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# Leveraging Theoretical Pluralism in Qualitative IS Research: THE Example of IS Professionals' Identity as a Complex Phenomenon

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LEVERAGING THEORETICAL PLURALISM IN  
QUALITATIVE IS RESEARCH:  
*THE EXAMPLE OF IS PROFESSIONALS' IDENTITY  
AS A COMPLEX PHENOMENON*

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Abstract

*As Information Systems (IS) research increasingly acknowledges the importance of non-positivist approaches, the case for a plurality of theories to guide qualitative studies has generally been quite well accepted on philosophical grounds. In this paper, we argue the need for a better leverage of theoretical pluralism in qualitative IS research. Specifically, we note that greater research insights may be obtained by considering the complementarity of various theoretical perspectives with respect to a specific IS phenomenon. Indeed, we suggest that when such complementary perspectives are purposefully employed in a portfolio of separate studies over time, they may collectively help to shed new light on complex IS phenomena. In this study, we use the research example of IS professionals' identity and the ethnography method to demonstrate the complementarity of three theoretical perspectives: Symbolic Interactionism's "micro analysis of social interactions", Critical Social Theory's emphasis on the "macro contextualisation of human action", as well as Adaptive Structuration Theory's "explicit focus on technology". Individually, each perspective boasts a unique angle from which a certain complex IS phenomenon can be investigated; when purposefully employed in different studies over time, they may collectively and synergistically shed new light on the phenomenon in question. By highlighting the possible leverage of theoretical pluralism in such a complementary manner, this study may thus have valuable implications for qualitative IS research.*

*Keywords: Theoretical Pluralism, Symbolic Interactionism, Critical Social Theory, Adaptive Structuration Theory, Ethnography, IS Professionals.*

# 1 INTRODUCTION

Information Systems (IS) research is a young but emergent discipline, drawing largely upon more established schools of thought for both theory and method, with reference disciplines ranging from economics to social sciences. IS research thus far has incorporated numerous theoretical perspectives and methodologies to solidify its domain. From sociology alone, the work of Anthony Giddens, Jurgen Habermas, Karl Marx, Max Weber, George Herbert Mead, Herbert Blumer, Antonio Gramsci, and many others, have been assimilated into IS research. While recognizing the importance of such new perspectives, Keen (1991) and others (e.g., Walsham, 1995; Midgley, 2000) have also advocated better application of theory. Meanwhile, the IS discipline has increasingly acknowledged the importance of non-positivist approaches such as interpretivist and critical research paradigms to address the complexity of IS phenomena (Walsham, 1995). In this study, we join the debate by arguing the need for a better leverage of theoretical pluralism in qualitative IS research. Specifically, we note that greater research insights may be obtained by considering the complementarity of various theoretical perspectives (such as symbolic interactionism, critical social theory, adaptive structuration theory, actor network theory, hermeneutics, etc.) with respect to a specific IS phenomenon. Indeed, we suggest that when complementary perspectives are purposefully employed in different studies over time, they may collectively help to shed new light on complex IS phenomena.

## 1.1 Increasing complexity of IS phenomena

The potential of information technologies to transform social and organisational life has been a persistent theme in IS literature. Multitudes of studies have investigated the impact of technology on human beings, but yet such research has often revealed contradictory findings both within and across studies (see Robey and Boudreau, 1999). Furthermore, the entanglement of human involvement in the appropriation and use of technologies has raised several seemingly paradoxical issues: for example, does technology force users to improvise in order to integrate it into their context specific and situated work? Or do users actively adjust such technologies to fit their work habits and behaviours? (Rolland and Herstad, 2000). As technology becomes progressively more assimilated into social reality, researchers need to contend with the increasing complexity of IS phenomena.

A good example of a complex IS phenomenon in need of more in-depth research is the evolving identity of the IS professional. The work of IS professionals has a dual focus on technology and business, two areas marked by constant change. Instead of focusing exclusively on the individual, as many studies have done, multiple levels of analysis may be necessary to adequately explore this complex IS phenomenon (Ang and Slaughter, 2000). For example, the evolving identity of the IS professional may be studied by examining his motivations, roles and skills development, each of which may reflect different aspects of social reality in terms of human interactions, environmental factors and technological impacts. We argue that greater insights may be obtained through due consideration of the complementarity of various theoretical perspectives with respect to that phenomenon.

## 1.2 Moving Beyond Theoretical Pluralism

Every theoretical perspective in itself is necessarily incomplete (Charon, 2001). By focusing on certain concepts and adopting a particular outlook, they exclusively neglect others. The benefits associated with pluralism thus arise from its ability to supplement the failings of one perspective with the merits of others. Researchers should nonetheless be careful not to regard it as an axiom. Rather, while an optimal amount of pluralism may beget academic progress, disciplines characterised by a too low or too high degree of pluralism may be confronted with a succession of specific problems (Foss and Knudsen, 1993). In the same vein, Pfeffer (1995) cautions that an overdose of pluralism may lead to

“disciplinary fragmentation” and consequently, create an inability to generate and absorb new knowledge. Bearing this in mind, we caution researchers to be vigilant in their selection of multiple theoretical perspectives.

### 1.3 Toward Complementarity of Theoretical Perspectives

*“Philosophy aims at the logical clarification of thoughts... Philosophy does not result in philosophical propositions, but rather in the clarification of propositions. Without philosophy thoughts are, as it were, cloudy and indistinct: its task is to make them clear and to give them sharp boundaries.”*

*(Ludwig Wittgenstein)*

Contrary to popular belief that philosophy, whole in its abstractness, is irrelevant and inapplicable to daily life, it is philosophy which illuminates many things that we take for granted. In IS literature, the philosophical underpinnings of theoretical perspectives have been discussed (e.g., Orlikowski and Baroudi, 1991). The significance of the philosophical underpinnings of theory in shaping the researcher’s mindset, predisposing him toward particular viewpoints, organizing his thoughts, directing his lines of inquiry, influencing his eventual findings is paramount.

When weighing the applicability of different theoretical perspectives for the study of a specific IS phenomenon, perhaps the most pertinent philosophical assumptions are those related to the underlying epistemology and ontology which guides research. Epistemology refers to assumptions governing the validity of knowledge while ontological assumptions guide perceptions pertaining to the essence of the phenomenon under study (Chua, 1986). Furthermore, the philosophical underpinnings of these theoretical perspectives must also be consistent with the underlying research methodology used.

In this study, after ascertaining the complementarities of the philosophical underpinnings of three theoretical perspectives, we posit their use in illustrating how complementarities may help to shed new light on a specific complex phenomenon such as the identity of IS professionals. While we do acknowledge the multitude of perspectives available and their respective merits, it is felt that the three selected serve the purposes of this paper best. First, these perspectives have distinctive yet related foci due to their unique philosophical underpinnings: Symbolic Interactionism’s micro analysis of social interactions, Critical Social Theory’s emphasis on the macro contextualisation of human action, as well as Adaptive Structuration Theory’s explicit focus on technology (Blumer, 1969; Habermas, 1987; DeSanctis and Poole, 1994). Second, while these theories bring forth divergent lines of inquiry, the knowledge garnered from each complements the others. Individually, each perspective boasts a unique angle from which a certain complex IS phenomenon can be investigated; when purposefully employed in a portfolio of separate studies over time, they may collectively shed new light on the phenomenon in question. In this regard, we also show how the ethnography strategy of inquiry has the empirical strengths and the necessary methodological fit to complement the theoretical strengths of each of these perspectives.

### 1.4 Roadmap of Paper

The rest of this paper will proceed as follows. We begin with a discourse on IS professional identity issues. We next elaborate on our choice of ethnography as the underlying methodology for this study. Each of the selected theoretical perspectives is then considered in turn – symbolic interactionism, critical social theory and adaptive structuration theory. In particular, we use the research example of the identity of IS professionals to highlight their individual merits and complementary strengths. Finally, we conclude with a discussion of how all three perspectives, with ethnography as the underlying methodology, may help to collectively shed new light on complex IS phenomena.

## 2 A COMPLEX IS PHENOMENON: THE IDENTITY OF IS PROFESSIONALS

The 'dot-com' boom in the late 1990s attracted a legion of professionals into the IS field, with the promise that it was a path of gold. A few years down the road, however, that bubble has burst, leaving only distant memories of the good times. Today, IS professionals battle with low morale as organisations cut their IT-departments back to the bone. Yet, the Working in IT 2003 study conducted by Computer Weekly revealed that 66% of the 600 IT professionals surveyed believe that the profession has a secure, long-term future (State of the IT Nation, 2003). In dealing with this apparent paradox, we suggest that examining the identity of IS professionals will be of heuristic value. Professional identity deals with the way individuals view and describe themselves in relation to their work and the work of others (Walsham, 1998). Identity has long been viewed as being negotiated in social interaction (e.g., Mead 1934). It is thus essential to achieve a fundamental understanding of the social and psychological processes by which people construct and/or modify their professional identity (Ibarra, 1999). However, such findings should be embedded in a broader context of social, economic, political and historical antecedents in order to gain more in-depth understanding. Hence while the concept of identity is inherently personal in nature, we suggest that researchers should not discount the pressures of external environments on identity formation and maintenance.

In this study, we focus on the evolving identity of IS professionals, with regard to their individual cognitive constructs, changes in their external environment and the bearing of technological revolution. As mentioned earlier - rather than focusing exclusively on the individual, as many studies have done, multiple levels of analysis may prove beneficial to adequately explore this complex IS phenomenon. For example, the evolving identity of the IS professional may be studied by examining his *motivations, roles and skills development*, each of which may reflect different aspects of social reality (Ang and Slaughter, 2000) in terms of human interactions, environmental factors and technological impacts. Through a portfolio of separate studies, investigating these three aspects of identity as a continuum may allow researchers greater insights into this complex IS phenomenon.

## 3 ETHNOGRAPHY AS THE UNDERLYING METHODOLOGY

Ethnography is an approach to studying the way of life of a group of people originally developed by anthropologists and recently adopted by qualitative IS researchers. This method of inquiry believes that intimate familiarity through relatively prolonged interaction with people in their everyday lives is the only effective way researchers can come close to comprehending the mindsets and behaviours of their subjects (Giddens, 1976).

### 3.1 The philosophical underpinnings of ethnography

Originating from social and cultural anthropology, ethnographic research has an inherent respect for the human world it studies. In striving to understand the intersubjective meanings people create in daily life, ethnographers acknowledge the complexity and dynamism which characterises human society, and concede the impossibility of a complete understanding of human behaviour (Van Maanen, 1988; Prus, 1996). By virtue of this, ethnography presents a philosophical affinity with the three theoretical perspectives that are the focus of this paper. Epistemologically, ethnography work is interpretive in nature as the researcher attempts to represent the social reality of others through his/her own experience and analysis. Ontological underpinnings influences the way researchers conceptualise social reality (Archer, 1995). Tacit within ethnography is an ontological belief that social reality is complex and dynamic. Ethnographers purport that in order to attempt an understanding of a social group, it is imperative that one immerses oneself in the culture, and socially situated context, of that group. Thus, ethnography is ontologically-inclined toward subjectivism; underscoring ethnographic work is the assumption of the intersubjectivity of personal meaning created by actors in their daily life (Prus, 1996).

It has been suggested that any approach to social inquiry requires a theoretical foundation, and in this regard, ethnography has been criticised as lacking in conceptual depth (Hammersley, 1992; Blumer, 1969). The ethnographic method would thus benefit from the use of a theoretical perspective to guide the study.

## **4 SYMBOLIC INTERACTIONISM**

Stemming largely from the teachings of George Herbert Mead, this unique theoretical perspective from sociology was founded by Herbert Blumer (1969), and has been appropriated into IS research in recent years (e.g., Hirschheim and Newman, 1991; Prasad, 1993). The symbolic interactionist approach is essentially one concerned with the process of meaning formulation during interaction between individuals. This perspective is based on the belief that objects have no intrinsic meaning to them, except that which people assign to them in the course of social interaction (Prasad, 1993). The essence of symbolic interactionism thus rests upon the premise that human action is based on an individual's definition of the situation which confronts him, and that the individual's resultant action is necessarily situated within that context (Blumer, 1969).

### **4.1 The philosophical underpinnings of Symbolic Interactionism**

Symbolic interactionism conceives experience as an intersubjective reality: meaning is fundamentally rooted in social and interactive contexts, and is inevitably subject to interpretation (Blumer, 1969). Epistemologically, then, the symbolic interactionist approach fits squarely into the interpretive tradition where social reality is viewed as emergent, subjectively created and objectified through human interaction. Ontologically, symbolic interactionism posits that unique social realities are constructed when human actors interact. As such, symbolic interactionists view the human being as an acting organism, capable of interpreting the symbolic actions of others (Rock, 2001).

### **4.2 Methodological fit with ethnography**

The focus of symbolic interactionism is the study of human group life and conduct – it is a micro analysis of society, riveted on individual action and behaviour. As an approach to social inquiry, symbolic interactionism necessarily requires a longitudinal methodology which will be sensitive to the multiple realities of human actors and tolerate provisional, open-ended research (Rock, 2001). Ethnography is essentially fieldwork, and through immersion, enables the researcher to experience and appreciate another way of life. In addition to its philosophical affinity with symbolic interactionism, ethnography facilitates the observation of the dynamism of human interaction in its original context. Moreover, the theoretical perspective of symbolic interactionism lays emphasis on the need to present a multifaceted picture of organisational life and thus, inherently advocates the use of multiple research methods to capture the complexity which characterises human interaction (Prasad, 1993). Ethnography fulfils this requirement through its employment of different data collection methods (interviews, observations and participant-observations). Immersion is the underpinning source of data collection and is valuable in symbolic interactionist studies because it serves to clarify and modify the researcher's ongoing observations. This methodological fit thus respects the premise of symbolic interactionism while increasing the relevance and reliability of ethnographic findings (Prus, 1996; Rock, 2001).

### **4.3 Shedding light on one aspect of Identity – “Motivations” of IS professionals**

Motivation explains the direction and persistence of an individual's behaviour, and is thus a key determinant of work performance in organisations (Campbell and Pritchard, 1983; Ang and Slaughter, 2000). Symbolic interactionism, by focusing on localised meanings, serves as a valuable perspective to study such cognitive constructs. This perspective allows researchers to examine the individual

perceptions of several pertinent issues like job characteristics, job satisfaction, performance appraisal approaches and compensation/reward schemes (Reichers, 1987).

Performance appraisal refers to the assessment of employee behaviours relative to the behaviours expected of them (Ang and Slaughter, 2000). The approach an organisation adopts to measure the performance of IS professionals has a significant impact on their motivation levels. Taking performance appraisals as a symbol, a symbolic interactionist perspective allows researchers to learn more about the localised meanings IS professionals hold regarding it. Researchers could follow this line of inquiry: What functions do IS professionals believe performance appraisals serve? Do they view such gauges as adequate in reflecting all aspects of their work performance? Do performance appraisals affect the way IS professionals interact with each other, and with others in the organisation? Closely related are compensation/reward schemes. The salary and fringe benefits IS professionals receive depends in part on their work performance. Researchers may also examine the perceptions held by IS personnel regarding the correlation between remuneration and performance. Further, the motivation for productive work behaviour may be also be defined through five needs – guidance, social, esteem, achievement and power (Ferratt and Short, 1986). To investigate the internalised meanings of such concepts, symbolic interactionism aids the researcher in a micro level analysis of localised symbolic meanings and interpersonal interactions. In this manner, the perspective allows researchers to enter the cognitive worlds of participants, explaining what different symbols means to them, and how such individual symbolic meanings can influence their interaction with other people and objects (Prasad, 1993). Ethnography as the underlying methodology provides a first-hand understanding of the phenomenon as it is empirically sensitive to the human capacity for symbolic interactions.

Interpretive traditions have, however, been criticised for ignoring external constraints placed on individuals by normative social beliefs and values. Indeed, symbolic interactionism in particular has been criticised for exaggerating the capacities of people to redefine their self-identities in situations (Turner, 1998). In this regard, critical social theory and adaptive structuration theory can effectively complement this perspective through their focus on macro-level forces of change.

## **5 CRITICAL SOCIAL THEORY**

Leading the second generation of critical scholars, Jurgen Habermas' numerous contributions to the critical paradigm are irrefutable. While we recognise the multitude of critical social theories available, Habermas' (1984) Theory of Communicative Action (TCA), as a social science theory which has had the greatest impact on the IS discipline, is broad and encompassing in its reach – suitable for illustrating the heuristic value of critical social theories in IS research (Lyytinen and Hirschheim, 1988; Ngwenyama and Lee, 1997). Habermas (1984, 1987) strives for societal critique on two levels. The first part of TCA presents a typology of four primary social action types evident in daily life - instrumental, strategic, communicative and discursive. The second portion of TCA brings in the concepts of the "lifeworld" versus the "system", two interdependent and complementary accounts of social existence. The lifeworld refers to the social sphere as it is constructed and maintained by its members, through their intersubjective recognition of the world as meaningful (Lyytinen and Hirschheim, 1988). The system, on the other hand, refers to society when it confronts the individual as a seemingly objective force – as economic and political-bureaucratic systems of power do (Habermas, 1987). The workings of such social systems, however, still depend upon the social skills of individual agents, evidencing the discursive relationship between lifeworld and system (Lyytinen and Hirschheim, 1988). Against this backdrop, it is clear that TCA adopts an integrative micro-macro view by contextualising human interaction within a wider social, political and historical landscape.

### 5.1 The philosophical underpinnings of Critical Social Theory

Epistemologically, theories like TCA are inherently critical in nature in that they attempt to explain, critique and empower. Researchers working in the critical paradigm believe that by their very presence, they influence and are influenced by the context under study. As such, objective observation is deemed unattainable. Rather, critical researchers thus intervene in the social situations they are studying, believing that a critique of unjust and inequitable conditions is necessary for the emancipation of human actors (Ngwenyama and Lee, 1997). With TCA, Habermas' dual concern with the lifeworld and the system underscores a cardinal concern with the emancipation of human agents from structural constraints. Ontologically, TCA rejects the polarisation of objectivism and subjectivism. Instead, Habermas (1984, 1987) sees the two as intertwined in his conception of the lifeworld-system distinction.

### 5.2 Methodological fit with ethnography

With critical social theories like TCA, the study of human interaction must be situated in a broader social, political and historical context thus requiring a methodology which is highly sensitive to the lifeworlds of the group under study. From a TCA perspective on IS research, the subjects of inquiry are inseparable from the organisational context within which they are situated. Ethnography meets this requirement by immersing the researcher in the subjects' way of life. In this manner, ethnographic methods respect TCA's belief that social contexts are not only important to subjects' meaning construction, but to social activity in general as well (Ngwenyama and Lee, 1997). As noted, critical researchers reject the notion of a purely objective observer. Instead, they believe themselves to be intervening in the context they purport to study which is also consistent with ethnography's participant-observation stance.

### 5.3 Shedding light on one aspect of identity – “Roles” of IS professionals

For the roles of IS professionals in an organisation to be effective, they must be internally congruent and externally consistent and most importantly, unambiguous (Ang and Slaughter 2000). In IS literature, however, there is a dearth of research work which takes into consideration the external environment when investigating IT personnel; most studies tend to concentrate on the individual as the main unit of analysis (Ang and Slaughter 2000). TCA, however, provides researchers with a theoretical perspective which insists on contextualising human action within a wider social, historical and political landscape so as to develop a critique of the status quo.

The external landscape affecting the roles of IS professionals comprises of numerous types of factors (for example, technological, economic, social and political antecedents). The changing business environment, for one, places significant pressure on IS personnel. To survive in increasingly competitive corporate settings, IS professionals need to be competent not only in technology, but must have an in-depth understanding of business functions and needs (Couger, 1988). The traditional role of an IS personnel in an organisation is thus being gradually changed to meet the expectations of the larger corporate context. Economically, fluctuations in demand and supply of labour are likely to have a strong influence on IS roles (Ang and Slaughter, 2000). New roles may need to be created to attract new talent, or in times of economic depression, some may be removed while others take on greater work load. The recent trend of outsourcing IT work may also impact roles in terms of role ambiguity and conflict (Ang, Wong and Soh, 1999). Researchers adopting a TCA approach can pursue this line of inquiry: What external factors are especially pertinent to IS professionals? Which seem to have the greatest impact on the role they play in an organisation? How do these issues affect their roles? How does the organisation itself, through tacit elements such as culture and values, change the perceived roles of IS professionals? How is the role of IS changing in society? What sort of impact does this have on individuals? How do professional *roles* relate to individuals' underlying *motivation* levels?



In their macro contextualization of human action, critical social theories tend to focus exclusively on the influence of external forces, belittling the possibility of human agency. In this regard, research informed by Symbolic Interactionism can complement TCA's typology of social action. The former acknowledges that humans have free will to create their social reality, while the latter grounds this in a wider social, historical and political landscape. Further, ethnography's insistence on researcher immersion allows a firsthand appreciation of the unique circumstances surrounding an organization, while allowing researchers to explore the 'bigger picture' in the hope of highlighting structural contradictions that impact the ability of IS professionals to play more effective roles in organizations.

## **6 ADAPTIVE STRUCTURATION THEORY**

Adaptive Structuration Theory (AST) was adopted from Anthony Giddens' original conceptualisation of the Structuration Theory; its main distinguishing feature being an explicit technological focus (DeSanctis and Poole, 1994). Structuration Theory purports that while social structures are the media through which human actions are performed, these structures are also the products of those human actions. Giddens thus recognises a discursive, interdependent relationship between structures and human agency in his notion of the 'duality of structure'. (Giddens, 1984). The focal point of AST considers the social structures provided by technologies and institutions as the basis for knowledgeable and reflexive human behaviour. AST provides a reconceptualisation of technology with the duality of technology, positing that while technology is a product of human action, it also assumes structural properties. When human actors work with technology in a given context, technology is physically constructed. At the same time, technology is also socially constructed when human actors attach personal meanings to it (DeSanctis and Poole, 1994; Orlikowski, 1992; Orlikowski and Robey, 1991; Rose, 1998).

### **6.1 The philosophical underpinnings of Adaptive Structuration Theory**

Ontological assumptions of research work generally posit social reality as objective or subjective. Giddens (1984), however, proposed Structuration Theory as a resolution of the two seemingly opposing traditions. In the same vein, AST mediates between objective structures and subjective human knowledge to produce an in-depth understanding of social reality (Giddens, 1984; Pozzebon and Pinsonneault, 2001). Epistemologically, AST follows the critical tradition in its critique of society as the first step in achieving human emancipation. However, our focus of AST in this paper is its reconceptualisation of technology – for it is this aspect which complements the other two perspectives discussed.

### **6.2 Methodological fit with ethnography**

AST's conceptualisation of technology as both physically and socially constructed by human actors requires a complementary methodology which will be able to investigate both these processes. Ethnographic fieldwork would place the researcher in close contact with the subjects under study, allowing a close observation of human-technology interaction. The prolonged period of immersion would further allow the researcher to fine-tune his line of inquiry to examine how management, end-users and IS professionals react to the constant introduction and use of new technologies in the workplace.

### **6.3 Shedding light on one aspect of identity – “Skills Development” of IS professionals**

There is considerable consensus in IS literature that job requirements and the associated skill sets of IS personnel are changing rapidly (Lee, Trauth and Farwell, 1995). This is due in part to the swift evolution of information technology which quickly erodes the technical abilities and skills of IS professionals in terms of relevance and value (Ang and Slaughter, 2000). As such, technology is a

crucial aspect of the external environment which is unique in its impact on IS professionals. This is especially pertinent in contrast to other professions where individuals' proficiency usually increases over time due to the accumulation of valuable industry experience. IS professionals, on the other hand, are required to engage in lifelong learning to constantly upgrade themselves. Failure to do so may result in their existing skill sets becoming obsolete, which may then negatively affect their own relevance in an organisation.

Technological advancement, thus, places significant pressure on IS professionals by constantly raising skills and knowledge requirements. Such requirements are becoming increasingly demanding, thus implying that IS professionals need to cope with organisations' changing emphasis on multiple dimensions of competencies (Lee, et al., 1995). In investigating the influence of technology on the professional identity of IS personnel, researchers may follow this line of inquiry: What is the impact of technology on skills upgrading and career development of IS professionals? How positively or negatively do they perceive such rapid change? What patterns of skills development are perceived to lead to career success?

As the roles of IS professionals evolve, training is often needed to aid them in acquiring the necessary skills to cope with their new work responsibilities. Researchers can examine how the shifting emphasis from "hard" technical skills to "soft" non-technical skills impacts the identity of the IS professional: To what extent do they still perceive themselves as technology people? How do they cope, straddling across the business and technology segments of an organisation? Do they relate more to the technological or managerial aspect of their job? What kind of impact does this have on their perceived professional identity? In building atop previous research avenues (as discussed in Sections 4 and 5), researchers can further query: How does the necessity of constant *skill development* influence their *motivation* levels? What perceived impact does this have on their *roles* in an organisation?

An AST perspective thus recognises the mutual influence between technology and human actors. While technological changes necessitate IS professionals to constantly upgrade themselves, studies can be conducted to investigate how personnel can come to shape technology through adoption, development, appropriation and interaction. This theory thus puts into perspective the significance of technology as an external environmental factor. To understand the impact of this external force on individual IS professionals, however, ethnographic concepts like immersion are appropriate as they allow the researcher to familiarise himself with the subjects under study. Through such a methodological approach, researchers would then be able to witness the dynamic interactions between IS professionals and technologies, thus directly studying any effects this relationship may have on the identity of IS personnel.

While AST has been criticised for being inconsistent with Giddens's original conceptualisations of Structuration Theory, its explicit focus on technology serves the purposes of this paper well.

## 7 DISCUSSION

As exemplified by the research example of IS professionals, the three theoretical perspectives hold distinctive yet inherently related foci. On their own, each of the perspectives provides a thorough examination of a different level of social reality – Symbolic Interactionism's focus on the individual, TCA's integrative view of society as a whole, and AST's concern with the impact and interaction with technology. Collectively, such complementary findings furnish a clearer picture of the complex phenomenon under study. More specifically, we argue that the complementarity of the three perspectives illuminates the on-going interactions between the three levels of human, society and technology as intrinsically interrelated. This is especially amplified in today's context, where IS phenomena are becoming increasingly complex to study and understand.

Specifically, we suggest that the Symbolic Interactionist approach presents the researcher with a greater awareness of the individual cognitive processes of IS professionals. Symbolic interactionism is the process of verbal and social interaction through which meaning and identity arise (Reichers, 1987).

As such, this guiding principle can enable researchers to focus on the process whereby IS professionals' construct their professional identity. The perspective's emphasis on the sedimentation of meanings – the process by which individual meanings crystallise into collective and enduring realities – implies that researchers need to understand why some symbols are granted greater importance than others (Prasad, 1993). With this fundamental understanding of their underlying motivations, researchers adopting a TCA perspective can then explore the environmental landscape for factors which may affect the perceived roles of IS professionals in organisations. In sync with the symbolic interactionist approach, the TCA perspective allows for the scanning of the external context for forces which may affect the relative importance and endurance of certain symbols. Social, political, economic and historical pressures are likely to have a significant influence on individuals and the formulation of their professional identity. Finally, with an AST perspective, researchers can study the effect of rapid technological advancements on the career development of IS professionals, in terms of continuous on-the-job training and skills upgrading. Employing theoretical pluralism thus allows researchers to leverage the strengths of each perspective, and combine them in a congruent and complementary manner in order to attain greater insights into the evolving identity of IS professionals.

In examining the impact of technology, macro approaches may overlook the symbolic and non-instrumental dimensions of social reality (Prasad, 1993). In a similar vein, a purely micro perspective lacks a broader context to embed individual behaviour and group interaction. Thus, through this three-pronged approach, researchers may be better equipped to conceptualise the link between IT and social transformations at both the individual and societal levels. While these three aspects of professional identity can be investigated in a portfolio of separate studies, it is crucial that they should not be viewed as independent. Rather, researchers should work in tandem; consciously integrating their findings with that of prior work, for it is in this manner that the plurality of the three perspectives can complementarily combine to shed new light on phenomena as complex as the evolving identity of IS professionals. Indeed, this approach can be operationalised through a unifying research program which will encompass a portfolio of separate, but interrelated, research works.

## **8 CONCLUDING REMARKS**

In this paper, we have attempted to contribute to qualitative IS research through an exposition of the merits of leveraging theoretical pluralism in a complementary fashion. Specifically, we have selected three theoretical perspectives by virtue of their distinctive foci, unique philosophical underpinnings and complementary strengths. Through Symbolic Interactionism's "micro analysis of social interactions", Critical Social Theory's "emphasis on the macro contextualization of human action" and Adaptive Structuration Theory's "explicit focus on technology", we have demonstrated how these three perspectives may collectively contribute to a greater understanding of a complex IS phenomenon: the evolving identity of IS professionals.

By leveraging on the empirical strengths of ethnography as the underlying methodology, the three perspectives inform distinct avenues of research which can converge to collectively shed new light on a variety of complex IS phenomena. In particular, we argue that not only are the findings obtained by applying each of the theoretical perspectives to a specific line of social inquiry congruent, the complementarities amongst them arguably produces a more comprehensive understanding of the complex IS phenomenon under study. Interested researchers may therefore wish to examine other combinations of theoretical perspectives to determine their complementarities with respect to other complex IS phenomena.

Through this exposition of the synergistic potential achievable by leveraging theoretical pluralism in such a complementary fashion, this study may therefore have valuable implications for qualitative IS research.

## References

- Ang, S. and Slaughter, S.A. (2000) "The Missing Context of Information Technology Personnel: A Review and Future Directions for Research," *Framing the Domains of IT Management: Projecting the Future Through the Past*, R.W. Zmud (ed.), Cincinnati, Ohio, Pinnaflex.
- Ang, S., Wong, S.S., and Soh, C. (1999). "Survivors of outsourcing," *Technical Report, Information Management Research Centre*, Nanyang Business School.
- Archer, M. (1995). *Realist Social Theory: the morphogenetic approach*. Cambridge, Cambridge University Press.
- Barley, S. (1986). "Technology as an Occasion for Structuring: Evidence from Observation of CT Scanners and the Social Order of Radiology Departments," *Administrative Science Quarterly* 31, pp. 78-108.
- Benbasat, I. and Zmud, R.W. (2003) "The Identity Crisis within the IS Discipline: Defining and Communicating the Discipline's Core Properties," *MIS Quarterly* 27(2), pp.183-194.
- Blumer, H. (1969). *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs, NJ, Prentice-Hall.
- Campbell, J.P., and Pritchard, R.D. (1983). "Motivation theory in industrial and organisational Psychology," *Handbook of Industrial and Organisational Psychology*, M.D. Dunnette (ed.). New York: John Wiley and Sons, pp. 63-130.
- Charon, J.M. (2001). *Symbolic Interactionism: an introduction, an interpretation, an integration*. 7<sup>th</sup> edition. Upper Saddle River, New Jersey, Prentice-Hall.
- Chua, W.F. (1986). "Radical Developments in Accounting Thoughts," *The Accounting Review* 61(4), pp. 601-632.
- Cooley, C.H. (1964). *Human Nature and the Social Order*. New York, Schocken.
- Couger, J.D. (1988). "Key Human Resource Issues in IS in the 1990s: Views of IS Executives versus Human Resource Executives," *Information & Management* 14(4), pp. 161-174.
- DeSanctis, G. and Poole, M.S. (1994). "Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory," *Organization Science* 5(2), pp. 121-147.
- Ferratt, T.W. and Short, L.E. (1986). "Are Information Systems People Different: An Investigation of Motivational Differences," *MIS Quarterly* 10(4), pp. 377-387.
- Foss, N.J. and Knudsen, C. (1993). "Pluralism and Scientific Progress in Economics," Working Paper, Institute of Industrial Economics and Strategy, Copenhagen Business School, Copenhagen, Denmark.
- Giddens, A. (1976). *New Rules of Sociological Method*. London, Hutchinson.
- Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge Cambridgeshire, Polity Press.
- Gopal, A, Bostrom, R. P. and Chin, W. W. (1993). "Applying Adaptive Structuration Theory to Investigate the Process of Group Support Systems Use," *Journal of Management Information Systems* 9(3), pp. 45-70.
- Habermas, J. (1984). *The Theory of Communicative Action Volume 1: Reason and the Rationalisation of Society*, trans. T. McCarthy. Boston, Beacon Press.
- Habermas, J. (1987). *The Theory of Communicative Action Volume 2: Lifeworld and System: A Critique of Functionalist Reason*, trans. T. McCarthy. Boston, Beacon Press.
- Hammersley, M. (1992). *What's Wrong with Ethnography? Methodological Explorations*, London, Routledge.
- Hirschheim, R. and Newman, M. (1991). "Symbolism and Information Systems Development: Myth, Metaphor and Magic," *Information Systems Research* 2(1), pp. 29-62.
- Hirschheim, R. and Klein, H.K. (1994). "Realising Emancipatory Principles in Information Systems Development: The Case for ETHNICS," *MIS Quarterly* 18(1), pp. 83-109.
- Ibarra, H. (1999). "Provisional Selves: Experimenting with Image and Identity in Professional Adaptation," *Administrative Science Quarterly* 44(4), pp. 764-791.
- Keen, P. G. W. (1991). "Relevance and Rigor in Information Systems Research: Improving Quality,

- Confidence, Cohesion and Impact," *Information Systems Research: Contemporary Approaches and Emergent Traditions*, H.E. Nissen, H.K. Klein and R. Hirschheim (eds), North Holland, Amsterdam, Elsevier Science Publishers, pp. 27-49.
- Lee, D.M.S., Trauth, E.M., and Farwell, D. (1995). "Critical Skills and Knowledge Requirements of IS Professionals: A Joint Academic/Industry Investigation," *MIS Quarterly* 19(3), 313-340.
- Lyytinen, K. and Hirschheim, R. (1988). "Information Systems as Rational Discourse: An Application of Habermas's Theory of Communicative Action," *Scandinavian Journal of Management* (4), pp. 19-30.
- Mead, G. H. (1934). *Mind Self and Society*. Chicago, University of Chicago Press.
- Merton, R.K. (1996). *On Social Structure and Science*. University of Chicago Press.
- Midgley, G. (2000). *Systemic Intervention: Philosophy, Methodology, and Practice*, Kluwer/Plenum, New York.
- Myers, M.D. (1997). "Critical Ethnography in Information Systems," in *Information Systems and Qualitative Research*, A.S. Lee, J. Liebenau and J.I. DeGross (eds.), London, Chapman and Hall, pp. 276-300.
- Ngwenyama, O.K. and Lee, A.S. (1997). "Communication Richness in Electronic Mail: Critical Social Theory and the Contextuality of Meaning," *MIS Quarterly* 17(2), pp. 145-167.
- Orlikowski, W.J. (1991). "Integrated Information Environment or Matrix of Control? The Contradictory Implications of Information Technology," *Accounting, Management and Information Technologies* 1(1), pp. 9-42.
- Orlikowski, W.J. (1992). "The Duality of Technology: Rethinking the Concept of Technology in Organizations," *Organization Science* 3(3), 1992, 398-427.
- Orlikowski, W.J. and Baroudi, J.J. (1991). "Studying Information Technology in Organizations: Research Approaches and Assumptions," *Information Systems Research* 2(1), pp. 1-28.
- Orlikowski, W.J. and Robey, D. (1991). "Information Technology and the Structuring of Organizations," *Information Systems Research* 2(2), pp. 143-169.
- Pfeffer, J. (1995). "Mortality, Reproducibility, and the Persistence of Styles of Theory," *Organisation Science* 6, pp. 681-686.
- Pozzebon, M. and Pinsonneault, A. (2001). "Structuration Theory in the IS Field: An Assessment of Research Strategies," Proceedings of the *Ninth European Conference on Information Systems*, Bled, Slovenia, June 27-29.
- Prasad, P. (1993). "Symbolic Processes in the Implementation of Technological Change: A Symbolic Interactionist Study of Work Computerization," *Academy of Management Journal* 36(6), pp. 1400-1429.
- Prus, R. (1996). *Symbolic Interaction and Ethnographic Research: Intersubjectivity and the Study of Human Lived Experience*. Albany, State University of New York Press.
- Reichers, A.E. (1987). "An Interactionist Perspective on Newcomer Socialization Rates," *Academy of Management Review* 12(2), pp. 278-287.
- Robey, D. and Boudreau, M. (1999). "Accounting for the Contradictory Organisational Consequences of Information Technology: Theoretical Directions and Methodological Implications," *Information Systems Research* 10(2), pp. 167-185.
- Rock, P. (2001). "Symbolic Interactionism and Ethnography," *Handbook of Ethnography*, P. Atkinson and A. Coffey and S. Delamont and J. Lofland and L. Lofland (eds.), London, Sage, pp. 26-38.
- Rolland, K.H. and Herstad, J. (2000). "The 'Critical Case' in Information Systems Research," *Proceedings of the Twenty-Third Information Systems Research Seminar In Scandinavia (IRIS 2000)*, August 12-15, Sweden.
- Rose, J. (1998). "Evaluating the Contribution of Structuration Theory to the Information Systems Discipline," Proceedings of the *6th European Conference on Information Systems*, Baets, W.R.J. (Ed), Granada, Euro-Arab Management School.
- State of the IT Nation. (2003). *Computer Weekly: IT Management, The Future of the IT Organisation*. September 2. (last accessed 20<sup>th</sup> October 2003). Available at <http://www.computerweekly.com/Article124474.htm>

Turner, J.H. (1998). *The Structure of Sociological Theory*. 6<sup>th</sup> edition. Belmont, CA, Wadsworth ITP.

Walsham, G. (1995) "Interpretive case studies in IS research: Nature and Method," *European Journal of Information Systems* 4(2), pp. 74-81.

Walsham, G. (1998). "IT and Changing Professional Identity: Micro-Studies and Macro-Theory," *Journal of the American Society for Information Science* 49(12), pp. 1081-1089.