*

*DMEE: Dependent variable decision making economic efficiency (indicators DMEE\_1 ... DMEE\_2)*

*DMSPE: Dependent variable decision making socio-psychological efficiency (indicators DMSPE\_1 ... DMSPE\_3)*

The statistical procedures provided an R<sup>2</sup> finding between the objective economic results and the subjective self-evaluation of 0.022, explaining that there is no relationship between the objective economic results and the subjective self-evaluation. This outcome is supported by the fact that the “tiny” R<sup>2</sup> is also statistically insignificant (Woschank, 2017).

These findings also support our basic hypothesis H<sub>B4</sub> [The real time situation context does not allow for any subjective evaluation adaptation]. Since the lab experiment did not provide the test persons with their actual economic performance, because the questionnaires were filled in immediately, the test persons did not have the opportunity to adapt their subjective evaluation to the objective outcomes. Thus, the situational context did not allow for any ex-post-harmonisation.

These research findings are also supported by the statistical procedures of the laboratory experiment in our first research project. The results refer to the correlation coefficients between the (objective) decision making efficiency and the subjective (motivational) self-evaluation, based on a questionnaire. In addition, a complementary correlation and regression analysis between those variables was conducted. The findings are as follows (Table 1):

**TABLE 1**  
**RESEARCH RESULTS (LABORATORY EXPERIMENT) (Neuert, 1987)**

Coefficients of Correlation (Lab Experiment)				Coefficients of Correlation (Random Values)			
Variable	PRAE3	PE	MOT3	Variable	PRAE3	PE	MOT3
PRAE3	1.00000	0.20984	0.04255	PRAE3	1.000	-0.091	-0.120
PE	0.20984	1.00000	0.12721	PE	-0.091	1	0.016
MOT3	0.04255	0.12721	1.00000	MOT3	-0.120	0.016	1.000

There is a correlation coefficient computed between the objective economic performance (PE) and the subjective self-evaluation (MOT) of 0.12721, which leads to an R<sup>2</sup> of 0.0162. This result again indicates that there is no relationship between objectivity and subjectivity (Neuert, 1987).

This result is further supported by the additional correlation analysis based on a random procedure. The correlation coefficient between PE and MOT provides an  $r=0.016$ , which corresponds to an  $R^2$  of 0.0003. The outcome is also non-significant (Neuert, 1987).

In addition, we also tested whether the actual time lag between the conducted decision making task and the ex-post evaluation of the decision making outcomes has an impact on the degree of ex-post rationalisation. Therefore, we classified the sample of the field experimental study into sub-groups. The first sub-group represented a “more recent” time lag of less than six months, the second one a time lag of more than six months. The findings are as follows (Table 2):

**TABLE 2**  
**Mann-WHITNEY U TEST** (Neuert, 1987)

	<i>DM EE 1</i>	<i>DM EE 2</i>	<i>DM EE 3</i>	<i>DM EE 4</i>	<i>DM EE 5</i>	<i>DM EE 6</i>	<i>DM EE 7</i>	<i>DM EE 8</i>	<i>DM SPE 1</i>	<i>DM SPE 2</i>	<i>DM SPE 3</i>
Mann-Whitney U	2147.00	2154.50	2297.00	2308.00	2226.50	2236.50	2114.00	2193.50	2142.00	1982.00	2184.00
Wilcoxon W	3687.00	5724.50	5867.00	5878.00	5796.50	5806.50	5684.00	3733.50	5712.00	5552.00	5754.00
Z	-.758	-.735	-.061	-.009	-.384	-.340	-.983	-.542	-.874	-1.625	-.583
Asy. Sig. (2-tailed)	.449	.462	.951	.992	.701	.734	.325	.588	.382	.104	.560
Test Statistics: Grouping Variable: Recalling information bias group											

The statistical procedure was based on a non-parametric Mann-Whitney U test. In both cases, the results showed no difference in the reported objective economic decision making outcomes between the more recent and the less recent sample (Woschank, 2017).

The same results apply for the subjective self-evaluation between the more recent and the less recent sample. These findings indicate the conjecture that the elapsed time between the occurrence of the decision making and the evaluation of the decision making outcomes does not matter, given a certain minimum time to learn about one’s performance and to reflect on it in order to maintain cognitive consistence (Woschank, 2017).

In general, it can be summarised that our basic hypotheses are tentatively corroborated by our empirical findings. Obviously, the “harmonisation” between the objective measures of decision making processes and the subjective evaluation and satisfaction with those processes, to a certain extent depends on the tendency of human beings to adjust their subjective sentiments to the objective real world status.

## TENTATIVE CONCLUSIONS AND IMPLICATIONS

Our experimental findings suggest that decision making behaviour and decision making efficiency are closely related. It can be claimed that decision making rationality depends on situational, personal, emotional, ecological, attitudinal, etc. contexts.

As a major conclusion, we also assume that the often reported discrepancy between the objective outcomes of decision making processes and the subjective satisfaction and self-evaluation of decision making performance can be indeed empirically observed. The degree of discrepancy obviously depends on the situational fact, whether the individual decision makers do have the opportunity to assess their performance in light of the actual and objectively measureable results. If they can do so, objective outcomes and subjective evaluation get closer “together” than in situations where the individual decision makers are either unaware of the objective results and/or cannot or do not deliberately analyse their personal contribution.

We have to concede that our theoretical framework, based on Festinger's theory of cognitive consistence, so far only provides one possible explanatory outline. There may certainly additional and more refined theoretical approaches being ready to be developed and applied, i.e. Helson's "adapation-level-theory" or Sherif and Hovland's "assimilation-contrast-theory", among others (Homburg & Rudolph, 1997).

In addition, the question will have to be discussed, whether the so far utilised empirical methods of ex-post-facto field experiments and laboratory experiments are indeed appropriate to investigate the relevant cause-effect-relations in decision making processes, especially in view of recent findings in behavioural economics.

From our point of view, in a first step it would be necessary to consolidate the numerous and sometimes contradictory findings from behavioural economics, experimental economics, game theory, etc. into a more transparent general theory of socio-economic decision making behaviour and decision making efficiency. Secondly, it might be useful to further develop and refine the methodology and the research methods for decision making research beyond the most used research designs, perhaps towards creative mixed methods approaches, also in the context of big data analyses.

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## **Small Business Employees' Intention to Learn: Establishing Research Directions**

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*The following paper overviews the importance of learning in small business and entrepreneurship. It examines the notions of behavioral intentions and behavior in particular with respect to small business and entrepreneurship and intention to learn. The paper also examines the roles that learning affordances, engagement, and self-directed-learning style play in the links between employee intentions to learn and their learning behavior. In total 15 propositions for future research are identified and described and a research agenda is briefly discussed.*

\*An earlier version of this paper had been presented at the Small Business Institute Conference in February 2016 in New Orleans, LA.

### **INTRODUCTION**

The small-business sector in Canada has been relatively understudied in terms of workplace learning, but merits investigation for a variety of reasons. Firstly, the small business sector is large. There were 1.1 million small and medium-sized businesses (i.e., those with 1-499 employees) in Canada in 2011, of which 99%, 1,089,000, were classed as small (i.e., those with 99 or fewer employees). Slightly more than 71% of these firms were in the services sector and slightly more than 28% were in the goods-producing sector (Government of Canada, 2014). Further, in 2012 small business employed 7.7 million people, almost 70% of Canada's private labour force and the sector contributed 27% of Canada's GDP in 2011 (Government of Canada, 2013). Secondly, the importance of workplace learning for those in small



business has been highlighted by numerous writers (Doyle, Kelleher, Mombourquette, & Young, 2013; Kitching, 2007; Murphy & Young, 1995; van Gelderen, van der Sluis, & Jansen, 2005). Doyle and Young (2007) and Doyle, Kelleher, Mombourquette, & Young (2015) reported that owners/managers of small businesses indicated that learning was very important for themselves and for their employees and that learning was required mostly to enable firms to keep up with change. Further, learning is also important because of looming labour shortages, skills shortages, and changing and increasing skill requirements (Goldenberg, 2006). However, learning has also been linked to various firm outcomes including competitiveness (Billesbach, & Walker, 2003; Singh, Garg, & Deshmukh, 2010), business creation (Martin, Wech, Sandfur, & Pan, 2006), and firm performance (Ruiz-Mercader, Merõno-Cerdan, & Sabater-Sánchez, 2006), and firm performance, growth, and survival (Fuller-Love, 2006). Learning is also important for improved service quality and its associated increase in customer service that leads to growth (Altinay, Altinay, & Gannon, 2008), and firm effectiveness and profitability (Thach & Kidwell, 2009). Additionally, Unger, Keith, Hilling, Gielnik, and Frese (2009) have shown that entrepreneurial knowledge is related to firm success, and education and cognitive ability mediated by deliberate practice and entrepreneurial knowledge are also related to firm growth. Consequently, "...understanding the process of skill formation in SMEs is critical" (Malik & Nilikant, 2011, p. 112).

However, Argyris has stated quite clearly that individuals can only be responsible for their own development and cannot be responsible for the development of others and "The responsibility for the growth of others lies within them. I can only help to develop the climate in which they grow, should they wish to do so" (1960, p.11). Thus, intention to learn by individuals can be an important factor in workplace learning.

The theory of planned behavior (TPB) developed by Azjen (1991) has become a popular and much-researched model that has been used to examine people's intentions to engage in behaviors. Thus the purpose of this paper is to examine the role of intention to learn among small business owners/managers and their employees particularly from the perspective of TPB. Initially this paper overviews the TPB (Azjen, 1991), examines the literature relevant to intention to learn, and more specifically considers the notion of intention to learn in a small business context. The paper then concludes with a series of research hypotheses.

### **Theory of Planned Behavior**

The TPB (Azjen, 1991) is built around several inter-related factors, intention, perceived behavioral control, attitude, subjective norms, and behavior. The notion of intention, i.e., how likely the individual is to try to perform the behaviour, suggests that the stronger the intention then the more likely is an individual to engage in a particular behaviour. There is an important volitional element, i.e., that the individual can decide whether or not to engage in the behaviour, and "To the extent that a person has the required opportunities and resources, and intends to perform the behavior, he or she should succeed in doing so" (p. 182).

Perceived behavioral control indicates how easy is it for the individual to perform a behavior, a perception that can differ across different contexts. Perceived behavior control is similar to the notion of self-efficacy, the confidence that an individual has in terms of being able to successfully perform a task. Together perceived behavioral control and intention predict individuals' behavior if they are compatible with the expected behavior, and if they are both stable between time of assessment and time of behavior. Further, perceived behavior control should reasonably reflect actual control. Perceived behavior control is based on individuals' past experiences and sense of future facilitators or barriers to performing the behavior. Attitude refers to individuals' subjective assessment of the favourableness or unfavourableness of some intention to act. Subjective norm refers to the perceived social pressure to perform an act or not perform an act that an individual perceives.

The TPB model has had its share of criticism (see for example, Sniehotta, Pesseau, & Araújo-Soares, 2014), but TPB has been staunchly defended by its developer (Ajzen, 2014). Indeed, the TPB model has been used to examine various intentions of people including intention to lose weight (Schifter & Ajzen, 1985), to quit smoking (Babrow, Black, & Tiffany, 1990), and to commit driving violations (Parker,

Manstead, Stradling, Reason, & Baxter, 1992). More recently TPB has been linked to quite varied intentions and behaviors such as nurses' intention to accurately measure blood pressure (Nelson, Cook, & Ingram, 2013), people's intention to donate blood (France, 2014), and shoppers' intentions to purchase organic food (Suh, Eves, & Lumbers, 2015). However, this paper now examines TPB in the contexts of small business and entrepreneurship and intention to learn.

### **Theory of Planned Behaviour and Small Business and Entrepreneurship**

TPB has been examined in terms of a broad variety of issues within the small business and/or entrepreneurial contexts and some of the work is conceptual (e.g., Ball, Wilcock, & Aung, 2009; Kuehn, 2008; Yacob & Moorthy, 2012) and some is empirical (e.g., Harrison, Mykytyn, & Riemenschneider, 1997; Ramalho, Pinto de Moura, & Cunha, 2015). Numerous writers have shown support for the basic TPB model in a small-business/entrepreneurial context in several areas such as entrepreneurial intention among 14 and 15 year-old students (Finisterra do Paco, Ferreira, Raposo, Rodrigues, & Dinis, 2011) and entrepreneurial intention among university students (Schwarz, Wdowiak, Almer-Jarz, & Breitenecker, 2009). Research on intention to grow the firm (Haugum, Mørkved, Lilleenget, Dalborg, & von Friedrichs, 2011; Wiklund & Shepherd, 2003) and intention to implement information technology by small-business owners-managers has also supported the TPB model (Grandón, Nasco, & Mykytyn, 2011; Harrison et al., 1997; Macredie & Mijinyawa, 2011; Riemenschneider & McKinney, 2001-2002).

The TPB model and small-business owners-managers and entrepreneurs have also been positively related to other issues such as intention to retire (Forster-Holt, 2013) and intention to implement Hazard Analysis Critical Control Point (HACCP) (Ramalho et al., 2015). Clearly there is interest in and success with the model of TPB and small business and entrepreneurship. However, this paper now examines the issues of TBP and learning, generally, and then specifically as related to small business and entrepreneurship.

### **Theory of Planned Behaviour and Learning**

As with the more general work on TPB and small business and entrepreneurship, some of the general work on TPB and learning intention has been conceptual in nature, for example, Wiethoff (2004) and Phipps, Prieto, and Ndinguri (2013). However, some of the work on TPB and learning is empirical, although it has focused on various groups such as students and factors such as training in organizations.

A variety of studies that focused on students showed support for the basic TPB model (Chen, Razi, & Tarn, 2009; Santhanam, 2002; Tan & Ferreira, 2012). In terms of learning through formal training the findings of Al-Eisa, Furayyan, and Alhemoud (2009), Fishbein and Stasson (1990), Hurtz and Williams (2009), Maurer and Palmer (1999) also supported the notions of the TPB. Other studies that focused on employees, such as those by Ho, Tsai, and Day (2011), Roberts and Barrett (2011), Sanders, Oomens, Blonk, and Hazelzet (2011), and Wu (2011), have been generally supportive of the TPB model.

The focus on learning and TPB in small business and entrepreneurship mirrors to some extent the work on learning and TPB in general – there is a focus on students and on training. For example, Zhao, Seibert, and Hills (2005) examined entrepreneurial intention among second-year MBA students. Self-efficacy fully mediated the relationship between entrepreneurial-related courses, entrepreneurial experience, and risk propensity and entrepreneurial intentions. Further, women reported lower entrepreneurial intentions than did men. Dimov (2007) more specifically examined opportunity intention among MBA students. Results of this study suggested that the likelihood of potential entrepreneurs acting on their insights and intentions will be directly affected by the match between their individual learning styles and their domain-specific knowledge. Von Graevenitz, Harhoff, and Weber (2010) indicated that taking formal entrepreneurial courses can reduce individuals' entrepreneurial intention, in essence students learn a greater knowledge of their own entrepreneurial aptitudes and at times might self-select out of the intention to be entrepreneurial. Lourenço and Jayawarna (2011) reported that creativity is positively related to perceived usefulness, learning, and perceived ease for students in a creativity-enhancing program for nascent entrepreneurs. Learning in the course was positively related to perceived usefulness and perceived ease, but was negatively related to intention to exploit learning. Perceived ease

was positively related to perceived usefulness and perceived usefulness was positively related to intention to exploit learning. Further, Lourenço, Jones, and Jayawarna (2012) examined nascent entrepreneurs, a profit-first mentality, and intention to exploit learning. Their findings indicated that perceived benefit of learning and perceived learning were related to learning intention, perceived ease of use and a profit-first mentality were related to perceived benefit of learning and a profit-first mentality was related to perception of learning. Lastly, the relationship between a profit-first mentality and intention to exploit learning was mediated by perceived benefit of learning. There was no statistically significant relationship between perceived ease of use and intention to learn, counter to the findings of Ajzen (1991), and, “This implies that even if the knowledge introduced during their training can be acquired without excessive effort, nascent entrepreneurs will not use that knowledge unless they perceive real benefits” p. 854.

Work on learning and TPB has also considered formal factors. For example, Renkema (2006) found that individual learning accounts had a positive influence on attitudes and learning intentions of those in small and medium technical-installation firms who were engaged in technological innovations, but there was no such relationship for those employed in elder-care firms. Unger et al. (2009) have shown that entrepreneurial knowledge is related to firm success, in this instance, firm growth. Further, education and cognitive ability mediated by deliberate practice and entrepreneurial knowledge were also related to firm growth. Deliberate practice refers to activities specifically undertaken by individuals to improve their performance in a relevant domain.

The above research, in general and specifically as it relates to small business and entrepreneurship, reasonably supports the use of the TPB model to examine workplace learning in small business and entrepreneurship. However, the broader relationship between TPB and workplace learning has not been considered much, certainly in small business or entrepreneurship in a Canadian context. Such a focus is important given that so much of what people learn in organizations is done through means other than formal training programs.

Given the above overview of research, several research propositions based on the basic TPB, follow for small business employees and their intention to learn:

*Proposition 1: Small business employees' intention to learn is positively related to their learning behavior.*

*Proposition 2: Small business employees' perceived behavioral control is positively related to their intention to learn.*

*Proposition 3: Small business employees' attitude is positively related to their intention to learn.*

*Proposition 4: Small business employees' subjective norms are positively related to their intention to learn.*

The initial focus of this paper is on learning in a small business/entrepreneurial context using the TPB model. However, in line with the work of Ramalho et al. (2012) and Ball et al. (2009) additional explanatory variables are considered here. Indeed the importance of individuality in learning for small business owners/managers and employees is not new and has been reflected in several ways, for example, different learning needs/goals (Hurtz & Williams, 2009), learning styles (Chen et al., 2009), contexts for individuals, and opportunities to learn (Hurtz & Williams, 2009). However, two factors that require further examination are learning affordances and engagement, and self-directed learning orientation, both of which are discussed next.

### **Workplace Learning Affordances and Engagement**

Learning in the workplace has been shown to encompass a variety of learning strategies, often typified as formal and informal, and although people in organizations avail themselves of both types, the informal ones are typically more predominant than the formal strategies. However, Billett (2002; 2004; 2006) has discussed the notion of co-participation and learning based on the notions of affordances and engagement, concepts that cut across formal and informal types of learning. Affordances are “opportunities to participate in and access support and guidance” (Billett, 2002, p. 462). Engagement

refers to the extent to which individuals participate in the workplace learning and "..., individuals exercise their agency in determining how they interpret and engage in social practice" (Billett, Barker, & Herson-Tinning, 2004).

Affordances and engagement have been shown to play a role in the learning of people in various types of organizations and professions. For example, Bryson, Pajo, Ward, and Mallon (2006) examined managers and workers in the wine-making industry in New Zealand and reported that workplace learning affordances are differentially available based on one's level and function in the organization. Secondly, individuality, in the form of proactivity, played a role in that those with higher levels of proactivity tended to have more affordances and more engagement in learning than those of lower proactivity. Newton, Billett, Jolly, and Ockerby (2009) examined the transferability of nurses' skills from university to the workplace. Themes that were identified included different learning preferences, observation and hands-on experience were preferred to text-book learning. Secondly, a lack of engagement in university clinical labs was a major theme due to a lack of fidelity between them and the real-world workplace. The third theme was that of affordances and engagement. Some nursing students did not experience as many opportunities to learn as did others, in part due to poor attitudes on the part of other medical professionals actually employed in the workplace, and in part due to not doing work that provided learning opportunities. Engagement of preceptors and other real-world instructors was seen as central to nursing students' learning (p. 324). Hetzner, Gartmeier, Heid, and Gruber (2009) showed that change in the routines of client advisors resulted in affordances that resulted in new skill and knowledge acquisition. However, lack of equitable affordances in terms of training based on age (i.e., older workers faced fewer affordances than did younger workers) was identified by Meyers, Billett, and Kelly (2010).

Cavanaugh (2012) examined the learning of women in auxiliary legal positions in Australia. Results indicated that "Each of the nine women in this study was found to participate in learning on a continual basis through the exercise of their personal agency and reflexivity" (p. 254). Despite having learned a lot, about their work and themselves, through being engaged in their work, the women felt that their lower workplace status resulted in few learning affordances, relative to those who were professional staff. Affordances and engagement have a role to play in medical education (ten Cate & Billett, 2014) and Bennett, McCarthy, O'Flynn, and Kelly (2013) examined medical education and "the mismatch between the formal and the enacted curricula" (p.405) through Billett's duality of workplace learning, affordances and engagement (2002). Affordances, access and guidance, tended to differ across different domains, for example, hospital versus community clinic. Further, engagement was seen as a function of students' prior knowledge and reflection. Tactics for improving affordances and engagement were discussed.

Smith, Dymock, and Billett (2013) examined workplace learning by workers in human-care facilities (for the aged and disabled) and those in logistics and transportation, and concluded that, "... it is the combination of affordances and engagement that is central to effective learning and meeting both the workplace and the employee imperatives for work and learning" (p. 98). Affordances and engagement were identified as important for workers in the health and community services industry (Choy, Billett, & Kelly, 2013) and "..., employees interact with others and thus are afforded opportunities to adopt better techniques that they observe others using" (p. 83). Further, "..., meanings are negotiated through mutual engagement and participation ..." (p.83).

It is clear that workplace affordances and engagement are important elements of people's intentions to learn by employees in various organizational types and sizes. Given the above overview of research, a second purpose of this research is to examine the role of affordances and engagement within the TPB model. Five research propositions follow for employees involved in small business/entrepreneurship and their intention to learn:

*Proposition 5a: Learning affordances will have an antecedent role in the perceived behavioral control element of the basic model of TPB for small business employees.*

*Proposition 5b: Learning affordances will have an antecedent role in the attitude element of the basic model of TPB for small business employees.*

*Proposition 5a: Learning affordances will have an antecedent role in the subjective norms element of the basic model of TPB for small business employees.*

*Proposition 6a: Employee engagement will moderate the relationship between perceived behavioral control and learning intention for small business employees.*

*Proposition 6b: Employee engagement will moderate the relationship between attitude and learning intention for small business employees.*

*Proposition 6c: Employee engagement will moderate the relationship between subjective norms and learning intention for small business employees.*

*Proposition 7: Employee engagement will be positively related to learning behaviour for small business employees.*

### **Self-Directed Learning**

Within workplace learning there has been increased interest in self-directed learning (SDL) in organizations from academics (Boyer, Artis, Solomon, & Fleming, 2012; Chien, 2004; Ellinger, 2004; Shah, Sterrett, Chesser, & Wilmore, 2001) as well as industry professionals, consultants, and trainers (Galagan, 2014; Kahle, 2011; Lasse, 2012; Piskurich, 1991; Skiff & Beckendorf, 2009; Zemke, 1998). SDL is not a new concept and has grown based on the work of numerous writers in the field of adult education such as Tough (1971), Knowles (1973), Brookfield (1984; 1993), and Merriam (2001). However, SDL has become a very popular topic in the field of human resource development (Ellinger, 2004).

There are many definitions of SDL and there is often little agreement about the meaning of SDL (Clardy, 2000; Ellinger, 2004). However, this paper uses a definition of SDL provided by Garrison (1997) who stated that, “self-directed learning is defined here as an approach where learners are motivated to assume personal responsibility and collaborative control of the cognitive (self-monitoring) and contextual (self-management) processes in constructing and confirming meaningful and worthwhile learning outcomes” (p. 18).

Guglielmino, Guglielmino, and Long (1987) and Guglielmino and Guglielmino (2001) have stated that SDL is important given the changes and the rate of change that organizations face and that self-directed learning is an important way for people to learn. Further, based on a review of “Creativity, innovation, people ...” (2009), Karakas and Manisaligil concluded that “the significance and centrality of self-directed learning in European workplaces is increasing” (2012, p. 712). Links between SDL and individual and/or firm performance have been long reported in a variety of studies (Boyer, et al., 2012; Gijbels, Raemdonck, Vervecken, & Van Herck, 2011; Guglielmino, et al., 1987; Hashim, 2007; Ho, 2008; 2011; Quinney, Smith, & Galbraith, 2010; Smith, Sadler-Smith, Robertson, & Wakefield, 2007). SDL has also been linked to job continuance, job satisfaction, and learning. For example, Cho and Kwon (2005) reported a moderate but positive relationship between SDL readiness and affective commitment and a moderate but negative relationship between SDL readiness and continuance commitment among Koreans in various types of businesses. Bromfield-Day (2000) and deBruin and Yiannakis (2012) determined that SDL was positively related to job satisfaction.

Although SDL can include formal as well as informal strategies (Gerber, Lankshear, Larsson, and Svennsson, 1995), some writers such as Howard (2010) focus more on informal learning. However, individual and environmental factors play a role in SDL (Straka, 2000). Individual factors include proactive personality, striving for knowledge work, and past learning initiative (Raemdonck, van der Leeden, Valcke, Segers, & Thijssen, 2012), learning goal orientation, and developmental needs awareness (Joo, Park, & Oh, 2013), and affinity for technology (Fleming, Artis, & Hawes (2014). Organizational/environmental factors include a firm’s economic sector, participatory staff policy (Raemdonck, et al., 2012), and perceived corporate affinity for technology (Fleming, et al., 2014). In addition, individual factors can overlap with organizational/environmental factors. Bouchard (1996) viewed SDL, based on research with people in a professional context, in terms of process, personality, and environment. SDL as a process is one in which the individual learner had clear goals, used diverse learning strategies, and took the “didactic leap” (p. 7), in which the learner decides to learn on his or her

own. Personality simply referred to a set of characteristics, some of which might be seen positively (e.g., curiosity) and some of which might be seen negatively (e.g., rebellious) (p. 8), which related to learners' ability to learn autonomously. The environment was seen as the individual's surround, e.g., work, family, and school that served as "triggers" (p.8) for SDL projects. Bouchard (1996) concluded that SDL can occur through formal schooling as well as other means, some learners might be better at SDL than others, SDL might well occur as a result of adverse as well favourable conditions, and SDL might not occur without the appropriate interaction of individual (i.e., independent style) and environment (i.e., opportunities) (pp. 12-13). Straka (2000) stated that, "Self-directed learning can be viewed as an idiosyncratic interplay between interest, strategy and control. Furthermore, it appears to be related to experienced environmental conditions ..." (p. 249). Further, Cho (2002) has argued that "... the bridges that connect SDL and the learning organization are their interdependent and collective aspects" (p. 469). Fleming, et al., (2014) found that a salesperson's affinity for technology and the perceived corporate affinity for technology interacted and were positively related to use of induced and scanning SDL projects.

SDL has been linked with entrepreneurship education and van Gelderen (2010) has argued that helping to create autonomy for entrepreneurship students is a goal of entrepreneurship education and within such a context SDL supports the development of student autonomy. For example, van Gelderen cited Bird (2002) as constructing learning contracts with entrepreneurship students in terms of competencies desired and expected activities to achieve the learning goals. More recently, Moalosi, Molokwane, and Mothibedi (2012) reported that design students, who engaged in problem-based learning through a design project, reported that they developed SDL and entrepreneurship skills, among others. Further, Bell (2008) showed how SDL, supported by appropriate physical resources (e.g., space and technology) and social resources such as opportunities for connecting with others, (e.g., the instructor, group members) played a key role, not only in further developing students' SDL, but in successfully using problem-based learning in an entrepreneurship course. Täks, Tynjälä, Toding, Kukemelk, and Venesaar (2014) found that entrepreneurship for engineering students served as preparation for work, a route to self-employment, an opportunity to develop leadership skill and achievement, and a first step in developing SDL. The teacher's role, in part, becomes one of guiding students to becoming more self-directed in their learning. Indeed, in an examination of the role of teacher-educators of entrepreneurship in Finland, Seikkula-Leino, Satuvuori, Ruskovara, and Hannula (2015) indicated that teacher-educators used a variety of methods in entrepreneurship education. In particular, problem-based learning, experiential-learning activities, and the encouragement of SDL were favoured by the teacher-educators because they support learning for entrepreneurship (p.392). Despite SDL's central role in developing entrepreneurs in an educational context there appears to be relatively little research done on SDL and real-life entrepreneurs, small-business owners, and their employees.

In terms of the owners/managers, the research on SDL and entrepreneurship/small business is relatively sparse and in terms of small-business employees, the research on SLD is even sparser. Some researchers have simply declared a role for SDL in entrepreneurial learning. For example, Fenwick (2002) stated with respect to women entrepreneurs that, "The learning of these workers is intensive, rapid, largely self-directed, and closely entwined with personal development and relationships" (p. 163). Carwile (2009) examined the workplace learning of nine women entrepreneurs. Findings indicated that women entrepreneurs experience various learning outcomes from SDL (e.g., writing business plans, negotiating) in response into various events (e.g., starting a firm, experimenting). Further, the women engaged in SDL through various means (e.g., asking others, exploring the web, and reading) and evaluated their learning in terms of various factors (e.g., satisfaction with learning, time taken, and value of learning). However, not all the women engaged in SDL to the same extent or with the same ability and, "Factors such as educational background, motivation, and past experience had much to do with how, when, and if the entrepreneur pursued learning that might be considered self-directed in nature" (p. 196). Business coaches played a predominant role in entrepreneurs' learning. An interesting finding of this study was that many of the entrepreneurs appeared to be over confident in their ability to run their own businesses and could rely on their own experience to deal with problems (p. 200). Finally, "learning was

primarily a 'just-in-time' strategy that involved very little pre-planning. Instead, these entrepreneurs adopted a highly instrumental, time-efficient, focused pursuit of new learning that was initiated as a response to a learning need" (p. 202). Further, Howard (2010) examined the learning experiences of 12 women entrepreneurs/small business owners. Learning was hugely important in their personal and professional lives and was seen to be highly informal, which seemed to be equated with self-directed learning, "informal learning, or self-directed learning, was not a straight pathway for any of the woman participants "(p. 141). Tseng (2013) constructed a model to be tested that not only highlighted the importance of SDL within entrepreneurship, but also linked SDL to entrepreneurial learning, which was in turn linked to entrepreneurial performance.

It is clear that SDL is an important individual element of learning for people in various types of organizations and contexts. Given the above overview of research, a third purpose of this research is to examine the role of SDL within the TPB. Four research propositions follow for employees involved in small business/entrepreneurship and their intention to learn:

*Proposition 8a: Self-directed learning style will moderate the relationship between perceived behavioral control and learning intention for small business employees.*

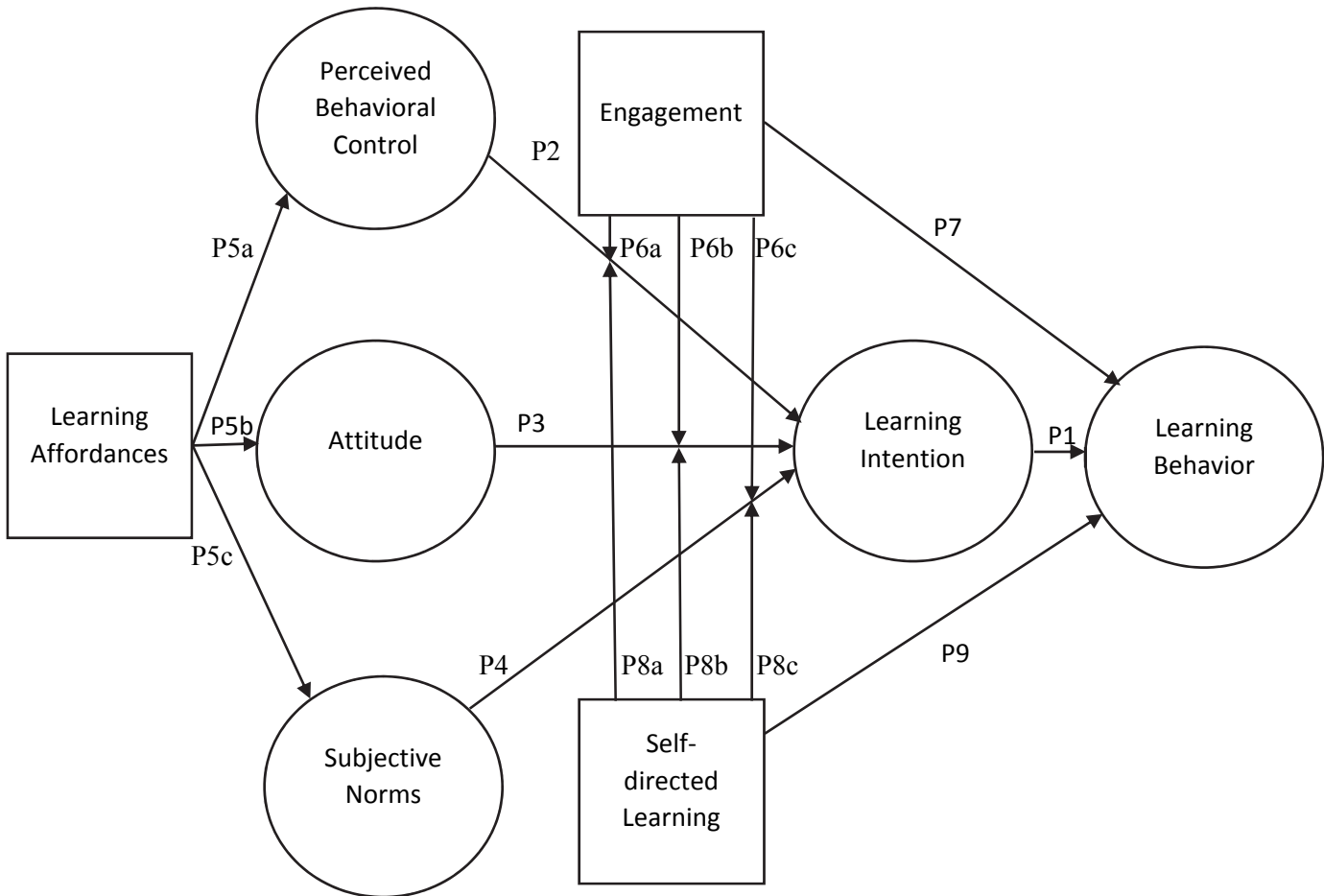
*Proposition 8b: Self-directed learning style will moderate the relationship between attitude and learning intention for small business employees.*

*Proposition 8c: Self-directed learning style will moderate the relationship between subjective norms and learning intention for small business employees.*

*Proposition 9: Self-directed learning style will be positively related to learning behaviour for small business employees.*

The research propositions associated with this study are presented in Figure 1.

**FIGURE 1**  
**A FRAMEWORK OF THE STUDY'S PROPOSITIONS**



**CONCLUSIONS**

The above propositions represent an opportunity to more fully explore the TPB model and relevant individual and environmental variables in terms of employees involved in small business and entrepreneurship. It seems reasonable to test the above propositions and their relationships through an empirical study of small-business employees. Instruments to assess learning affordances, perceived behavioral control, attitude, subjective norms, learning intention, and learning behaviour will have to be developed for this context, although measures of engagement and self-directed learning style are readily available exist. Such a study should be based on a large sample that is somewhat representative of the small-business sector.



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