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UMI
ORGANIZATIONAL SOCIALIZATION OF NEWCOMERS:
A LONGITUDINAL STUDY OF ORGANIZATIONAL ENCULTURATION
PROCESSES AND OUTCOMES

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the
Graduate School of The Ohio State University

By
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ABSTRACT

Past research on organizational socialization has focused on outcomes such as task mastery, role clarity, role orientation, job satisfaction, organization commitment and turnover, but has neglected the study of the internalization of organizational beliefs and values. Organizational enculturation, a sub-domain of organizational socialization, can be broadly defined as the learning of the culture of the organization. However, organizational enculturation is not just the acquisition of cultural knowledge, it includes the process in which one embraces (or not embraces) the core organizational beliefs and values as part of his/her self-concept. Existing theories are fragmented and not comprehensive, and few empirical studies exist.

The purpose of this dissertation is to propose a framework for organizational enculturation research and to present a study that investigated some key elements and the relationships among them. Specifically, a two-wave longitudinal field study, employing the survey methodology, examined perceptions, beliefs and values change over a period of eight weeks for 718 newcomers (conscripts) in the Singapore Armed Forces which has a strong and homogeneous culture that emphasizes collectivism.

The results showed that the newcomers' perceptions of the organizational culture did become more similar to those of the insiders (their superiors) between week 1 and
week 8. No overall change was found for the collectivistic beliefs and values (collectivism) that relate to the newcomers’ self-concept. Their collectivism scores were relatively stable ($\beta = .69$) over the two data collection points. However, changes in collectivism that occurred at the individual level between week 1 and week 8 were systematically and positively related to some of the hypothesized constructs. Newcomers who reported having positive experiences and superiors who engaged in pro-organizational (collectivism) culture behavior (the latter being moderated by the superiors’ charismatic leadership behavior) showed an increase in their collectivism after controlling for their initial level. The study also showed that having self-concept related beliefs and values that were congruent with the organizational culture was directly related to perceptions of person-organization fit and indirectly related to organizational commitment, low stress and task performance. Finally, the implications of the study, its limitations and future directions were discussed.
Dedicated to my wife Grace
ACKNOWLEDGMENTS

When I was growing up, I wanted to be a doctor. It is interesting to look back to see how the events have unfolded to lead me to a Doctor of Philosophy in Psychology instead. The journey to attaining a Ph.D. is without doubt a long and challenging one. While it often appears to be driven by an individual’s quest for knowledge and tenacity, we must not forget that many other people are involved in making that journey possible.

My journey began way back to my childhood when the foundation was laid by my parents. My dad worked hard to afford me a decent roof over my head, nutritious food on the table and sufficient money for my education. My mum doted on me and yet ensured that I was imbued with the right values. Because of their emphasis on education, as well as their love, encouragement and support, I have excelled in my studies throughout my primary, secondary and tertiary education, which in turn has helped me to set my sight on the Ph.D. I am indebted to my parents for where I am today.

While my parents set the foundation, my wonderful wife, Grace, provided the invaluable physical and mental support throughout the journey. I would especially like to thank her for her love, sacrifice, care and support, without which I would not have been here or able to have completed the dissertation on time. She has risen to the challenge to be a great homemaker, tirelessly attending to the household chores and needs of the family, without uttering a single complaint to me. I would also like to mention my
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CHAPTER 1

INTRODUCTION

Given the cost of recruitment and training, and in the interest of productivity, all organizations want their new employees to quickly acquire the knowledge and skills required for their jobs, fit into their roles and feel that they are part of the organization. In the longer term, organizations would like their employees to be committed and satisfied as these psychological states are often found to be associated with high performance, extra-role behavior, low absenteeism and low turnover (Meyer, 1997; Spector, 1997). Following a good recruitment program and selection system, organizational socialization is the next line of human resource management activities that is vital to achieving that goal of having a pool of committed and satisfied employees.

Organizational socialization has been defined as "the process by which employees are transformed from organizational outsiders to participating and effective members" (Feldman, 1981, p. 309), "the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role" (Van Maanen & Schein, 1979, p. 211), and "a joint process, involving an organization that is seeking to
influence and shape its members, and an employee who is attempting to define an acceptable role for him or herself within an organization” (Bauer, Morrison, & Callister, 1998, p. 150). Past research on organizational socialization (see reviews by Ashford & Taylor, 1990; Bauer et al., 1998; Fisher, 1986; Van Maanen & Schein, 1979; Wanous & Colella, 1989) has focused on proximal outcomes such as task mastery, role clarity, role orientation and social integration, and distal outcomes such as job satisfaction, organization commitment and turnover. Research in organizational psychology has neglected the study of newcomers’ internalization of organizational beliefs and values, despite acknowledgement by several scholars of its importance. Values serve as criteria and standards for evaluation, and guiding principles for action (James, James, & Ashe, 1990; Rokeach, 1973; Schwartz, 1996). Together with beliefs, they form the building blocks for attitudes and most behavior (Eagly & Chaiken, 1993). Hence, lasting attitude and behavioral change can take place only if the underlying belief and value systems are changed. The neglect of the study of beliefs and values change during organizational socialization therefore ignored a vital piece of the theory.

All organizations have cultures (Schein, 1990, 1997). Cultures are essentially shared assumptions/beliefs, values and meanings, and they give rise to shared patterns of perceiving, thinking, feeling and doing. A newcomer entering an organization will encounter the culture of the organization. He/She will have to interpret the information, make sense of them (Louis, 1980) and deal with the underlying beliefs and values that the organization holds and expects its members to have. How well the newcomer deals with the beliefs and values conflicts is crucial to his/her adjustment, mental health, contribution to, and stay in the organization. This point is generally supported by the
empirical literature on person-environment (e.g., job, vocation and organization) fit (Kristof, 1996), i.e., there is typically a positive relationship between values congruence and desired outcomes such as job satisfaction and organizational commitment.

**Definition of Organizational Enculturation**

Organizational enculturation is a sub-domain of organizational socialization. It can be broadly defined as the learning of the culture of the organization, whatever culture is defined as (Schein, 1997; Schneider, 1990). As a result of the learning, it is proposed that two distinct levels of proximal outcomes are possible – the newcomer’s gain in knowledge of the beliefs, values and expectations of the organization, and the extent the newcomer embraces the core organizational beliefs and values as his/her own, i.e., internalization. Knowledge is clearly a prerequisite for internalization to take place, however, the processes of internalization goes beyond knowledge acquisition or learning. Hence, a more central and narrower definition of organizational enculturation refers to the processes in which the organization and its members influence the newcomers to align their beliefs and values with those of the organization’s, as well as the processes in which newcomers make-sense and internalize (or reject) the organizational beliefs and values as part of their self-concept.

The definition needs to be qualified with four important points of elaboration. First, for conceptual clarity, a distinction is drawn between enculturation and acculturation. Scholars in organizational psychology typically refer to newcomers’ culture learning and internalization of organizational beliefs and values as acculturation (e.g., Bauer et al., 1998; Louis, 1990). However, I believe what they meant to imply is more accurately captured by the term “enculturation” rather then “acculturation”. Acculturation (Berry & Sam, 1997) is
a key construct in cross-cultural psychology and it is commonly used to refer to groups of individuals having different cultures coming into continuous contact with each other, usually resulting in cultural changes in one or both groups (e.g., immigrants, sojourners and indigenous people). On the other hand, enculturation (LeVine, 1990) is commonly used to refer to within-culture socialization of cultural values, norms and traditions during one’s early developmental years. Given that the focus here is on newcomers joining an organization, enculturation more aptly describes the processes of culture learning and internalization. This does not mean that there is no place for the concept of organizational acculturation. In fact, organizational acculturation may be most appropriately used for employees of corporate mergers where two or more organizations with highly diverse organizational cultures are meshed together. It is not clear to what extent the processes of organizational enculturation differ from those of acculturation, and whether the experiences of organizational enculturation differ from acculturation in kind or in intensity. As such, until such issues are studied, it is best to keep organizational enculturation and acculturation as separate constructs, use them appropriately depending on the context, and compare them to examine their similarities and differences. Henceforth, all previous references in the organizational psychology literature that implied enculturation but used the term acculturation will be indexed as enculturation in this paper.

Second, newcomers’ cultural learning, i.e., the acquisition of knowledge of the organizational culture, involves both objective and subjective knowledge. Objective knowledge refers to information that can be objectively observed and recorded -- what Schein (1997) referred to as “artifacts”. Examples of objective knowledge or artifacts include the organization’s structure, products and its formally stated goals, motto, symbols,
history, policies and actions. Subjective knowledge of the organizational culture refers to information that has been interpreted by individuals. Examples include the insiders’ assertions about the unwritten expectations and norms for behavior, and the organization’s underlying beliefs and values based on interpretation of the artifacts. Newcomers acquire both objective and subjective knowledge from various sources. In turn, they arrive at their own subjective knowledge as a result of sense-making (Louis, 1980). It is this latter subjective knowledge of the newcomers, which is captured in their perceptions of the organizational culture, that is important for understanding the internalization process and their behavior in the organisation (Jones, 1983).

Third, internalization is not the same as identification. Both constructs have been argued to be conceptually distinct with different antecedents and outcomes (Ashforth & Mael, 1989; Kelman, 1958; O'Reilly & Chatman, 1986). Ashforth and Mael (1989, pp. 21-22) defined identification as reference to the “self in terms of social categories (I am)” and internalization as “the incorporation of values, attitudes, and so forth within the self as guiding principles (I believe)”. Therefore, an individual may identify himself/herself with an organization, i.e., proudly accepting his/her membership as part of his/her self-definition, without knowing or embracing the beliefs and values of the organization. For example, one may like to be identified with an organization because of the prestige it confers. Such identification is argued to be predicated on the desire for affiliation and self-definition. However, identification may engender internalization of beliefs and values by making one more attentive and receptive to the beliefs and values of the organization. Likewise, internalization of an organizational beliefs and values can enhance one's
identification with the organization. Whatever the relationship may be, the focus here is on internalization, i.e., beliefs and values change, not identification.

Third, self-concept is invoked to distinguish beliefs and values that are significant and meaningful to the individual and those that are not. For example, a belief such as "the world is round" is a belief but that has little implication for defining one's concept of himself/herself. Focusing on beliefs and values that are related to the self-concept is critical to understanding the motivational and cognitive bases for beliefs and values change (Gecas, 1982; Grube, Mayton, & Ball-Rokeach, 1994) that have implications for the relationship between the individual and the organization (Rosenberg, 1981). For example, a belief such as "I believe in being a team-player" has a tendency to motivate the individual to behave consistently with the "team-player" self-concept, interpret feedback in accordance with the self-concept, and be attracted or committed to organizations that espouse teamwork. Self-concept and the associated motives and processes will be further elaborated later.

Previous Literature on Organizational Enculturation

Theories on organizational enculturation (and acculturation) in the organizational psychology literature are incomplete and fragmented (cf. Feldman, 1981; Louis, 1990). The few empirical studies that exist (Chatman, 1991; Enoch, 1989; Mortimer & Lorence, 1979; Selmer & De Leon, 1996) described changes but did not sufficiently address the underlying processes, individual differences and the impact on outcomes such as organizational commitment and task performance. Enculturation (and acculturation) have attracted much research in other fields and disciplines, namely cross-cultural psychology, sociology and anthropology. Nevertheless, the study of organizational enculturation (and acculturation) deserves attention of its own because of its unique context, antecedents and
outcomes. For example, unlike the immigrant or sojourner (which is often the object of study in cross-cultural psychology), the organizational newcomer comes into direct and constant contact with socialization agents (e.g., superiors and peers) who have a vested interest in the enculturation of the newcomer.

Purpose

The purpose of this research is to propose a framework for organizational enculturation research that is derived from various perspectives (organizational, social, cognitive and cross-cultural psychology, individual differences and sociology), and to present a study that investigated some of the key elements and their relationships. The framework is built around a newcomer’s entry into an organization. It proposes the sources and processes of influence on beliefs, values and attitude change, some individual differences attributes and the impact of enculturation on various outcomes. The framework serves as a preliminary guide and does not exhaustively include all sources and processes of organizational enculturation. The study focused on beliefs, values and attitudes related to individualism and collectivism (Kagitçibasi, 1997; Triandis, 1995). These two clusters of beliefs, values and attitudes are central to many societies, organizations (see arguments in literature review chapter later), as well as to individual self-concepts (Markus & Kitayama, 1991; Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, 1995). The study examined the extent of subjective knowledge, beliefs and values change over a period of eight weeks for newcomers who underwent strong orientation in an organization with a strong and homogeneous culture that emphasizes the above-mentioned beliefs and values. The focus was to understand why different individuals change (if at all) their beliefs and values at different rates and direction.
Attention was directed at the relative contribution by two sources of influence (superior and the nature of one’s experience) and an individual difference variable (need for affiliation). The impact of enculturation on perceived person-organization fit, stress, organizational commitment and task performance was also examined, and contrasted against the impact of the more traditional task-role learning during organizational socialization.

Potential Applications

Besides advancing the body of knowledge in organization socialization, this research has practical implications for human resource management and organizational development. By understanding the potential or limitations of different socialization agents and processes to effect beliefs, values and attitude change, human resource managers will be better informed in investing resources between selection, orientation and training, and in developing strategies and effective socialization programs. In particular, for certain types of entry-level jobs where the selection ratio is low, training cost is high and turnover is highly disruptive and costly, effective socialization takes on great significance. Similarly, this study is important for organization development practitioners who are in the business of enhancing organizational effectiveness through greater individual learning, innovation and teamwork. Such organization development efforts inevitably involve changing individual perceptual and cognitive systems at work which are built on beliefs and values based on old organizational assumptions and values. Hence, successful organization development efforts necessitate leaders to evolve the organizational culture (Schein, 1997) and work with the socialization agents and mechanisms to bring about lasting attitude and behavioral change in the employees.
LITERATURE REVIEW

The following literature review focuses on aspects that will provide understanding, clarification and support to the subsequent sections on the proposed framework for enculturation research and the design of the study. It is organized into subsections on (1) organizational socialization, (2) culture, beliefs and values, (3) enculturation and acculturation, (4) self-concept and self-esteem motives, (5) sources of influence and socialization processes in organization, (6) individual differences, and (7) outcomes of organizational enculturation.

Organizational Socialization

There are several excellent reviews of the theoretical and empirical literature on organizational socialization (Bauer et al., 1998; Fisher, 1986; Van Maanen & Schein, 1979; Wanous & Colella, 1989). Closely related to organizational socialization is the literature on individual adaptation in the workplace (Ashford & Taylor, 1990; Chan, in press; Nicholson, 1984). A brief review of the major developments will be presented here.
Early work on organizational socialization focused on the sequencing and stages of newcomers’ socialization (e.g., Feldman, 1976), newcomers’ expectations (e.g., Wanous, 1980) and the impact of organizational factors on socialization (e.g., Jones, 1986; Van Maanen & Schein, 1979). Van Maanen and Schein’s (1979) framework of six organizational socialization tactics (collective vs. individual, formal vs. informal, sequential vs. variable, fixed vs. variable, serial vs. disjunctive, and investiture vs. divestiture) generated much interest and a few empirical studies followed. While Van Maanen and Schein (1979) provided an organizational and structural perspective to organizational socialization, an individual cognitive perspective was provided by Louis (1980).

Louis (1980) focused on how the newcomer makes-sense and copes with the changes and surprises in his/her new role and environment. She referred to sense-making as a process in which the newcomer considers inputs from various sources (e.g., other’s interpretations, past experiences, and goals) and then attaches meaning to the actions, events and surprises in the new setting. A behavioral response and/or update of expectations and view of the setting follow from the attribution of meaning. Unfortunately, the sense-making model stops short of elaborating on the sense-making mechanism and outcomes that impact the newcomer’s beliefs and values system, leaving several questions unanswered. In particular, what happens when the newcomer encounters influences to embrace organizational beliefs and values that are incongruent with his/her own? What are the motivational mechanisms that underlie the newcomers’ acceptance and rejection of the incongruent set of beliefs and values? What factors (e.g.,
individual differences, source attributes, and nature of the beliefs and values themselves) affect and/or moderate the sense-making and motivational mechanisms?

Jones (1983) adopted an interactionist perspective to organizational socialization, arguing that individual differences and attributional processes moderate the newcomer's adjustment. The premise he adopted is that the same "objective" situation can be interpreted differently by different people. Reichers (1987) also argued for an interactionist perspective. She proposed that the rate of socialization is a function of the amount of interaction between the newcomer and insiders, and that individual differences (e.g., field dependence, tolerance of ambiguity and need for affiliation for both the newcomer and the insiders) and situational characteristics (e.g., task interdependence) influence the interaction. In addition to the traditional person-by-situation interaction framework, she proposed symbolic interactionism as the mechanism in which a newcomer is socialized.

The last decade has seen the most research on newcomers' proactive behavior, emphasizing the active role newcomers take (e.g., information seeking and relationship building) upon organizational entry (e.g., Ashford & Black, 1996; Ashford & Taylor, 1990; Morrison, 1993a). Ashford and Taylor (1990), drawing on past theorizations, formulated a model of adaptation processes which they argued underlies various transition contexts in separate literatures (e.g., job transfers, organizational entry, socialization and adaptation). Their model focuses on four adaptation tasks (learning/sense-making, decision-making, action-regulation and stress-management) that the individual has to engage in during his/her adaptation to the work settings. The model incorporates person factors (individual differences), situation factors and transition
factors, and argued that the criterion for adaptation is the fit between the newcomers' behavior and the environmental demands. It is a comprehensive model and looks promising in terms of understanding the complexity and dynamics of organizational socialization from the perspective of the individual. However, the model is behavior-oriented and hence it says little about beliefs and values change.

Various outcomes of organizational socialization have been proposed and studied. Van Maanen and Schein (1979) proposed that the outcome of newcomer socialization varies between role custodianship (i.e., the newcomer accepts the given knowledge, strategies and mission associated with the role) to role innovation (i.e., seeking to redefine the role). Feldman (1981) was one of the early scholars to distinguish between proximal and distal outcomes of organizational socialization. He proposed task mastery, resolution of role demands, and adjustment of group norms and values as the immediate outcomes of socialization. Innovation, satisfaction and job involvement were some of the more distal outcomes. Chao, O Leary-Kelly, Wolf, Klein and Garnder (1994) took an inductive approach and empirically identified six content dimensions (i.e., performance proficiency, politics, language, people, organizational goals/values, and history) of socialization using factor analytical method. In general, past research have focused on proximal outcomes such as task mastery, role clarity, role orientation and social integration, and distal outcomes such as job satisfaction, organization commitment and turnover.

One obvious gap in the organizational psychology literature is the study of beliefs and values change during the socialization of newcomers. Despite the acknowledgement that values are implicated in organizational socialization in many theoretical models and
reviews, there are few propositions and no systematic program to study the internalization of organization beliefs and values by newcomers. Studies that examined values were typically found in the person-organization fit literature (Kristof, 1996) but many were either cross-sectional studies or they did not examine the underlying processes of fit. One exception is Chatman's (1991) study which found the amount of time newcomers spent time with their mentors and the number of social events attended to be positively related to person-organization values congruence.

Van Maanen and Schein (1979, p. 210) asserted that “socialization necessarily involves the transmission of information and values”, and two pages later, lamented that “with few exceptions, observers of organizations have failed to give systematic attention to the problem of how specific bits of culture are transmitted within an organization”. Feldman’s (1981) model explicitly included adjustment to group norms and values as one of the major task of socialization but gave no propositions as to why, what, when and how the adjustment would proceed. Similarly, Chao et al. (1994), Louis (1980) and Reichers (1987) included the learning and/or adjustment of values in their work but again details were scant. Recent research, which focused on individual proactive behavior during socialization, has continued to give little attention to assessing the influence from and impact on newcomer’s beliefs and values. In the most recent review, Bauer et al (1998) wrote that “it is surprising that only a few studies have focused on how newcomers learn about and internalize cultural norms and values” (p. 162), and that “relatively little is known about how socialization affects values internalization and learning, both of which have been emphasized in theoretical discussions of socialization” (p.180).
Another gap in the literature is the lack of empirical testing of the mediators and underlying psychological processes of organizational socialization. Van Maanen and Schein's (1979) six socialization tactics are organizational strategies and their propositions did not specify the intervening variables and moderators that would account for different efficacy of the tactics on different individuals. Unfortunately, the recent studies on newcomer proactive behavior, except for a few studies (e.g., Bauer & Green, 1998; Major, Kozlowski, Chao, & Gardner, 1995), have also not given sufficient attention to the influence effected by the socializing agents. Indeed when the effects of manager behavior on newcomer's socialization were included, Bauer and Green (1998) found that newcomer’s proactive behavior did not account for any additional variance for all the proximal and distal socialization outcomes assessed. They concluded that organizational socialization research can ill afford to exclude the role of supervisors. It seems that future research should direct their attention toward understanding the interactions between the socialization agents (in particular the supervisor and peers) and the newcomer. Specifically, there is a need to examine the underlying psychological processes that motivate newcomers to engage in proactive behavior, and cause them to accept or reject information that has an impact on their beliefs, values, attitudes and behavior.

Culture, Beliefs and Values

The definition of culture has been elusive. Culture means different things to different researchers (Triandis, 1996). Early conceptions hold the view that culture is out there to be observed and described. An example of a definition that embraces this view is provided by Veroff and Goldberger (1995):
A collectivity of people who share a common history, often live in a specific geographic region, speak the same or a closely related language, observe common rituals, beliefs, values, rules, and laws, and which can be distinctly identified according to culturally normative practices such as child-rearing, kinship arrangements, power arrangements, ascribed roles that make up the fabric of how a society functions. (p. 10).

Later conceptions of culture, influenced by cognitive psychology, viewed culture as a system of shared values and meanings that give rise to shared patterns of perceiving, thinking, feeling, communicating and doing (e.g., Hofstede, 1980; Resnick, 1991; Schein, 1990).

Cultures exist not only in societies but in subsystems such as organizations, divisions and departments. Some organizational researchers have made the distinction between culture as something an organization is and as something an organizational has (Reichers & Schneider, 1990). This current research adopts the latter approach which promotes the study of organizations as having systems of shared meanings, assumptions and values (Schein, 1990, 1997). According to Schein (1997), culture adds two important elements to the concept of sharing. The first element relates to structural stability, i.e., the sharing is embedded in deep structures and endures superfluous attempts to change. The second element is the integration of the various components of culture into a coherent whole.

Most definitions of culture implicate beliefs (which include assumptions) and values as core ingredients. Norms, rules, rituals and symbols are often regarded as manifestations or artifacts of the deeper structures of shared beliefs and values. For
example, Schein (1997) proposed a culture hierarchy comprising basic assumptions, espoused values and artifacts, with assumptions at the deepest level.

Values are attributes of the individuals as well as the collective group. Rokeach (1973) defined a value as:

A single belief of a very specific kind. It concerns a desirable mode of behavior or end-state that has a transcendent quality to it, guiding actions, attitudes, judgements, and comparisons across specific objects and situations and beyond immediate goals to more ultimate goals. (p. 18).

Concurring with Rokeach (1973), Schwartz (1996, p. 2) defined values as “desirable, transsituational goals, varying in importance, that serve as guiding principles in people’s lives”. James et al. (1990, p. 53) argued that values engender higher order schemas for “judging the degree to which the environment is personally beneficial versus personally detrimental (damaging, painful) to one’s sense of well-being”. In essence, values serve as criteria and standards for evaluation, and together with beliefs, form the building blocks for attitudes and most behavior (Eagly & Chaiken, 1993; Rokeach, 1973). Hence, lasting attitude and behavioral change take place only if the underlying beliefs (assumptions) and values are changed. The neglect of the study of beliefs and values change during organizational socialization therefore ignored a vital piece of the theory.

According to Rokeach (1973) and Schwartz (1996), values are interconnected and organized into relatively stable hierarchy of importance or structure known as values system. It is often assumed that beliefs and values systems are formed relatively early in childhood and crystallized by the time adulthood is reached (Mortimer & Simmons, 1978). Perhaps this assumption had discouraged many organizational researchers from
studying newcomers' internalization of organizational beliefs and values. On the contrary, the empirical literature from sociology and social psychology indicate that values can indeed change.

Several studies using the value self-confrontation method, i.e., a method for initiating changes or enhancing stability in one's beliefs, values, attitudes and behavior by presenting the individual with feedback and interpretation concerning his/her own and significant others' beliefs, values, attitudes and behavior, have shown that lasting value changes can take place using this simple method (Grube et al., 1994). Enoch (1989) found that the values and attitudes of social work students adopted the values of the dominant group (i.e., peers during university and then peers at work after graduation) in each stage of their professional socialization. In a longitudinal study spanning over 10 years, Mortimer and Lorence (1979) found their working participants' intrinsic and extrinsic work values to have changed. The change was an increase in the magnitude of the work values identified to be important 10 years ago when they were still in college. Mortimer and Simmons (1978) interpreted the findings to mean that rewarding occupational experiences have reinforced the same values that constituted the basis of the participants' earlier job selection. Therefore, there seems to be increasing evidence to question the earlier untested assumption that beliefs and values are not malleable after childhood. The task ahead is to find out what beliefs and values are more amenable to change, what the effective socialization processes are, and the conditions that facilitate effective socialization.

What is the link between culture and individual beliefs and values? Many scholars have argued and demonstrated that culture influence one's self-construal or self-concept
(Markus & Kitayama, 1991; Rosenberg, 1981; Triandis, 1995) through the process of socialization. Reciprocally, culture is shaped by the individuals, most significantly by those in positions of authority and influence (Rosenberg, 1981; Schein, 1997).

Individualism and collectivism are probably the most well studied dimensions of culture in societies (Kagitçibasi, 1997; Triandis, 1995). These dimensions are related to the independent and interdependent self-construals respectively (Markus & Kitayama, 1991). Singelis (1994), extending the work of Markus and Kitayama (1991), succinctly defined self-construal, independent self-construal and interdependent self-construal for us:

Self-construal is conceptualized here as a constellation of thoughts, feelings, and actions concerning one’s relationship to others, and the self as distinct from others...

The constellation of elements composing an independent self-construal includes an emphasis on (a) internal abilities, thoughts, and feelings, (b) being unique and expressing the self, (c) realizing internal attributes and promoting one’s own goals, and (d) being direct in communication...

An interdependent self-construal is defined as a “flexible, variable” self that emphasizes (a) external, public features such as statuses, roles, and relationships, (b) belonging and fitting in, (c) occupying one’s proper place and engaging in appropriate action, and (d) being indirect in communication and “reading others’ minds”. (p. 581).

Individualism and collectivism are only two dimensions or “cultural syndromes” as Triandis (1996) has labelled them. Other cultural syndromes include tightness, cultural complexity, active-passive, honor, and vertical and horizontal relationships (Triandis, 1996). Of particular interest is the combination of the individualism-collectivism and the vertical-horizontal cultural syndromes and the implications for individual beliefs and
values. Singelis et al. (1995) made theoretical distinctions between vertical and horizontal individualism and collectivism, the essence of which is described as follows:

Vertical collectivism includes perceiving the self as part (or an aspect) of a collective and accepting inequalities within the collective. Horizontal collectivism includes perceiving the self as a part of the collective, but seeing all members of the collective as the same; thus equality is stressed. Vertical individualism includes the conception of an autonomous individual and acceptance of inequality. Horizontal individualism includes the conception of an autonomous individual and emphasis on equality. (p. 240).

When Singelis et al. (1995) used the terms vertical and horizontal individualism and collectivism to describe individuals, it is obvious that an isomorphism was drawn here between constructs from two levels of analysis (Rousseau, 1985), i.e., the group as a culture and the individual. These two dimensions are highly relevant to organizational cultures as well (cf. Schein’s (1990) dimensions of nature of human relationships and homogeneity vs. diversity). The vertical-horizontal dimension can be applied to organizational cultures that differ in beliefs and values related to the importance of hierarchy, unequal status and treatment in the hierarchy, and the relationship, communication and behavior to adopt with regard to one’s superiors and subordinates. The individualism-collectivism dimension would apply to cultures that differ in beliefs and values related to the significance of one’s goals in relation to the organization’s, obligations between the individual and the organization, rules and norms regarding interpersonal behavior at work, and self-expression at the workplace. Combinations of these dimensions would give rise to four organizational cultures that map onto the self-
construals. As organizational cultures are created or evolved to serve the function of external adaptation and internal integration (Schein, 1997), one would expect a close association between organizational structure and functions, and organizational culture.

It is posited here that a vertical collectivistic culture would best describe the culture in most traditional large bureaucratic organizations where the organization's goal is visibly achievable only through collective effort (e.g., military and construction industries). Such cultures emphasize differences in status and hold the assumption that those in management are capable and deserve better benefits and more respect. Control, orderliness, teamwork and loyalty are valued because they are critical to the efficiency of the stratified and differentiated organization.

A horizontal collectivistic culture would best describe the culture in research and development organizations where new products or scientific breakthroughs depend on individuals from multidisciplinary background working together. There would be little hierarchy in such organizations. Each member is equally valued because he/she has a unique contribution to make. However, since each individual's contribution is worthless without the others', co-operation, teamwork and group goals are emphasized. It seems that many organizations today consider this culture to be ideal and are striving towards it. CEOs are often heard espousing the values of empowerment, participatory management and teamwork, and seen flattening organizational structure.

A vertical individualistic culture is probably found in bureaucratic organizations where the performance of the organization is assumed to be dependent on the sum of individual effort rather than their teamwork (e.g., insurance and real-estate industries). Such cultures embrace values such as independence, creativity and competition, and
reward successful individuals with status and benefits that are linked to the hierarchy of
the organization.

A horizontal individualistic culture is most likely found in network organizations
(e.g. publishing house) where work is compartmentalized and teamwork is not critical to
the attainment of the organization's goals. The work can be completed sequentially as
long as there is proper co-ordination. In such organizations, individuals are typically
engaged for their specialized knowledge and skills until an organizational goal is
achieved or terminated. Hence, individual expression, independence and creativity are
expected and rewarded in such cultures. As the engagement is often temporary, hierarchy
and status within the organization bear little significance.

It must be stressed that the above descriptions serve only as illustrations and are
not meant to pigeon-hole any particular organization type with a particular culture. Great
variations exist. Even within an organization, different subcultures can exist. Unless there
are good justifications, the culture or subculture that an organization has should best be
answered empirically.

The above typology of organizational cultures now allows us to make theoretical
predictions with regard to the four types of self-construals in the context of socialization.
For example, if the culture of an organization is strong and homogeneous, and
socialization is effective, we would predict that newcomers' self-construals to change
over time, in the direction towards the beliefs and values that underlie the organization's
culture. In short, a strong vertical collectivistic culture will, on average, increase the
strength and homogeneity of newcomers' vertical collectivism self-construal, and so on.
Enculturation and Acculturation

Enculturation (LeVine, 1990) is generally equated with the aspect of socialization that focuses on intergenerational transmission of culture. The construct is most commonly found in the social anthropology and sociology literature, and often times, it is simply replaced by the more general term “socialization”. As mentioned earlier in chapter one, for the time being, “enculturation” can be distinguished from the closely related construct “acculturation”, the former referring to within-culture socialization and the latter to across-culture socialization. Acculturation will be elaborated in the next few paragraphs while enculturation will be addressed in the subsequent section on “sources of influence and socialization processes in organization”.

Acculturation has always been a major research theme in cross-cultural psychology. Cross-cultural psychologists are interested in understanding the development and display of human behavioral diversity of individuals and/or groups who have to relate to others that are culturally different in every aspect of their lives. The traditional focus has been on immigrants and refugees. Lately, the interest groups have grown to include sojourners, indigenous people and asylum seekers.

Some cross-cultural psychologists equate acculturation with adaptation, others consider it a subset of adaptation (e.g., Kim & Gudykunst, 1988), yet others view acculturation and adaptation as distinct constructs (e.g., Berry & Sam, 1997). The subsequent discussion will draw mostly from the works of Berry (1980; Berry & Sam, 1997) who has well elaborated and coherently stringed together various aspects of acculturation, and conducted research on the subject over the last three decades.
Acculturation has traditionally been used as a collective or group-level phenomenon. Graves (1967; cited in Berry & Sam, 1997) made the distinction between acculturation at the group and individual level. The latter was termed psychological acculturation. Berry and Sam (1997) adopted the distinction. He defined acculturation as a group-level phenomenon and it refers to processes and outcomes of changes in the culture of a group when the group comes into contact with culture(s) of other group(s). Psychological acculturation is an individual level phenomenon and it refers to the processes and outcomes of changes in the psychology of the individual.

Berry and Sam (1997) essentially proposed a rational choice model of four acculturation strategies (integration, assimilation, separation and marginalization) for someone from a different culture coming into contact with a dominant culture. The strategies are based on a dichotomy of the value one places on maintaining his/her cultural identity and characteristics, and on building/maintaining relationships with others in the dominant culture. Integration and assimilation strategies are based on one’s desire to participate and be active in the dominant culture, whereas separation and marginalization are based on one’s desire to be isolated from the dominant culture. The integration strategy is adopted when one wants to maintain both cultural identity and good relationships with members of the dominant culture. The assimilation strategy is adopted when one wants to fit into the dominant culture and does not consider it important to maintain one’s cultural identity. The separation strategy is adopted when one values keeping his/her cultural identity and at the same time has no desire to blend with members of the dominant culture. The marginalization strategy indicates that one is not concerned with maintaining his/her cultural identity and is also not interested in...
participating in the dominant culture. The strategy adopted will be reflected in one's attitudes and behaviors. Several moderators, at the national-population and individual level, are posited to influence the acculturation process and outcomes. For example, at the national level, whether the broader national policy is one that emphasizes cultural pluralism or assimilation, can influence one's personal preference of strategy.

Acculturative stress occurs when the individual encounters or perceives conflicts and difficulty in modifying his/her previously established behavior repertoire to one that is appropriate for the new cultural context. In most situations, only moderate difficulties are experienced because the individual can engage in problem reappraisal and various coping strategies. In a small number of cases, psychopathology may result when the conflicts and changes required exceed the individual's capacity to cope.

Adaptation in Berry and Sam's (1997) conception refers to the outcomes of acculturation. He argued that adaptation can take the form of a fit or misfit. Fit is generally associated with the integration and assimilation strategies. Fit is not achieved with the separation and marginalization strategies but the individuals may settle into a pattern of conflict. Recently, a distinction has been made between psychological and sociocultural adaptation (Searle & Ward, 1990). Psychological adaptation refers to feelings of well-being and satisfaction whereas sociocultural adaptation refers to the ability to deal with daily problems and interactions. Though distinct, both constructs are expected to correlate.

Berry and Sam (1997) noted that the empirical literature had identified some consistent findings on psychological acculturation. It appeared that the factor that led the group or individual to the existing situation has a strong influence on the variation of
outcomes. In other words, the initial motivation (voluntary, no choice or forced) for physical relocation appeared to be a significant factor. The integration strategy appeared to be often preferred and also turned out to be a consistent predictor of positive outcomes than the other three strategies.

What can we adopt from this literature to the study of organizational enculturation? Firstly, the typology of acculturation strategies provides a useful framework for thinking about the strategies newcomers may adopt upon organizational entry. Specifically, the criteria (cultural identity maintenance and participating/blending in with the dominant culture) can be incorporated into Louis's (1980) sense-making paradigm and as part of decision-making tasks in Ashford and Taylor's (1990) adaptation model. Cultural identity is essentially a component of one’s self-construal or self-concept. In other words, if the newcomer has an existing self-concept that is incongruent as a member of the organization, he/she to decide if he/she wants to stay with the self-concept or be prepared to discard it. The motivation to change will be discussed in the subsequent section on self-concept.

Secondly, the literature draws our attention to the fact that the dominant culture will always have an explicit or implicit policy favouring immigrants/newcomers to integrate or assimilate. This point ties in with Van Maanen and Schein's (1979) conception of the investiture vs divestiture socialization tactic. The investiture tactic reinforces the identity of the newcomer and places importance on the unique knowledge, skills and personality that he/she brings to the organization. The divestiture tactic seeks to disconfirm the identity and self-concept of the newcomer and then moulds it into what the organization believes it should be. Hence one would posit that collectivistic
organizational cultures would tend to expect and value the assimilation/divestiture strategy while individualistic organizational cultures would expect and value the integration/investiture strategy. Thirdly, the literature reaffirms the importance of studying interactions and moderators that exist at different levels, and stress as an indicator of coping with enculturation.

Berry and Sam's (1997) review has presented a descriptive framework of the moderators, the general processes of acculturation and the outcomes. Missing are the more micro-processes in which psychological acculturation takes place and specific propositions with regard to the relationships between the various antecedents, moderators and outcome variables. As such, we will turn to the sociology, social psychology and cognitive psychology literature for an understanding of the micro-processes and to the organizational psychology literature for outcomes which are pertinent to organizational enculturation.

**Self-concept and Self-esteem motives**

The study of the self has a long history in the field of social science, much as a result of the promise it holds to answering a multitude of psychological and sociological phenomena (Baumeister, 1998). A partial list of the subtopics include self-concept, self-awareness, self-monitoring, self-esteem, self-enhancement, self-presentation, self-deception, self-protection, self-regulation, self-serving bias and self-verification. The literature is therefore enormous and several excellent reviews exist (Baumeister, 1998; Byrne, 1996; Gecas, 1982; Rosenberg, 1981). The aim here is to focus on defining self-concept, self-esteem, motives related to self-concept, consequences arising from the motives and the distinction between self-concept and self-esteem. Fleshing out these
details will help to better understand the socialization factors and processes during organization enculturation that affect beliefs, values and attitude change.

What is self-concept? Gecas (1982, p. 3) defined self-concept as “the concept the individual has of himself as a physical, social, and spiritual or moral being”. Rosenberg (1979, p. 7) defined it as “the totality of an individual’s thoughts and feelings having reference to himself as an object”. Self-concept is generally seen as consisting of an organization/structure of various attributes, identities, beliefs, values, motivations and attitudes — although researchers disagree on the extent of differentiation and multidimensionality (Byrne, 1996). Self-construal, as defined by Markus and Kitayama (1991) and Singelis (1994), is therefore part of self-concept. In fact, they have argued that it is a central theme in one’s self-concept and that it is a key product of cultural socialization. Self-esteem refers to a global evaluative value judgment of the self-concept. Increasingly, two different aspects of self-esteem have been posited (Gecas, 1982) -- self-esteem based on a sense of competence, power or efficacy, and self-esteem based on virtue (a.k.a. self-worth) grounded in norms and values concerning personal and interpersonal conduct.

There are several motives related to the self-concept. Self-consistency and self-esteem maintenance/enhancement, two major and powerful motives, have probably received the most interest. Self-consistency has been used to refer to maintaining perceived congruence among components of self-concept at a given time, over time, and between self-concept and behavior. It is founded on Festinger’s (1957) theory of cognitive dissonance which, in essence, stated that if a person has two cognitions that are inconsistent, he/she will experience an unpleasant dissonance state which in turn
motivates the person to reduce it through cognitive or behavioral changes. Progressive research has generally indicated that the self-consistency motive is weaker than the self-esteem maintenance/enhancement motive. In fact, it has been argued that the self-consistency motive operates in the service of the self-esteem motive, i.e., cognitive dissonance is only a significant motivational force when it implicates one’s self-esteem (Rokeach, 1973; Thibodeau & Aronson, 1992).

Numerous studies have concurred that it is human nature to be motivated to maintain one’s positive self-concept or to enhance it further, i.e., to have high self-esteem. As a result, the individual engages in various means to protect or enhance his/her self-esteem. One major avenue is through cognition. Cognition may take several forms, such as selective perception of information (e.g., attending only to positive information in feedback), self-serving attribution (e.g., attributing success to personal effort and not luck, or attributing failure to circumstances and system), reappraisal (e.g., seeing one’s attainment as “half-full” instead of “half-empty”), justification (e.g., coming up with reasons for having made a lie or vested effort), and changing one’s frame of reference (e.g., using a lower standard for comparison).

A more active avenue is to put in greater effort to improve oneself. This competency-based self-esteem motive is the self-efficacy motive (a subset of the self-esteem maintenance/enhancement motive). It is related to the motivation to seek mastery and control over one’s environment. It is found in several theories in the literature, often under different guises, e.g., McClelland’s (1975) power and achievement motives, and Bandura’s (1977) social learning theory. Other active avenues of maintaining/enhancing one’s self-esteem include presenting oneself in the best light, seeking out those who are
likely to provide positive feedback or verification of one’s self-concept, distancing from those who threaten one’s self-esteem, and challenging those who disagree with one’s self-concept. Clearly there are many ways in which a person can choose to protect or enhance his/her self-esteem. In his review, Baumister (1998) also noted that those with low self-esteem show greater malleability in response to external influence.

An important point to stress here is that although self-esteem is derived from self-concept, there is no universal hierarchy of self-concepts that provides the highest to the lowest self-esteem. Two persons who perceived themselves to have the same self-concept can have different levels of self-esteem. On the other hand, two persons with different perceived self-concepts can have the same level of self-esteem. Very much depends on the beliefs, values and norms the individual chooses as standards for evaluating his/her self-concept. In a highly homogeneous and closed society, one would expect greater correspondence among individuals of what the ideal self-concept is. In a highly heterogeneous and open society, or in a cross-cultural context, the standards for evaluating one’s self-concept are likely to differ greatly. We can relate back to the predominant independent and interdependent self-construals found in individualistic and collectivistic cultures (Markus & Kitayama, 1991) as the result of the internalization of different sets of socially desirable beliefs, values and norms as standards in different cultures.

Again, let us pause to identify the implications for organizational enculturation. We have earlier established that organizational cultures can impact individual self-concepts/construals. In this section, the literature has shown that self-concepts are powerfully protected by self-esteem motives, especially when self-esteem is high. We
have also noted that self-esteem is a function of both the substantive self-concept and the standards adopted to evaluate the self-concept. Hence, in order to change the contents of the self-concept, which is argued to be the essence of organizational enculturation, there is a need to deal not just with the strength of the self-concept, but the standards adopted for evaluating one’s self-concept and the strength of the self-esteem maintenance/enhancement motives of the individual. The factors and processes that affect these aspects will be reviewed in the next two subsections.

Sources of Influence and Socialization Processes in Organization

Previous sections have shown that one’s beliefs and values are intertwined with culture, that an adult’s beliefs and values are still malleable, that physical relocation into a different culture confronts one to deal with retaining or changing one’s beliefs and values. Changing beliefs and values often implicates changes related to one’s self-concept, and that changing one’s self-concept implicates self-esteem maintenance/enhancement motives. This section will focus on the sources and processes of change, drawing mainly from sociology, social psychology and organizational psychology. There are many sources of influence for a newcomer upon organization entry, e.g., organizational factors, superior, mentor, peers, subordinates and the nature of one’s experience. However, only two sources that will be investigated in the study, i.e., the superior and the nature of one’s experience, are presented in this section.

The superior. The generally accepted notion among scholars in social sciences that significant others can greatly affect one’s self-concept is based on the “looking-glass self” idea of Cooley (1902) which was developed by Mead (1934). The idea is that we learn about ourselves and develop our self-concept through others’ perception of us.

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Significant others are those people whose opinions we value (Rosenberg, 1981) and therefore one would expect such persons to have a stronger effect on our self-concepts than those we consider less significant. Rosenberg (1973, cited in Robsenberg, 1981) investigated this proposition and found support for a positive relationship between what the respondents think of themselves and what they believe someone they value (mother, father, teacher, classmate, sibling or friend) think of them. The respondents studied were school students. Had working adults been studied, we would expect the list to include superiors and co-workers as people whose opinions matter.

A significant other can influence one passively or actively. The passive mode refers to influence arising simply from the significant other's attributes or actions (that are directed at someone else). Some of the attributes and actions of the significant other (model) are perceived to be attractive which in turn engender identification and imitation, processes that are well-elaborated in the literature (e.g., Bandura, 1969; Kelman, 1958). Identification generally refers to a strong emotional attachment to the model, a desire to be like him/her. Imitation focuses on the emulation of thoughts, emotions and behavior through observational learning (Bandura, 1971).

Within the organizational context, the superior is a good candidate for a model. Weiss (1977, 1978) argued that by virtue of differential status in power and prestige, the superior's position symbolizes success and it is generally a place everyone aspires to be someday. Hence the position confers positive valence to the superior. Subordinates may attribute the success of the superior to some attributes or behavior that in turn provide the basis for the superior to be perceived as a model to emulate. He found that there was greater subordinate-superior similarity in managerial behavior and work values when the
subordinates reported their superiors to be successful and competent. This study provided some support for the identification processes in social learning theory. However, because it was a cross-sectional design, it cannot be ascertained that the subordinates were drawn to the successful and competent superiors and increasingly adopted their behavior and values over time.

In the leadership literature, superiors are often asked to be role models and show exemplary conduct. This being a good chance that identification and imitation will take place, and if so, good behavior will be modeled. However, this may not happen at all – the problem about identification and imitation is that the influence is often idiosyncratic. Different subordinates may perceive different attributes and actions of the superior to be attractive, if at all. This brings us to a discussion of the active influence that superiors can initiate.

The superior can be a significant other by establishing a sense of trust with the subordinates. Trust is a fundamental ingredient of social interaction. Rousseau, Sitkin, Burt and Camerer (1998) defined trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another”. They noted that the idea of “willingness to be vulnerable” proposed by Mayer, Davis and Schoorman (1995) was frequently cited in the definitions among the articles they reviewed. Mayer et al. (1995, p. 712) defined the essence of trust as “a willingness to be vulnerable to the actions of another party”. It follows that if a superior is trusted or considered to be trustworthy, the subordinate will be willing to open himself/herself to influence, including his/her beliefs and values, especially those related to his/her self-concept.
Trustworthiness is closely related to the concept of source credibility in the persuasion literature. It is important to consider the persuasion literature because in organizational enculturation, superiors and peers often engage in persuasion to align the beliefs and values of newcomers with theirs' (we want others to be like us) or the organizations' (we like to help them adapt). According to Petty and Wegener (1998), the effects of source variables have traditionally been organized around Kelman’s (1958) taxonomy of credibility, attractiveness and power, with hypothesized relationships with internalization, identification and compliance respectively. Source credibility has been typically defined by the components of expertise and honesty, factors that parallel ability and integrity in the Mayer et al. (1995) model of trust. In general, the persuasion literature (Petty & Wegener, 1998) on source credibility supports a positive relationship between credibility and persuasiveness. Similarly, they noted that source attractiveness does exert a strong influence, but is moderated by conditions such as when the topic is of low relevance to the subjects. Given that the focus here is on self-concept related beliefs and values, any such information would be highly significant and hence engages the central route (i.e., systematic and effortful scrutiny of information) of cognitive processing (Petty & Cacioppo, 1986). It follows that credibility or trustworthiness would be a more important factor than attractiveness.

Establishing oneself as a significant other is only part of the equation for understanding the influence of the superior. Metaphorically, it is like renovating a house. The individual (newcomer) has now chosen an interior designer (superior) whom he/she thinks is trustworthy. The material and method that the interior designer chooses to use will determine the new look of the house. The material corresponds to messages that the
superior sends to the newcomers and the method corresponds to the superior's leadership behavior which affects the impact of the messages.

The messages that the superior sends to the newcomer clearly have the most direct influence on the newcomer's knowledge and acceptance/rejection of the organization's beliefs, values and expectations. It is posited that superiors who hold beliefs and values that are congruent with the organizational culture would be more comfortable and committed in espousing those beliefs and values than those who do not readily embrace the beliefs and values of the organization. Such congruence would be manifested in their communicative as well as managerial behavior. For example, a collectivistic superior in a collectivistic organizational culture would most likely seize more opportunities to speak more frequently and elaborate more thoroughly about the virtues of collectivism. Legitimized by the organizational culture, the superior would also be more likely to administer rewards and punishments accordingly and without doubts. On the other hand, an individualistic superior in a collectivistic organizational culture would probably avoid talking about the virtues of collectivism even if presented with the opportunities. Even if he/she does it as part of the job, it is likely to come out less convincingly. Without going against the organizational culture (unless the superior truly believes in a need for organizational change), he/she is likely to focus more on the goal and task at hand instead.

In short, one would expect a superior whose beliefs and values are congruent with those of the organization to exhibit increased communication and acts that are consistent with the beliefs and values of the organization. Newcomers socialized under such superiors who are pro-organizational culture will be exposed to greater pro-organizational
culture messages and will therefore be more likely to internalize the organizational beliefs and values. It is posited that the degree of internalization will, however, be moderated by the newcomers’ trust in their superiors. Trusted superiors who strongly espouse organizational beliefs and values will be most effective in influencing the newcomers’ beliefs and values compared to superiors who are not trusted and do engage in pro-organizational culture communication and behavior.

Another important moderator is the superior’s leadership behavior. Two superiors may have the same message to deliver, but the manner that is used to deliver it can have a profound effect on whether it is well accepted or not. Various motivational aspects of leadership have been studied (House & Podsakoff, 1994). Early research has focused on leader’s behavior that directly affects the immediate task or transactional environment, e.g., initiating structure, setting goals, clarifying the linkage between performance and rewards, supportive behavior and providing feedback. Much of these approaches have been labeled as transactional leadership because they involve the motivation of followers through contingent-reward-based exchanges. In the mid-1970s, a major paradigm shift began. Attention was drawn to leaders who have extraordinary effects on their followers and social systems. Such effects cannot be answered by transactional promises of rewards or threats of punishment which are based on the rational-economic man assumption. For the next two decades, leadership theories with labels such as “charismatic”, “transformational” and “visionary” appeared. This new genre of leadership theories (Bennis, Mason, & Mitroff, 1988; House & Shamir, 1993) emphasizes symbolic leader behavior, visionary and inspirational messages, appeal to ideology and values, intellectual stimulation, display of confidence in self and followers, high expectations of
followers' commitment and performance, and demonstration of exemplary conduct and personal sacrifices. The theories also share similar assertions about the effects on the followers, i.e., the needs, values and aspirations of the followers are transformed from self-interests to collective interests, followers exhibit strong commitment to the leader's cause/mission by making personal sacrifices and they perform beyond expectation. This set of theories is therefore most relevant to this research because it offers an understanding of the behavior of superiors that can effectively lead their subordinates to internalize the beliefs and values they espouse.

Amongst the set of theories, House and Shamir's (1993; Shamir, House, & Arthur, 1993) charismatic leadership theory appears to have the most solid foundation. The theory is anchored in the self-concept literature discussed earlier, offering it as a motivational theory to account for the effects of charismatic leaders on their followers. House and Shamir (1993) define charismatic leadership as follows:

Charismatic leadership as an interaction between leaders and their followers that results in (1) making followers' self-esteem contingent on their involvement in the vision and the mission articulated by the leader, (2) strong internalization of the leaders’ values and goals by the followers, (3) strong personal or moral (as opposed to calculative) commitment to these values and goals, and (4) a willingness on the part of followers to transcend their own self-interests for the sake of the collective (team or organization). (p. 86).

They suggested that charismatic leaders achieve the transformational effects on their followers largely by implicating their self-concepts. In other words, the charismatic leader engages in behaviors that activate self-expressive, self-esteem enhancement and
self-consistency motives which in turn leads to satisfaction, internalization, commitment and performance.

What are some of the characteristic behavior of charismatic leaders? Charismatic leaders often use symbolism (e.g., stories, metaphors and symbols) to help communicate their vision or goal effectively. They are able to raise the attractiveness, significance and/or morality of their vision/goal to engage the cognition and, more importantly, the affect of the followers. Charismatic leaders create awareness and pride in their followers that they will be part of that vision and/or noble cause, arousing their self-expressive and self-esteem motives. They may also emphasize the followers' connection and identification with the collective group in which their effort is being sought. Another characteristic behavior of charismatic leaders is empowerment. Empowerment behavior involves instilling confidence and a sense of self-efficacy and self-worth in the followers. This is often achieved by expressing confidence, increasing the effort-accomplishment expectancies and providing positive feedback. The personal behavior of the charismatic leaders typically include such exemplary acts as demonstrating optimism, self-confidence, courage, self-sacrifices and high involvement, which further serve to enhance the followers' confidence and self-efficacy, and their identification with the leaders.

As a result of their behavior, charismatic leaders raise the salience of certain beliefs, values and motives in the followers' self-concept and change their valence through persuasive arguments, cognitive restructuring (e.g., creating new categories or linking categories that were previously not considered) or emotions (cf. Richardson & Thayer, 1993). In this way, the contents of the self-concept as well as the standards used to evaluate one's self-concept may be altered. Once altered, the self-concept motives
have a tendency to generate cognitions and behavior that are congruent with the new self-concept and in service of the leaders’ vision or goal. For example, a charismatic leader may appeal to a follower’s morality to put aside his/her personal interest for the collective good and argue that others and their children will judge them by their participation and contribution to the cause. In doing so, the followers’ collective value may initially be elevated in valence, together with a consideration of the new criterion for evaluating oneself. The vision/goal and their involvement become highly meaningful. When these messages are consistently repeated and reinforced by the leader’s empowerment communication and feedback, the altered valence and criterion come to be accepted as part of the new self-concept.

Although charismatic leadership theories have been around for over two decades, the self-concept-based charismatic leadership theory is relatively new. Only one empirical study could be located. Shamir, Zakay, Breinin and Popper (1998) examined the relationship between three clusters of hypothesized charismatic leadership behavior (displaying exemplary behavior, ideological emphasis and emphasizing collective identity) and followers' outcomes such as identification and trust with their leaders, motivation and willingness to sacrifice and self efficacy in a sample of Israeli soldiers. They found only partial support for their theory, i.e., of the three clusters of behavior, only “emphasizing collective identity” achieved significance with the predicted relationships. The results were explained by an oversight on the operationalization of the behavior, i.e., they emphasized identification with different foci which contradicted each other in values and brought conflicting meaning to the followers, affecting the expected responses.
To recap the main points, the effectiveness of a superior as an agent of organizational enculturation is a function of four main factors: perceived role model, perceived trustworthiness, behavior espousing organizational beliefs and values, and ability to effectively communicate and behave in ways that implicate the subordinates' self-concepts. If a superior can fulfill all requirements, he/she is likely to exert additional influence on a newcomer through his/her peers (whom the superior also has an influence on).

**Nature of one’s experience.** The nature of the accumulative experiences that the newcomer encounters during socialization can similarly exert a powerful influence on his/her beliefs and values. It is posited that multiple positive experiences will engender beliefs and values change towards those of the organization whereas negative experiences will foster disengagement from the organization and hence will not likely bring one’s beliefs and values closer to those of the organization’s. The assertion that a positive or rewarding experience can impact one’s beliefs, values and attitudes is old one and can be found in the socialization (Gecas, 1981; Mortimer & Simmons, 1978) and attitude change literature (Eagly & Chaiken, 1993; Petty & Wegener, 1998). In the socialization literature (in sociology), the process of reinforcement is often assumed to be operating to strengthen or change one’s beliefs, values, attitudes and behavior, and is often offered as an explanation without further elaboration or testing. In the attitude change literature, more elaborate and complex processes have been proposed and studied. Given that attitudes have cognitive, affective and behavioral bases, a personal encounter with the attitude object can impact any of the bases to change the attitude. The experience-attitude link has been most explicitly studied by Fazio and Zanna (1981) and Wu and Schaffer
Therefore, it is posited that multiple experiences in the organization that result in positive affect is likely to facilitate the internalization of the organizational beliefs and values.

Although the assertion is not new, it does not appear to have been directly studied in the context of organizational socialization. There is some indirect evidence provided by Mortimer and Lorence (1979) in a longitudinal study spanning over 10 years. Their analyses suggested that rewarding occupational experiences reinforced the same values that constituted the basis of the incumbents' earlier occupational choice. One of their finding showed that senior college students who scored high on intrinsic values held jobs that were high in work autonomy (10 years later) and they continued to show high endorsement of intrinsic values (10 years later) -- there remained a substantial correlation between work autonomy and intrinsic values even after the effect of their endorsement of intrinsic values 10 years ago was partialled out.

Despite the appeal of the assertion, there is a lack of studies on the impact of positive or negative experiences on beliefs and values change in organizations. The main reason is perhaps the difficulty in defining and measuring an experience, given that an experience is subjective and the result of some antecedents that are probably more quantifiable to study. While this is probably true, it should not negate the study of the experience itself since the whole does not always equal the sum of its parts. Another obstacle in studying experience, particularly in experimental research, is the ethics involved in manipulating an event into a significant experience that have long lasting effects on the participants. Finally, another reason is perhaps the longitudinal nature of such an exercise is often daunting and a risky investment.
Individual differences

Newcomers enter the organization with varied demographics, work experience, knowledge, skills, beliefs, values, motives, attitudes and personality. Jones (1983) observed that the literature at that time had focused on either macro variables such as an organization’s socialization methods and tactics (e.g., Van Maanen & Schein, 1979) or micro variables such as cognitive sense-making (e.g., Louis, 1980). Hence, he directed researchers’ attention to the importance of interaction and the individual differences and attributional processes that operate to moderate the newcomer’s adjustment. His main argument is that the nature of the newcomer’s adjustment to the organization cannot be adequately understood until the socialization process is studied from an interactionist perspective, i.e., the interaction between organization socialization tactics and the schemas the newcomer brings to define and understand information and his/her experiences. The latter, he argued, is a function of individual differences in psychological orientation and attributional processes. Specifically, Jones (1983) identified the newcomer’s past experience, self-esteem, self-efficacy and growth need strength as important individual attributes that will moderate the newcomer’s reaction to their new roles and to feedback. Essentially, these variables will cause the newcomers to perceive the same “objective” situation differently. Using self-efficacy as an example, he argued that newcomers with high levels of self-efficacy will define the situation differently from those with low levels of self-efficacy. The former is likely to assimilate knowledge more readily and seek opportunities to demonstrate their competency rather than the latter.

Similarly, in his theory of work role transitions, Nicholson (1984) also emphasized the importance of individual differences during adjustment to work role
changes. Given that his model is built on the discretion and novelty of role demands, the key individual attributes identified were the desire for control/power and the desire for feedback. Mismatches occur when the motives and personality of the newcomer are not congruent with the role demands. The result is that the newcomer may attempt to change the role demands, stay and endure the negative psychological consequences or exit for a better fit elsewhere. Again, individual differences in newcomers’ threshold for arousal of anxiety and tolerance of anxiety and frustrations may operate to affect the behavioral outcomes.

Reichers (1987) who also adopted an interactionist perspective on newcomer socialization identified three important individual attributes, i.e., field dependence, tolerance for ambiguity and need for affiliation, that are likely to result in different levels of motivation for proactivity in newcomers. For example, she hypothesized that newcomers characterized as intolerant of ambiguity may prematurely form conclusions that inhibit their socialization. As for newcomers with a high need for affiliation, they would be motivated to seek out interpersonal interactions and build relationships that facilitate their socialization. These individual attributes also apply to the insiders of the organization who may differently engage in proactive socialization of the newcomers.

Ashford and Taylor’s (1990) individual adaptation model also strongly featured individual attributes as an important factor in accounting for individual differences in four adaptation tasks. Seven person factors were highlighted: self-monitoring, tolerance of ambiguity, past experience, experience with transition, self-efficacy/self-esteem, need for power and interpersonal skills. Some were obviously drawn from the earlier literature and others were added to the list. Self-monitoring, tolerance of ambiguity and experience
with transition were posited to be important for the learning/sense-making task; self-esteem, need for power and interpersonal skills for the decision-making/negotiation task; self-monitoring and self-efficacy for the behavior-regulation task; and self-efficacy for the stress-management task.

Self-esteem and self-efficacy probably received the most research. Weiss (1977) in testing the predictions of role modeling by subordinates found that self-esteem moderated the relationship between supervisor-subordinate similarity and the subordinates perception of their supervisor’s success and competency. In other words, subordinates high in self-esteem probably felt that they did not have much to learn from their supervisor, providing support for the role of cognitive motivational variables in controlling behavioral learning. Consistent with his earlier theorization, Jones (1986) found in a sample of graduating MBA students that self-efficacy was a moderator for the relationship between socialization tactics and role orientation. Institutionalized socialization tactics produced stronger role conformity when newcomers reported low levels of self-efficacy, supporting his assertion that newcomers who perceived low self-efficacy are more likely to accept definitions of situations offered by others. In another study on self-efficacy, Saks (1995) found that during the first year of employment, initial self-efficacy moderated the relationship between training and adjustment. Training was more strongly related to ability to cope, job performance and intention to quit for newcomers with low levels of initial self-efficacy. The literature on self-esteem and self-efficacy therefore seemed to support the notion that they play an important moderating role in influencing the proactivity and learning behavior of newcomers.
Other individual attributes that have been studied include self-monitoring, desire for control and desire for feedback (e.g., Ashford & Black, 1996; Ashforth & Saks, 1995). For example, Ashford and Black (1996) found that the desire for control was related to six newcomer's proactive entry tactics. In particular, it had the strongest relationship with information seeking and networking. Ashforth and Saks (1995) tested Nicholson's (1984) model and found partial support for the predicted relationships with desire for control and for feedback. More recently, Wanberg and Kammeyer-Mueller (in press) investigated the influence of personality dimensions of extraversion and openness to experience on four newcomer's proactive entry tactics. They found that extraversion was related to relationship building and feedback seeking, and openness was related to feedback seeking and positive framing.

The literature review indicates that a number of the individual attributes suggested in the eighties have been tested. Others, such as need for affiliation, remained untested. More recent work has focused on the individual attributes that affect newcomers' proactivity. To understand organizational enculturation, there is a need to direct our attention to individual attributes that impact on the newcomer's motivation to attend to information related to organizational beliefs and values and their sense-making process. It is posited that the strength of newcomers' initial beliefs and values and their need for affiliation are examples of such attributes. This is because when newcomers' beliefs and values are moderately to strongly at odds with those of the organization's, the discrepancy generates a sense of discomfort which compels the newcomers to deal with it. It is posited that the newcomer's initial strength of his/her beliefs and values and need
for affiliation motive are important factors in determining how the newcomer will resolve the discrepancy.

A newcomer who has deeply rooted beliefs and values that are contrary to the organization's and have low need for affiliation (i.e., does not mind being shunned by their superiors or peers) is less likely to internalize the organizational beliefs and values. Instead, his/her first thoughts are likely to be: change the organizational beliefs and values (if he/she thinks that it is possible and that he/she has the power to do so), stay with the organization and hope that the beliefs and values will evolve, or leave the organization when a job in a better organization comes along (cf. Ashford & Taylor, 1990). On the other hand, a newcomer with ambivalent beliefs and values and high need for affiliation is likely to be a good target for organizational enculturation.

Outcomes of Organizational Enculturation

As mentioned earlier, various outcomes of organizational socialization have been proposed and studied. More recently, researchers have made the distinction between proximal and distal outcomes (e.g., Bauer & Green, 1998). The proximal outcomes would encompass more of the internal states of the newcomer while the distal outcomes would comprise more behavioral indicators that have implications for organizational effectiveness. Traditional proximal outcomes include task mastery/self-efficacy, role clarity, role orientation, social integration and internalization of organizational values. The first three outcomes are more directly related to the task and role learning of the newcomers while the last two outcomes are more directly related to the learning of the culture of the work group and organization. Traditional distal outcomes include performance, job satisfaction, organization commitment, intention to quit and turnover.
Other outcomes include stress and person-organization fit which have not been categorized. The nature of these constructs would best place them as proximal or intermediate outcomes.

As argued earlier, learning of the organizational culture does not necessarily lead to internalization of the organizational values. The most immediate outcome of organizational enculturation would be an increase in knowledge of the organization’s beliefs, values, expectations and other aspects of culture (Chao et al., 1994; Louis, 1980). Whether the knowledge results in a change in one’s personal beliefs and values system is the subject of this dissertation. Therefore, the status of the newcomer’s beliefs and values (that are related to those of the organization’s) would be another key proximal outcome. A subsequent outcome, i.e., perceived person-organization fit, would arise from the comparison of the one’s beliefs and values with those of the organization’s. Kristof (1996) provides an excellent review on the literature on person-organization fit. One of the outcomes reviewed was stress. The overall finding suggested that high person-organization fit was related to low levels of work-related stress. This is not surprising given that stress arises from cognitive appraisal of the environment and one’s ability to cope (Lazarus & Folkman, 1984). Hence, a perceived fit implies that one would perceive that there are few issues and surprises to cope with in the environment.

Given that organizational enculturation is a sub-domain of organizational socialization, the distal outcomes of organizational enculturation are no different from those of organizational socialization. However, the relative impact of organizational enculturation on the distal outcomes is posited to be different when compared to the impact from task and role learning that has been traditionally studied in organizational
socialization research. Given that the proposed study examines the impact of organizational enculturation on organizational commitment and task performance, a brief description will be accorded to each of the distal outcomes below.

Traditionally, organizational commitment has been regarded as a unitary construct (Mowday, Porter, & Steers, 1982). More recently, Meyer and Allen (1997) has argued and shown that there are three components of commitment, i.e., affective, normative and continuance. Affective commitment refers to the commitment arising from an emotional attachment to the organization, normative commitment refers to commitment arising from a sense of moral obligation and continuance commitment refers to commitment arising from cost-benefit calculations. Despite disagreeing on the components of organizational commitment, researchers generally agree that organizational commitment is a psychological state that points to an individual’s attachment to the organization and that it bears on his/her intentions and actions toward the organization. Theoretically and empirically, the earlier and popular conception of organizational commitment by Mowday et al. (1982) has been argued and shown to be closely related to affective commitment. Most research conducted have been done on affective commitment. Hence, subsequent use of the term “organizational commitment” in this dissertation can also be taken to mean affective commitment.

Turnover intention, turnover and organizational citizenship behavior (OCB) are commonly found to be correlated with organizational commitment. As an illustration, Organ and Ryan (1995) found, in a meta-analysis, the corrected mean correlation between organizational commitment and organizational citizenship behavior to be 0.316. As for the relationship with job performance, Meyer and Allen (1997) concluded that the
average correlation is generally positive but weak, with substantial variance around the mean. They reasoned that many factors contribute to job performance, some of which are probably unrelated to organizational commitment (e.g., ability and resources). With regard to the antecedents, job satisfaction, person-job/organization fit, met expectations, organizational justice and organizational support have been found to correlate with organizational commitment. However, the causal ordering for some of these relationships, in particular between satisfaction and commitment, has been questioned. The relevance of organizational commitment to organizational enculturation is embodied in the notion that organization commitment is a function of values congruence between the person and the organization (O’Reilly and Chatman, 1986) based on the idea of internalization (Kelman, 1958). Indeed, O’Reilly and Chatman’s (1986) measure of values-congruent-based commitment correlated significantly with extra-role behavior, intention to stay and turnover. In another study, Chatman (1991) found that newcomers who experienced vigorous socialization fit the company values better than those who did not, and person-organization values fit was significantly correlated with satisfaction, intention to stay and low turnover. Again, O’Reilly, Chatman and Caldwell (1991) found that person-organization fit predicted organizational commitment a year after fit was measured and actual turnover two years later.

Job performance has been the traditional ultimate measure (criterion) of a worker’s behavior. However, as researchers studied the construct, several questions regarding its construct validity were raised (Borman, 1992), e.g., what are the criteria for defining job performance and is it a single or multi-dimensional construct? Today, it is generally accepted that job performance is a multi-dimensional construct with at least two
subcomponents: task performance and contextual performance (Motowidlo, Borman, & Schmit, 1997; Motowidlo & Van Scotter, 1994). Task performance refers to in-role behavior that is generally prescribed whereas contextual performance refers to extra-role behavior that are discretionary. Motowidlo and Scotter (1994) showed that the superior’s overall assessment of the subordinates’ performance generally contained both components. One advantage of dividing job performance into its constituent components is that it allows for better prediction and understanding of the antecedents. Indeed, Organ and Ryan (1995) postulated and demonstrated that job attitudes and disposition/personality related better to contextual performance (more specifically OCB) than task-related knowledge, skills and abilities which related better to task performance. Hence, one would expect that successful organizational enculturation would have a greater influence on the contextual performance (OCB) component of job performance evaluation than the task performance component, whereas traditional socialization outcomes like task mastery/self-efficacy and role clarity would have a greater influence on task performance than contextual performance.

Finally, we need to remind ourselves that the bridge between proximal and distal outcomes closely parallels the relationship between attitude and behavior which has been widely studied in the social psychology literature. Ajzen and Fishbein’s (1980) theory of reasoned action asserts that the best predictor of people’s planned and deliberate actions are their behavioral intentions. The best predictors of their intentions are their attitudes toward the specific behavior and their subjective norms. A person’s subjective norms are his/her beliefs about how people they care about will view the behavior in question. Implicit in the model are the situational factors that activate one’s attitude and subjective
norms. Therefore, the path from newcomers’ beliefs and values change to behavioral outcomes such as task performance or OCB is a tenuous one, a significant proportion of the variance can be expected to be determined by the specific context of the situation.
CHAPTER 3

FRAMEWORK, ASSUMPTIONS AND HYPOTHESES

To briefly recap, organizational socialization is a broad topic that encompasses many processes and outcomes (see Figure 1). Traditional organizational socialization research focused on newcomer's expectations, task and role learning and organizational socialization tactics while more recent research focused on newcomer's attributes, proactive behavior and relationships with their superiors and co-workers. One of the sub-domains of organizational socialization, i.e., learning and internalization of organizational beliefs and values, which is more succinctly captured by the term organizational enculturation, lags behind in theoretical development and empirical research. Therefore, the purpose of this dissertation is to propose a tentative research framework for organizational enculturation and to propose a study to examine some of the key elements.

Framework for Organizational Enculturation Research

The proposed framework for organizational enculturation research is shown in Figure 2. The purpose of the framework is to identify the main components of
Figure 1. Organizational Socialization of Newcomers: Key variables proposed and/or studied by previous researchers
Organizational Culture

Sources of information
- Superiors, mentor
- Co-workers, peers
- Subordinates
- Documents

Newcomer acquisition of knowledge of organizational goals, beliefs, values and expectations

Newcomers' prior experience, information seeking behavior, etc.

Attention and Sense-making e.g., are they compatible, which is better?

Predictors and moderators of change
- Organizational factors
- Superiors
- Co-workers
- Individual attributes
- Nature of experiences

Status quo (incongruent)
self-concept related beliefs and values unchanged, incompatible with the organization's beliefs and values.

Internalization
self-concept related beliefs and values changed in the direction of the organization's beliefs and values.

Status quo (congruent)
self-concept related beliefs and values unchanged, compatible with the organization's beliefs and values.

Outcomes
Clarity and common understanding of norms in the organization.

Outcomes
Perception of poor fit, stress, low organizational commitment.

Outcomes
Perception of good fit, low stress, high organizational commitment.

Figure 2. Organizational Enculturation: A Framework for Research
organizational enculturation for research. In particular, the framework highlights the following: (1) there are two different processes involved in organizational enculturation – knowledge acquisition and internalization of organizational beliefs and values, (2) changing one's self-concept related beliefs and values in the direction of those of the organization's is the essence of internalization, (3) selective attention and sense-making are the key mediators of beliefs and values change, (4) the internalization of organizational beliefs and values is predicted and moderated by various factors such as initial beliefs and values, superiors, co-workers, the nature of one's experience and individual attributes, and (5) different outcomes can be predicted when the processes of organizational enculturation are more precisely specified.

The framework and subsequent theorizations in this chapter are drawn from various theories and constructs across different disciplines. This is because the organizational socialization literature, as elaborated in the previous chapter, presents little theorization and empirical data on beliefs and values change. Scholars who had written about the internalization of beliefs and values during organization socialization either did not elaborate on the processes or, if they did, typically identified the processes as newcomers' learning. It is the position of this dissertation that internalization goes deeper than acquisition of knowledge of the organizational beliefs and values. It is the thesis of this dissertation that internalization of organizational beliefs and values involves self-concept change and hence we must work with the motivational bases of self-concept change and study the factors that affect these motivational bases. As such, self-concept theories and the socialization literature in sociology (e.g., Baumeister, 1998; Byrne, 1996; Gecas, 1982; Markus & Kitayama, 1991; Mortimer & Simmons, 1978; Rosenberg, 1981)
provide the main theoretical bases and assumptions for this research. Although the organizational socialization literature did not adequately specify the processes for understanding internalization, the conceptualizations by Louis (1980) and Ashford and Taylor (1990) on the newcomers' experiences, sense-making and adaptation tasks are adopted in the framework and the writings of this dissertation. Lastly, the framework also draws from the literature on culture, values, attitude and organizational psychology (in particular, person-environment fit and organization commitment).

Although the framework is based on a newcomer's entry into an organization, it is posited that the components and relationships would be similar for other forms of transition that involves an organizational member experiencing a different culture. However, the relative strengths of the relationships may vary as a function of the context of transition. For example, a person who is transferred from one division to another in the same organization has a wealth of experience and information to interpret any differences in cultures between the two divisions. Hence, his/her experience in the prior division would be a significant influence on his/her beliefs, values and attitudes than perhaps the influence from significant others outside the organization for a newcomer who is starting work for the first time.

The rest of this chapter will be organized according to the hypotheses to be tested. Hence, only the components of the framework that will be examined will be elaborated upon. Main points from the literature review will be reiterated where necessary. The hypotheses are grouped into three sections that correspond to the three main questions in this dissertation, i.e., (1) to what extent do newcomers become task-role socialized and enculturated in a relatively short period of time, (2) what are some of the predictors and
moderators of organizational enculturation, and (3) what impact does organizational enculturation have compared to traditional task-role socialization?

**Changes arising from Task-Role Socialization and Organizational Enculturation**

In the last decade, self-efficacy (sometimes also referred to as performance efficacy or task mastery in the literature) and role clarity have increasingly been studied as proximal outcomes of socialization (Bauer et al., 1998). For example, Morrison (1993a) found technical information seeking in new staff accountants to be related to self-efficacy and referent information seeking to be related to role clarity. However, with the exception of the recent study by Chan (2000), previous studies that examined newcomers' self-efficacy and role clarity have measured them as outcome variables and have not paid attention to how they change over time. Chan (2000) found that self-efficacy and role clarity increased linearly over a period of four months in a sample of 146 new graduate students. The findings can be attributed to the acquisition of knowledge by the newcomers on how to behave and perform.

As the newcomers seek and accumulate information with regard to their tasks and roles, the level of uncertainty about how to perform and behave in the job is reduced. As such, it is posited that they will also experience a reduction in stress level (Louis, 1980; Nelson, 1987). However, the reduction in stress level is likely to be temporary and time-sensitive. There is often an initial period where newcomers are forgiven for mistakes made because they are learning and adapting to their new roles. However, beyond the "honeymoon" period (which may coincide with the end of a training phase or some change in job title), newcomers are likely to be anxious to perform. Therefore, it is postulated that:
Hypothesis 1a. Newcomers’ job-related self-efficacy will increase over a relatively short period of time.

Hypothesis 1b. Newcomers’ role clarity will increase over a relatively short period of time.

Hypothesis 1c. Newcomers’ stress level will decrease over a relatively short period of time.

This first hypothesis obviously takes a step back from the organizational enculturation framework (Figure 2) and into the broader domain of organizational socialization (Figure 1). There are two reasons for this. First, it is to establish that the newcomers are indeed undergoing a process of organization socialization involving task and role learning that have generally been identified by previous research. Second, it is to establish the basis to compare and contrast against the processes and outcomes of organizational enculturation which are posited to be different from task and role learning.

All organizations have cultures. According to Schein (1997), the culture of an organization is created to serve two important functions: external adaptation and internal integration. The approach adopted here is that culture is something an organization has (Reichers & Schneider, 1990), and that culture is a system of shared meanings, assumptions/beliefs and values that gives rise to shared patterns of perceiving, thinking, feeling, communicating and doing (Schein, 1990; Triandis, 1996). Some cultures are stronger and more homogeneous than others. “Strong” refers to the saliency and strength of the underlying beliefs and values whereas “homogeneous” refers to the pervasiveness of the culture across the layers of the organization. Strong and homogeneous cultures, besides being shared in the minds of the insiders, are usually accompanied by various
institutional structures, policies, events, rituals, symbols and stories that reinforce the underlying beliefs and values. Such cultures convey a clear and consistent message about behavior that is desirable or expected and behavior that is not tolerated.

The first process in organizational enculturation is the acquisition of knowledge of the organization's culture (Figure 2). More specifically, newcomers learn what the objective and subjective knowledge of the organizational culture are and then generate their own subjective knowledge. Objective knowledge refers to organizational goals, beliefs, values, history, symbols, policies, actions, etc, that are either formally documented or physically observable. The subjective knowledge that is acquired refers to interpreted reports of the organizational culture provided by insiders of the organisation, e.g., superiors, mentors, co-workers and subordinates. Newcomers then make-sense of both the objective and subjective knowledge acquired to arrive at their own subjective knowledge of the organizational culture.

It is posited that if the culture of the organization is strong and homogeneous, the insiders will share similar perceptions and cognitive frameworks in interpreting various aspects of organizational life and symbols. Hence, newcomers will obtain and receive generally consistent and coherent information from the insiders, with the result that they will hold a sense of "objective" reality about the organizational culture. In other words, newcomers are likely to hold increasingly similar subjective knowledge as the organizational insiders over time. Evidence supporting such a proposition was reported in a longitudinal study of British military recruits' expectations by Thomas and Anderson (1998). They measured the recruits' expectations at day 1 and eight weeks later and found that changes in four out of the seven dimensions of expectations were towards the
insider norms of experienced soldiers. On the other hand, if the organizational culture is weak and heterogeneous, newcomers are likely to face inconsistent and incoherent bits of information and would be less certain of what the culture is. Therefore, it is postulated that:

**Hypothesis 2a.** Given a strong and homogeneous culture, newcomers’ subjective knowledge of the organizational beliefs, values and expectations will become more similar to those of their superiors over time.

**Hypothesis 2b.** Given a strong and homogeneous culture, newcomers will be more confident of their subjective knowledge of the organizational beliefs, values and expectations over time.

The third hypothesis relates to the second process in organizational enculturation, i.e., internalization. In an organization with a strong and homogeneous culture, insiders will not only share common knowledge of the culture, they are likely to endorse and embrace the beliefs and values of the organization as their own. This proposition is in accordance with the Attraction-Selection-Attrition (ASA) framework (Schneider, 1987; Schneider, Goldstein, & Smith, 1995). One of the main theses of the ASA framework is that through the processes of attraction, selection and attrition, the homogeneity of people within an organization is maintained and thus perpetuates the culture of the organization. Literature from vocational and organizational psychology (e.g., Holland, 1997; Judge & Bretz, 1992; Kristof, 1996) supports the notion that people are attracted by and tend to seek work environments which they feel share their goals, values and interests. Further, there is also a fair amount of evidence to support the attrition proposition. Employers whose values fit with those of the organization’s generally have higher job satisfaction,
commitment and lower turnover (O'Reilly et al., 1991; Saks and Ashforth, 1997; Kristof, 1996). Therefore, in an organization with a strong and homogeneous culture, we would expect the insiders' beliefs and values which are implicated by the organizational culture to be stronger and more homogeneous than those of the newcomers'. The disparity will be greatest when the recruitment and selection processes do not generate any self-selection among the job applicants so that a diverse group of job applicants is selected into the organization.

The ASA framework clearly suggests that the increased homogeneity of insiders relative to newcomers is due to the attrition of newcomers who do not fit in with the organizational culture. It is silent on the impact of organizational enculturation. Hence, an important question to ask is whether newcomers' beliefs and values can become more similar to those of the insiders as a result of knowledge acquisition and internalization instead of the result of selective attrition of newcomers whose beliefs and values do not fit with those of the organization's. Almost all organization socialization theories make the assumption that newcomers enter an organization with the motivation to learn and assimilate into the culture of the organization. After all, they chose the organization, applied for the job and accepted the offer. Beliefs and values in adults, though relatively stable, are amendable to change given the appropriate influences and conditions (Eagly & Chaiken, 1993; Grube, 1994; Mortimer & Simmons, 1978; Rokeach, 1973; Schein, 1997). Although there are two longitudinal studies (Chatman, 1991; Enoch, 1989) which suggested that newcomers adopt the predominant values and attitudes of the insiders over time, both studies did not control or address the possible confounding influence from
voluntary turnover of selective participants. Hence, the question needs to be re-examined
with the possible confound in mind. It is postulated that:

Hypothesis 3a. Given a strong and homogeneous organizational culture,
newcomers’ beliefs and values that are implicated by the culture will become
more similar with those of their superiors over time, after controlling for the
effects of voluntary turnover.

Hypothesis 3b. Given a strong and homogeneous organizational culture,
newcomers’ beliefs and values that are implicated by the culture will increase in
homogeneity over time, after controlling for the effects of voluntary turnover.

Predictors and Moderators of Change during Organizational Enculturation.

The organizational enculturation research framework in Figure 2 posits that there
are a number of possible predictors and moderators of change for the processes of
knowledge acquisition and internalization. The purpose of this section is to propose the
hypotheses concerning the existence of the two distinct processes and their relationships
with some of the key predictors and moderators. The hypothesized relationships among
the variables are illustrated in a structural equation model as shown in Figure 3. The rest
of this section will elaborate on the rationale and hypotheses relating to the model.

The fourth hypothesis concerns the acquisition of knowledge of the organizational
culture and its relationship with newcomers’ proactive behavior. Reichers (1987)
probably provided the earliest most formal statement about the prediction of rate of
socialization, i.e., it is a function of the amount of proaction by the newcomers and
insiders. Morrison (1993a, 1993b) systematically studied newcomers’ proactive behavior
and found that newcomers sought different information from different sources and that
the information sought was related to different outcomes. For example, Morrison (1993b) found that the primary mode of obtaining normative information (i.e., information relating to the culture of in the organization) was from monitoring (cf. Ostroff & Kozlowski, 1992). She also reported that the frequency of normative information seeking was positively related to job satisfaction, performance and intention to stay in the organization. Ashford and Black (1996) found that newcomers’ proactive information seeking behavior was related to job satisfaction but not performance. Contrary to the above findings, Bauer and Green (1998) did not find newcomers’ information seeking behavior to predict any outcomes when superiors’ clarifying and supporting behavior was included. Instead, the superiors’ behavior was predictive of the outcomes. They suggested that newcomers’ proactive behavior was a function of the superiors’ behavior and hence the effects were partialled out when the superiors’ behavior was included.

In the three studies mentioned above, the more immediate outcome of information seeking behavior, i.e., amount of knowledge acquired, was never measured. What were measured were outcomes such as self-efficacy and role clarity which were assumed to increase as a result of increased knowledge from information seeking behavior. Therefore, taking a step back, it is posited that newcomers who are more proactive in information seeking will gain more knowledge of the organizational culture compared to those who are less proactive in the same period of time. In addition, following from Bauer and Green’s (1998) findings on the significant role of superiors, it is posited that newcomers whose superiors are proactive in emphasizing the beliefs and values of the organizational culture will gain more knowledge of the organizational culture than those whose superiors are less proactive. Newcomers who have acquired more cultural
knowledge are likely to be more confident in expressing their subjective knowledge of the organizational culture. Therefore, it is postulated that:

**Hypothesis 4a.** Newcomers’ increase in confidence in their subjective knowledge of the organizational culture will be positively related to their proactive behavior in information seeking.

**Hypothesis 4b.** Newcomers’ increase in confidence in their subjective knowledge of the organizational culture will be positively related to their superiors’ pro-organizational culture behavior.

The organizational enculturation framework in Figure 2 indicates that having knowledge of the organizational culture is a pre-requisite but not necessarily a predictor of internalization. It is a pre-requisite because information about the organizational culture, e.g., beliefs, values and expectations of the organization, is needed when the newcomers make-sense and compare them with their own beliefs and values. At some time during the enculturation process, newcomers are likely to ask themselves how well they fit into the organization as part of the sense-making process (Louis, 1980) and adaptation task (Ashford & Taylor, 1990). The crunch comes when newcomers face occasions in which they are expected to behave in accordance with the beliefs and values of the culture, especially when they greatly conflict with the newcomers’ self-concept related beliefs and values.

Although researchers are still debating over the structure and components of self-concept (Baumeister, 1998; Byrne, 1996), there is consensus that the self-concept is a great motivational force for behavior. In particular, people go to great lengths to have, protect and verify what is regarded as a positive self-concept (Baumeister, 1998; Byrne,
Therefore, to have to behave in a manner that is inconsistent with one's self-concept is highly disturbing and stressful. Hence, if there are no forces to facilitate the newcomers' re-evaluation of their self-concept and change towards the beliefs and values espoused by the organization, those newcomers with conflicting beliefs and values are unlikely to perform and remain in the organization. It is posited that the motivation for self-concept evaluation and change to embrace the organizational beliefs and values are influenced by factors such as the superior, co-workers, the nature of one's experience and individual attributes. In particular, the additive influence of three of these factors (superiors' pro-organizational culture behavior, the nature of one's experience and need for affiliation) and the moderating effects of three other factors (trustworthiness of the superiors and superiors' charismatic leadership behavior) will be examined in this study. The next two paragraphs will focus on the influence from superiors.

Drawing on the socialization literature in sociology, persuasion and leadership literature (as elaborated in the literature review in the preceding chapter), it is posited that three attributes of the superior will influence the direction and rate of organizational enculturation in newcomers. The attribute that most directly impacts on newcomers is the extent in which superiors engage in pro-organizational culture behavior. Superiors who consistently espouse and uphold the beliefs and values of the organizational culture are likely to at best create a "mere exposure" effect (Eagly & Chaiken, 1993) on the newcomers. More importantly, it is hypothesized that the impact will be greatest when the superiors are perceived to be trustworthy. To briefly reiterate, the socialization (Rosenberg, 1981) and the persuasion (Petty & Wegener, 1998) literature have shown
that someone who is considered a significant other, i.e., one whose opinion is valued, is an important agent of change. Perceived trustworthiness is one of the key characteristics of a significant other. Therefore, changes in newcomers' beliefs and values towards those of the organizational culture will be most greatly facilitated when the two attributes interact. In other words, trusted superiors who strongly espouse and uphold organizational beliefs and values will be most effective in influencing the newcomers' beliefs and values compared to superiors who are not trusted and do not engage in pro-organizational culture communication and behavior.

It is also hypothesized that the way the information on organizational beliefs and values is communicated can make a difference between mere acceptance or conviction by the newcomers. It has been proposed that charismatic leadership (Bennis et al., 1988; House & Shamir, 1993; Richardson & Thayer, 1993; Shamir et al., 1993) brings about transformational effects on the followers' needs, values, aspirations, commitment and effort. Followers are transformed from a focus on self-interests to collective interests, they exhibit strong commitment to the leader's cause/mission by making personal sacrifices and they perform beyond expectation. House, Shamir and colleagues (House & Shamir, 1993; Shamir et al., 1993; Shamir et al., 1998) argued that the key to the followers' transformation is that charismatic leadership behavior engages the motivational forces of their self-concepts, i.e., self-presentation, self-esteem, self-efficacy and self-consistency. It is posited that charismatic leaders raise the salience of certain beliefs, values and motives in the followers' self-concept and change their valence through persuasive arguments, cognitive restructuring (e.g., creating new categories or linking categories that were previously not considered) or emotions. In this way, the
Newcomer's proactive information seeking behavior (Time 2)

Newcomer's subjective knowledge of organizational culture (Time 2)

Superior's pro-organizational culture behavior (Time 2)

Newcomer's trust in the superior and superior's leadership behavior (Time 2)

Newcomer's beliefs and values (Time 2)

Newcomer's need for affiliation (Time 1)

Nature of Newcomer's Experiences (Time 2)

Figure 3. Structural Equation Model of Predictors and Moderators of Organizational Enculturation in this study.
contents of the self-concept as well as the standards used to evaluate one’s self-concept may be altered. Once altered, the self-concept motives have a tendency to generate cognitions and behavior that are congruent with the new self-concept and in service of the leaders’ vision or goal. In sum, it is postulated that:

**Hypothesis 5a.** The effects of the superiors’ pro-organizational culture behavior on newcomers’ beliefs and values change will be moderated by the newcomers’ trust in their superiors. Superiors who are trusted and who engage in pro-organizational culture behavior will be most effective.

**Hypothesis 5b.** The effects of the superiors’ pro-organizational culture behavior on newcomers’ beliefs and values change will be moderated by the superiors’ charismatic leadership behavior. Superiors who engage in charismatic leadership and pro-organizational culture behavior will be most effective.

Besides the influence from superiors, it is posited that the nature of one’s experience during socialization and the need for affiliation can additionally impact newcomers’ beliefs and values change. A personal encounter is often a powerful source for forming or changing our beliefs, values and attitudes. It can even negate the influence from one’s significant others. An encounter may be classified as a positive or negative experience. It is posited that multiple positive experiences during organizational socialization will engender beliefs and values change towards those of the organization whereas negative experiences will foster disengagement from the organization and hence will not likely bring one’s beliefs and values closer to those of the organization’s. The assertion that a positive or rewarding experience can impact one’s beliefs and values is an old one and can be found in the general socialization (Gecas, 1981; Mortimer &
Simmons, 1978) and attitude change literature (Eagly & Chaiken, 1993; Petty & Wegener, 1998; Fazio & Zanna, 1981; Wu & Schaffer, 1987). Although the assertion is not new, it does not appear to have been directly studied in the context of organizational socialization. It is posited that an overall positive experience in the organization will be an important factor in influencing one’s evaluation of the organizational beliefs and values and willingness to embrace them.

Various scholars (e.g., Jones, 1983; Nicholson, 1984; Ashford & Taylor, 1990) have argued for the importance of individual attributes in organizational socialization. Indeed, a number of attributes have been shown to affect newcomers’ socialization. For example, individual differences in the desire for control (Ashford & Black, 1996) and extraversion and openness to experience (Wanberg & Kammeyer-Mueller, in press) were found to be related to newcomers’ proactive behavior during socialization. This study investigates the influence of the need for affiliation attribute in organizational enculturation.

Need for affiliation first appeared as one of the need strengths proposed by Murray (1938). Subsequently, it was popularized by Maslow’s (1954) needs theory (one of the needs being social needs) and McClelland’s (1975) program of research to study such needs. It is generally accepted that individuals with a high need for affiliation place much importance on relationships, have a strong desire for approval and reassurance from others, and have a tendency to conform to the group norms and requests from others whose friendships they value. Need for affiliation is chosen for study because it is believed that it affects the sense-making process that resolves conflicts between organizational expectations and one’s self-concept related beliefs and values. Given the
nature of the need for affiliation attribute, it is posited that newcomers who are high in such a need will have a greater tendency to justify the organizational beliefs and values because they are motivated to achieve social integration quickly. In the process of justification, they are likely to internalize them as their own so as to maintain their self-esteem. Therefore, it is postulated that the nature of one's experience and need for affiliation exert the following influence:

**Hypothesis 6a.** Newcomers' change in beliefs and values towards those of the organization's will be positively related to the nature of their experiences during socialization, in addition to the influence from superiors' pro-organizational culture behavior.

**Hypothesis 6b.** Newcomers' change in beliefs and values towards those of the organization's will be positively related to their need for affiliation, in addition to the influence from superiors' pro-organizational culture behavior.

Hypotheses 4, 5 and 6 have been integrated together into a structural equation model as shown in Figure 3. The model is essentially an operationalization of the relationships of some of the predictors and moderators on the processes of knowledge acquisition and internalization proposed in the organizational enculturation framework in figure 2.

**Outcomes of Task-Role Socialization and Enculturation.**

The literature reviewed suggests that self-efficacy (term is used interchangeably with task mastery and performance efficacy), role clarity and beliefs and values change are only proximal outcomes of organizational socialization and that they lead to other outcomes such as stress, person-organization fit, job performance, job satisfaction,
organizational commitment, organizational citizenship behavior and turnover (see Figure 1). The purpose of this section is to propose key hypotheses concerning the relative impact of self-efficacy and role clarity (from task-role socialization) and knowledge acquisition and internalization of organizational culture (from organizational enculturation) on four outcomes, i.e., stress, person-organization fit, organization commitment and task performance. The various hypothesized relationships among the variables are captured in a structural equation model as shown in Figure 4. The rest of this section will elaborate on the rationale and hypotheses relating to the model.

The seventh hypothesis concerns the outcomes of task and role socialization. As mentioned earlier, researchers have recently linked the proximal outcomes of task and role learning to self-efficacy and role clarity respectively. However, the literature is generally silent on relationship between self-efficacy and role clarity even though they have been studied together as outcome measures. Logically, it would appear that they are relatively independent given that they are posited to be the outcomes of two different learning domains. At best role clarity will weakly influence self-efficacy assuming that understanding the demands of the role, in which the tasks are embedded, builds one's confidence. However, the empirical findings indicated a much stronger relationship. For example, Morrison (1993a) found the correlation between task mastery and role clarity to be .64 and .60 when measured at two separate times, and Bauer and Green (1998) reported a correlation of .47 between performance efficacy and role clarity. In view of the findings and logic, it is postulated that:

**Hypothesis 7a.** Newcomers' role clarity will have a positive influence on their self-efficacy.
Self-efficacy and role clarity are posited to be related to stress during organizational socialization (Nelson, 1987). The literature review on work stress (e.g., Kahn & Byosiere, 1992) unequivocally identifies role ambiguity and appraisals of inability to cope as stressors at work. Given that role clarity is generally accepted as the flip-side of role-ambiguity and self-efficacy can be considered the flip-side of perceptions of inability to cope, it is posited that self-efficacy and role clarity will be negatively related to stress. In turn, stress is generally found to negatively affect performance (Beehr & Bhagat, 1985; Driskell & Salas, 1996; Kahn & Byosiere, 1992). Therefore, it is postulated that:

Hypothesis 7b. Newcomers’ self-efficacy will be negatively related to their level of stress.

Hypothesis 7c. Newcomers’ role clarity will be negatively related to their level of stress.

Hypothesis 7d. Newcomers’ level of stress will be negatively related to their task performance.

Self-efficacy and role clarity have also been theorized (Feldman, 1981; Bauer & Green, 1998) to impact on outcomes such as job performance and job satisfaction. Empirically, Bauer and Green (1998) found that job performance for 104 newcomers across various jobs was predicted by self-efficacy and role clarity measured at an earlier time, after controlling for job satisfaction and organizational commitment. Today, it is generally accepted that job performance is a multi-dimensional construct with two main components: task performance and contextual performance (Motowidlo & Scotter, 1994; Motowidlo & Borman, 1997). Task performance refers to in-role behavior that is
generally prescribed whereas contextual performance refers to extra-role behavior. Since task performance is a subset of job performance, it is postulated that:

**Hypothesis 7e.** Newcomers' self-efficacy will be positively related to their task performance.

**Hypothesis 7f.** Newcomers' role clarity will be positively related to their task performance.

In addition to task and role learning, newcomers learn about the culture of the organization which is the focus of this study. Researchers (Bauer & Green, 1998; Chan, 2000; Morrison, 1993a) have theoretically linked technical information seeking and acquisition to self-efficacy, referent information to role clarity, and normative information (i.e., knowledge about the organizational culture) to newcomers' social integration and person-organization fit. Of particular interest to this study is the influence of normative information (cultural knowledge) on self-efficacy, role clarity, beliefs and values change, person-organization fit, stress, organizational commitment and task performance. The studies by Bauer and Green (1998), Morrison (1993a, 1993b) and Ostroff and Kozlowski (1992) are most relevant here.

Bauer and Green (1998) did not find any significant relationship between social (culture) information seeking and self-efficacy or role clarity. The finding is not entirely surprising given that what was assessed was the frequency of information seeking, not the amount of information possessed which is probably a better predictor of self-efficacy and role clarity. It is posited that the possession of cultural knowledge might be related to newcomers' self-efficacy since such knowledge will contribute to their perception of control and mastery of their situation. Role clarity might also be enhanced by more
cultural knowledge since some of the more general role expectations (e.g., you have to be a team-player in your job) are likely to be embedded in the context of the organizational culture (e.g., valuing teamwork). Newcomers who have acquired more cultural knowledge are likely to be more confident in expressing their subjective knowledge of the organizational culture. Hence, it is posited that:

**Hypothesis 8a:** The newcomers’ confidence in expressing their subjective knowledge of the organizational culture will have a weak positive relationship with their self-efficacy.

**Hypothesis 8b:** The newcomers’ confidence in expressing their subjective knowledge of the organizational culture will have a weak positive relationship with their role clarity.

The amount of knowledge of the organizational culture that the newcomers possessed is not expected to have any direct or strong effects on the other outcomes in this study. As stated on several previous occasions, knowledge acquisition of the organizational culture is necessary but not sufficient to lead to internalization of organizational beliefs and values. Hence, no relationship between knowledge of organizational culture and pro-organizational beliefs and values is predicted. Similarly, there should be no relationship between knowledge of organizational culture and person-organization fit. This is because more knowledge only helps newcomers to have a greater perspective on the breadth and depth of the beliefs, values and expectations of the organization. It does not lead to a perception of greater fit. What it does is to allow newcomers to have a more accurate and confident assessment of their fit with the organization.
The relationship between cultural knowledge and stress was examined by Ostroff and Kozlowski (1992). They found a weak significant positive correlation (.18) between how knowledgeable the newcomers felt about their organization and their self-reported stress. They attributed the unexpected relationship to the mode of information acquisition. They found that stress was also related to observation which was in turn related to the dominant mode newcomers used to acquire knowledge of the organization. On the other hand, logic would dictate that being knowledgeable about the organizational culture would reduce stress by removing some of the uncertainty for the newcomers. Hence, given the opposing data and logic, it is likely that any relationship between possession of cultural knowledge and stress will be weak and the direction of the relationship dependent on the context. With regard to the impact of cultural knowledge on organizational commitment and task performance, two studies (Bauer & Green, 1998; Morrison, 1993a) have examined and found no relationship between them.

The ninth hypothesis concerns the outcomes of newcomers who have pro-organizational culture beliefs and values. Besides acquisition of knowledge of the organizational culture, organizational enculturation may lead to internalization of organizational beliefs and values, i.e., newcomers embracing the organizational beliefs and values as their own. The result is a change in beliefs and values, the most transformational being beliefs and values related to one’s self concept, toward those of the organization’s. The relationships between pro-organizational culture beliefs and values and outcomes such as person-organization fit, stress, organizational commitment and task performance are examined in the next few paragraphs.
Figure 4. Structural Equation Model of Outcomes of Task-Role Learning and Organizational Enculturation in this study.
Kristof (1996) reminds us that there are various types of person-environment fit. Besides person-organization fit, there are person-vocation fit, person-group fit and person-job fit. In general, the person-environment fit literature shows that “objective” measures of person-environment fit are positively correlated with self-reported perceived person-environment fit. This finding indicates that individuals are on the whole aware of their own disposition, needs, beliefs and values, and the attributes/demands of the environment, enabling them to make evaluations about their fit with the environment.

Consistent with this finding, it is postulated that:

**Hypothesis 9a.** Newcomers who hold pro-organizational culture beliefs and values will perceive a better fit with the organization than newcomers who hold less pro-organizational culture beliefs and values.

It is posited that the impact of pro-organizational culture beliefs and values on stress, organizational commitment and task performance will be largely mediated by person-organization fit. Person-environment fit, or rather misfit, has been implicated in a number of adaptation and stress research (Ashford & Taylor, 1990; Kahn & Byosiere, 1992). The assumption is that people are motivated to seek a fit with their environment. The greater the discrepancy, the greater the level of stress. The discrepancy may not even be real. A perceived gap or conflict is sufficient to evoke stress. Stress, being an unpleasant state, serves to motivate one to address the gap or conflict so that the level of stress would in turn be reduced. In a longitudinal field study of newcomers in a variety of occupations, Saks and Ashforth (1997) found person-job and person-organization fit to be negatively related to stress.
Organizational commitment (Meyer & Allen, 1997; Mowday et al., 1982) is a psychological state that points to an individual's attachment to the organization and that it bears on his/her intentions and actions toward the organization. O'Reilly and Chatman (1986), based on the idea of internalization by Kelman (1958), tested and found support for the notion that organization commitment is a function of values congruence between the person and the organization. In another study, Chatman (1991) found that newcomers who fit the company's values better than those who did not reported greater commitment to the organization. O'Reilly et al. (1991) found that person-organization fit predicted organizational commitment a year after fit was measured and actual turnover two years later. In sum, based on the logic and evidence, it is postulated that:

**Hypothesis 9b.** Newcomers who perceived fit with the organization will have lower stress than those who perceived less fit.

**Hypothesis 9c.** Newcomers who perceived fit with the organization will have higher organizational commitment than those who perceived less fit.

With regard to influence of pro-organizational culture beliefs and values on task performance, the relationship is expected to be weak given that task performance is more directly related to mastery of the knowledge and skills required to do the task and the resources available. Most of the relationship, if any exists at all, is posited to be mediated by person-organization fit, which in turn, is mediated by organizational commitment. In other words, newcomers who hold pro-organizational culture beliefs and values are likely to have higher commitment to the organization which lead them to greater motivation to perform. However, the literature (Meyer & Allen, 1997) has shown that organizational
commitment is generally a weak predictor of job performance. Hence, it is postulated that:

**Hypothesis 9d.** There will be a weak positive relationship between newcomers' organizational commitment and their task performance.

Figure 4 shows the structural equation model that succinctly captures the various hypothesized relationships, i.e., hypotheses 7 to 9(c), of the outcomes of task-role socialization and organizational enculturation. To date, no study has attempted to model and simultaneously test the complex relationships among the different dimensions and outcomes.
CHAPTER 4

METHOD

Overview

The study was a two-wave longitudinal field study conducted in the Singapore Armed Forces (SAF). Using on-site surveys, data were collected from recruits at time 1 (first week in the military) and time 2 (eight weeks later) and from their superiors at time 2.

Design Considerations

The SAF is by large a conscripted military force. All male citizens, typically after their pre-university education, are drafted into the military for a period of either two or two-and-a-half years. Males with higher education serve the longer term and those who are physically fit receive their first training at the Basic Military Training Center (a place where the selection of officers and non-commissioned officers takes place). The training is typically eight weeks long. The aim of basic military training is to teach the newcomers (recruits) the basic skills of soldiering, condition them to a minimum level of physical fitness, and educate them about the structure, history and culture of the military. After
basic military training, they are selected and posted to more advanced and specialized training schools, e.g., School of Infantry Specialists (SISPEC) and Officer Cadet School (OCS).

The military in Singapore provides a good context for studying organizational enculturation for several reasons. First, given that it is compulsory for all males to be drafted, there is no scope for self-selection into the organization, eliminating the problem of restriction of range. Hence, there will be greater variability in the beliefs and values of newcomers, allowing changes in their beliefs and values to be better studied.

Second, basic military training in Singapore is quite unlike the intense U.S. boot-camp treatment which is often portrayed in movies. There are no drill sergeants who constantly shout and torment the recruits into relinquishing their individual civilian identity from day one. Instead, recruits are gradually eased into the military regime and discipline, somewhat akin to a strong orientation program that might be found in some non-military organizations.

Third, the organizational culture of the military is relatively unambiguous and homogeneous when compared to organizational cultures in the corporate world. There are many symbols and routines in the military that reflect and reinforce the culture and they are highly consistent with one another. Hence, it allows the study to focus on the effects of a strong and homogeneous culture on a large sample of newcomers.

Fourth, the military culture in Singapore (and probably in most armed forces) can be classified as collectivistic (Kagitçibasi, 1997; Triandis, 1995). To be even more specific, it has a vertical-collectivistic culture (Singelis et al., 1995; Triandis & Bhawuk, 1997), i.e., one where hierarchy, control, orderliness, teamwork, group loyalty and
collective goals are valued over equality, individual expression and self-interests. The vertical aspect (hierarchy and acceptance of inequality) is clearly emphasized by symbols of ranks which are displayed on the uniforms and the language that is used to identify and differentiate the hierarchies (e.g., addressing someone of higher rank as “Sir” or “Mdm”, or by his/her rank, followed by his/her last name). Symbolically, collectivism is emphasized by the uniform and various routines that are performed in groups, e.g., marching to the dining or lecture hall, and performing area cleaning. In training, the group mission is constantly stressed and individuals are expected to put the team interests above self-interests, the ultimate sacrifice being giving one’s life for the group mission.

Being able to unambiguously classify the military culture as collectivism or vertical collectivism is important because collectivism is a fairly well-established construct at the cultural level (Hofstede, 1980; Triandis, 1995) and there is also an equally established literature to link it to individual self-concepts (Markus & Kitayama, 1991; Singelis et al., 1995) which is central to the theoretical framework proposed. In short, the unambiguous culture allows specific propositions relating to collectivism to be made and tested.

Sample

The main sample was drawn from the population of male conscripts (recruits) from the Basic Military Training Center of the SAF. At the center, recruits are organized according to the hierarchical structure of the military, i.e., company, platoon and section. Each company has about 200 recruits which in turn is divided into four platoons and each platoon is typically further divided into four sections. 822 recruits from four companies of the end-January 2000 intake participated in the survey at time 1. This represents a response rate of 99.3% of the total number of recruits (828) in the four companies. The
participants were all males and their average age was 18.3 years old. The distribution of
their ethnicity was as follows: 96.8% Chinese, 1.7% Malay, 1.2% Indian and 0.2%
"others". The distribution was not quite representative of the population of Singapore
which has 77% Chinese, 17% Malay, 5% Indians and 1% of other ethnic groups. The
reason for the uneven distribution is that the training center typically takes in conscripts
with higher educational qualification, a category in which the Chinese are more
represented.

718 of the 822 recruits from time 1 participated in the survey at time 2. The
attrition was 12.7%. There were four main causes for the attrition: recruits were either
sick, involved in some duties or chores, out-of-camp for personal administration or
posted out of the course during to medical reasons. The average age of the recruits at time
2 remained unchanged at 18.3 years old. The distribution of their ethnicity was as
follows: 96.8% Chinese, 1.7% Malay, 1.1% Indian, 0.3% “others” and 0.1% did not
indicate their ethnicity. As for the attrited sample, the average age was also 18.3 years
old. The distribution of their ethnicity was as follows: 96.2% Chinese, 1.9% Malay and
1.9% Indian. Hence, the demographics between the attrited and non-attrited samples were
highly similar. Most importantly, t-tests results indicated no significant differences (at the
.05 alpha level) between the samples on all the measures taken at time 1.

Immediate superiors of the recruits (Section Commanders) and the next-level-up
superiors (Platoon Commanders) were also surveyed at time 2. A total of 60 superiors
participated, representing a response rate of 81.1%. The 60 superiors comprised 46
Section Commanders and 14 Platoon Commanders. The average age of the Section
Commanders and Platoon Commanders were 20.8 and 28.6 years old respectively. The
average tenure of the Section Commanders and Platoon Commanders were 18 months and 3.5 years respectively. The distribution of the ethnicity for the Section Commanders was as follows: 89.1% Chinese, 4.3% Malay and 2.2% Indian and 4.3% “others”. The distribution of the ethnicity for the Platoon Commanders was as follows: 64.3% Chinese, 14.3% Malay and 21.4% Indian.

**Measures**

The measures for the study may be broadly divided into five categories: (1) task-role learning outcomes, (2) organizational enculturation, (3) individual differences variables, (4) perceptions of superior, and (5) other outcomes. A summary of the measures together with the sources and target participants is given in Table 1. Details of the measures are given in Appendix A. Given the relatively high educational qualification of the sample and that English is the main medium for education and business in Singapore, there was no need to translate the questionnaire into other languages.

**Self-efficacy.** A measure of self-efficacy was employed as an indicator of the level of task mastery achieved during socialization. In accordance with Bandura’s (1977) self-efficacy theory and adapting from Jones’ (1986) measure of self-efficacy, seven items (two reverse-scored) were written to measure the respondents’ confidence in successfully executing the knowledge, skills and behavior to produce the required performance in their current and future roles. However, exploratory factor analyses indicated that a subset of four items best captured the construct over time. The four items were: “I am confident of my abilities to perform now and in my next posting”, “I believe I have the knowledge, skills, character and fitness to go to OCS”, “I do not expect any
<table>
<thead>
<tr>
<th>Measure</th>
<th>Source</th>
<th>Items</th>
<th>Recruits</th>
<th>Superiors</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
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<tr>
<td><strong>Task-role learning outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Self-efficacy</td>
<td>Jones (1986), scale modified</td>
<td>7</td>
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<td>X</td>
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<td>X</td>
<td>X</td>
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<td><strong>Organizational enculturation</strong></td>
<td></td>
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</tr>
<tr>
<td>• Knowledge of organizational</td>
<td>New, based on Triandis (1995).</td>
<td>10</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Collectivism and Individualism</td>
<td>Buchholz (1978), scale shortened.</td>
<td>5</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>• Beliefs about work</td>
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<td></td>
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<td><strong>Individual differences</strong></td>
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<tr>
<td>• Need for affiliation</td>
<td>Steers and Braunstein (1976), scale modified.</td>
<td>6</td>
<td>X</td>
<td></td>
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<tr>
<td>• Proactive information seeking</td>
<td>Morrison (1993b), scale shortened.</td>
<td>3</td>
<td>_</td>
<td>X</td>
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<tr>
<td>behavior</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>• Nature of one’s experiences</td>
<td>New.</td>
<td>3</td>
<td>_</td>
<td>X</td>
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<tr>
<td><strong>Perceptions of superior</strong></td>
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<td>• Trust</td>
<td>Shamir et al. (1998).</td>
<td>7</td>
<td>X</td>
<td></td>
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<td>• Pro-organizational culture</td>
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<td>5</td>
<td>X</td>
<td>X</td>
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<td>(collectivism) behavior</td>
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<tr>
<td>• Charismatic leadership behavior</td>
<td>New, based on subscales in Behling and McFillen (1996), Shamir et al.(1998), and Schriesheim and Hinkin (1990).</td>
<td>10</td>
<td>_</td>
<td>X</td>
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<tr>
<td><strong>Other outcomes</strong></td>
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<td></td>
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<tr>
<td>• Stress</td>
<td>Banks (1980).</td>
<td>12</td>
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<td>• Perception of person-</td>
<td>New.</td>
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<td>organization fit</td>
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<tr>
<td>• Organizational commitment</td>
<td>Meyer et al. (1993) Affective Commitment Scale.</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>• Task performance</td>
<td>New.</td>
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<td>_</td>
<td>X</td>
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</table>

Table 1. Measures in the Recruits’ and Superiors’ Surveys
problems adjusting to the training now or in my next posting” and “I am not confident that I can do better than my peers during training” (reversed-scored). Respondents answered using the seven-point Likert scale (“1” is strongly disagree and “7” is strongly agree). The internal consistency reliability for the four-item measure was .81 at time 1 and .84 at time 2.

Role clarity. A measure of role clarity was employed as an indicator of the level of role learning achieved during socialization. Role clarity is generally better known by its inverse, i.e., role ambiguity. The most commonly used measure of role clarity is the six-item role ambiguity scale by Rizzo et al. (1970) who reported internal reliabilities of .78 and .81 for two samples. Although the reliabilities of the scale have generally been found to be acceptable in various studies, the scale has recently come under scrutiny and criticism for its content and construct validity (Harris, 1991; King & King, 1990). Since no other scales have been as thoroughly researched, the strategy is to modify and extend Rizzo et al. (1970) role ambiguity scale. Two items were retained and three items modified. In addition, five items were added to the scale to address the lack of coverage of theoretical domains raised by King and King (1990). Exploratory factor analyses indicated that a subset of six items best captured the construct over time. Five of the six items were from the original scale. Unchanged items from the original scale were “I know what my responsibilities are” and “I know exactly what is expected of me”. Three items from the original scale were modified to suit the context — “I feel certain about how much initiative I can exercise”, “Clear goals and objectives exist for me as a recruit” and “My superior gives clear explanation of what has to be done”. A sixth and new item was “I know how to behave appropriately in discharging my responsibilities”. Respondents
answered using the seven-point Likert scale ("1" is strongly disagree and "7" is strongly agree). The internal consistency reliability for the six-item measure was .78 at time 1 and .78 at time 2.

**Perception of organizational culture.** The assessment of the participants' subjective knowledge was operationalized by measuring their perceptions of the organizational culture. Instead of asking general questions about how knowledgeable the respondents feel about the culture of the organization, a context-based measure was designed to capture the respondents' subjective knowledge. Earlier, the culture of the SAF has been argued to be high on collectivism, or more specifically, vertical collectivism. As such, 10 items (three reverse-scored) based on the collectivistic items in the individualism-collectivism scale by Triandis (1995) were written to capture the respondents' perception, and hence subjective knowledge, of the collectivistic beliefs, values and expectations of the organization. Sample items include "The SAF expects soldiers to respect the decisions by higher authorities whatever they are", "Individuals in the SAF are expected to compromise their own goals and needs for the benefit of the organization" and "There is much room for individual uniqueness and expression in the SAF" (reverse-scored). The respondents were asked to rate each item on how accurately it describes the beliefs, values and expectations of the SAF, using a five-point scale with "1" as very inaccurate, "2" inaccurate, "3" do not know, "4" accurate and "5" very accurate. Two aspects of newcomers' subjective knowledge were examined using this measure. First, at the item level, the similarity of responses between the newcomers and their superiors provided an indication of the similarity of their subjective knowledge of the organizational culture. The further apart the responses between the newcomers and
their superiors, the greater the differences in the perception of the organizational culture between them. Second, the items were aggregated to provide an indicator of how knowledgeable the respondents were. It was assumed that more knowledgeable respondents were also more confident in expressing their perception of the organizational culture. In other words, respondents who had much knowledge of the organizational culture would be less likely to choose the response “3” which is “do not know”. As such, each item was scored according to whether response “3” was chosen and the scores for all 10 items were summed to provide a total score. A maximum score of 10 indicates a highly confident (and hence knowledgeable) respondent whereas a minimum score of 0 indicates a respondent who was not confident (hence less knowledgeable) about his knowledge of the organizational culture. The Kuder-Richardson internal consistency reliability (K-R 20) for time 1 was .64 and for time 2 was .58.

Self-concept related collectivistic beliefs and values. Although a measure of vertical-collectivism at the individual level would probably best match the culture of the SAF, there was only one self-report measure in the literature and the measure did not appear to operationalize the construct too well (Triandis & Gelfand, 1998, Soh & Leong, 2000). Hence, a measure of the broader construct of collectivism, which encompasses vertical-collectivism and had better psychometric properties, was preferred. Triandis, Singelis and colleagues (Singelis et al, 1995; Triandis, 1995; Triandis & Gelfand, 1998) have reported variations of a 32-item measure to capture the collectivism and individualism constructs and the sub-divisions of the vertical-horizontal dimension at the individual level of analysis. A subset of the 32-item measure, i.e., eight items for collectivism and individualism each, has been shown to be cross-culturally valid.
Therefore, the reduced set of items was used as a measure of the collectivistic and individualistic orientation of the newcomers. Since most of the items referred to the self, the measure tapped the respondents' self-concept related beliefs and values and not their general attitude towards the concepts of collectivism or individualism. A sample of the items measuring collectivism-orientation include “I feel good when I co-operate with others”, “It is my duty to take care of my family, even when I have to sacrifice what I want” and “It is important to me that I respect decisions made by my groups”. A sample of the items measuring individualism-orientation include “I rather depend on myself than others”, “It is important to me that I do my job better than others” and “When another person does better than I do, I get tense and aroused”. The respondents used a nine-point Likert scale (“1” being strongly disagree and “9” strongly agree) to rate themselves. The internal consistency reliability for the collectivism subscale was .68 at time 1 and .77 at time 2. The internal consistency reliability for the individualism subscale was .63 at time 1 and .69 at time 2.

Work related collectivistic beliefs/attitude. Newcomers’ beliefs/attitude towards collectivism in the workplace was measured using a subscale from Buchholz’s (1978) Beliefs About Work instrument. The instrument has five different subscales: work ethic, organizational belief system, marxist-related beliefs, humanistic belief system and leisure ethic. Of interest to this study was the organizational belief system subscale which holds that work is valued and meaningful when it serves group interests and that the group is central to an organization. Sample items are “The group is the most important entity in any organization” and “One’s contribution to the group is the most important thing about his work”. In order to keep the questionnaire short, five items based on their relatively
high loadings (> .40) in the original factor structure (Buchholz, 1978) were used instead of the original eight items. The response format is a five-point Likert-type (“1” being strongly disagree and “5” strongly agree) rating scale. Although Buchholz (1978) did not report the internal inconsistency of the subscale, the findings of his study indicated that the subscale had convergent and discriminant validity. This measure was included in this study to cross-validate the self-concept based collectivism subscale. The internal consistency reliability was .59 at time 1 and .62 at time 2.

Need for affiliation. The need for affiliation measure was based on Steers and Braunstein's (1976) Manifest Needs Questionnaire. The instrument was originally developed to measure the needs of achievement, affiliation, autonomy and dominance based on Murray’s (1938) theory. For this study, only items from the need for affiliation subscale were of interest. Steers and Braunstein (1976) reported the internal consistency and test-retest reliability for five-item need for affiliation subscale to be .56 and .75 respectively. A pilot study on an earlier intake of 334 recruits indicated that the subscale did not have acceptable internal consistency (.45). A higher internal consistency of .58 was obtained with a six-item measure that retained three of the original five items. Sample items are “When I have a choice, I try to work in a group instead of by myself” (original item), “I pay a good deal of attention to the feelings of others at work” (original item) and “My energy at work is derived from the people I work with” (new item). Respondents answered using a seven-point Likert scale with frequency descriptors: always, almost always, usually, sometimes, seldom, almost never, and never. The measure was used only at the time 1 and the internal consistency reliability was .53.
Proactive information seeking behavior. The measure for proactive information seeking behavior was an abridged version of the instrument used by Morrison (1993b). The measure has three items which represent the primary modes of information seeking, i.e., ask your superior, ask your peers and observe how others behave. Respondents were asked to indicate how frequently (based on the last 30 days) they have used each of the modes of information seeking “to determine the behaviors and attitudes that the SAF values and expects”. A five-point response format based on objective units of time ("1" is 0-5 times, "2" is 6-10 times; "3" is 11-15 times, "4" is 16-20 times and "5" is 21 or more times) was used, a procedure that was recommended by Morrison (1993b). The measure was used only at time 2 and the internal consistency reliability was .71.

Nature of one’s experiences. Three items were written to measure the affect-based evaluation of the overall experience that the newcomers had. The items were “What is the level of satisfaction with your basic military training experience?”, “How meaningful has your basic military training experience been?” and “How happy are you with your experience in basic military training?”. The response format was a five-point Likert scale with “1” being very negative and “5” very positive. The measure was used only at time 2 and the internal consistency reliability was .85.

Trust in one’s superior. Identification with and trust in one’s superior was measured using Shamir et al. (1998) seven-item scale. Sample items are “I have complete faith in him”, “I trust his judgement and decisions completely” and “He is a good model for me to follow”. Shamir et al. (1998) reported that the measure has an internal consistency of .90 and that it showed the expected convergent validity with leader’s
supportive behavior. The measure was used only at time 2 and the internal consistency reliability was .93.

**Superior's pro-organizational culture (collectivism) behavior.** Since there was no instrument that measures the extent a superior engages in pro-organizational culture behavior, i.e., collectivism in the context of this study, 12 items were written for this purpose. Three of the items were adapted from the vertical collectivism subscale (Triandis, 1995; Triandis & Gelfand, 1998). The other items were developed based on the attributes related to collectivism (e.g., obedience, teamwork and sacrificing for the group) and the different modes of expression (e.g., teaches, talks about, emphasizes and punishes). A pilot study on an earlier intake of 334 recruits was used to refine the measure. Exploratory factor analyses and examination of the descriptive statistics of each item resulted in a five-item measure that has a single factor structure and an internal consistency of .82. The five items are “__ encourages the sacrifice of self-interest for the benefit of the section/platoon”, “__ encourages the section/platoon to stick together, no matter what sacrifices are needed from each one”, “__ emphasizes respecting the decisions made by higher authorities”, “__ stresses the need to follow the chain-of-command in communication” and “__ emphasizes the importance of obedience and teamwork”. Respondents rated the frequency in which their superiors engaged in each of the behavior using a five-point frequency scale (never, seldom, occasionally, often and very often). The measure was used only at time 2 and the internal consistency reliability was .85.

**Superior's charismatic leadership behavior.** Charismatic leadership theories emphasize various leadership behavior that brings about transformational effects on the
followers (Bennis et al., 1988; House & Shamir, 1993). Three clusters of charismatic leadership behavior, i.e., the superior’s inspiring and convincing communication, empowerment behavior and exemplary conduct, are believed to be most appropriate for this study. The communication items are based on the literature on influence tactics (e.g. Schriesheim & Hinkin, 1990; Yukl & Tracey, 1992). In particular, rational persuasion and inspirational appeal tactics were found to be most effective (Yukl & Bruce, 1992) in obtaining the desired outcomes. 13 items were written, three of which were adapted from Schriesheim and Hinkin’s (1990) instrument, to capture the superior’s communication that would be perceived to be rational and inspiring by the subordinates. Seven items, six of which were drawn from Behling and McFillen’s (1996) empowerment scale, were used to measure the superior’s empowerment behavior. Superior’s exemplary conduct was measured using the six-item subscale from Shamir et al. (1998) study. A pilot study on an earlier intake of 334 recruits was used to examine the 26 items. Exploratory factor analyses indicated high multicollinearity among the items. Hence a principal components analysis was carried out to identify the best combination of items that efficiently captured the variance of the single factor. The result was a 10-item measure that comprised seven communication items, two empowerment behavior items and one exemplary conduct item. The measure had a single factor structure and an internal consistency of .93. Sample items are “uses logic to convince” (communication item), “appeals to our moral sense” (communication item), “makes the work to be done sound exciting and challenging” (communication item), “creates opportunities for us to experience success” (empowerment item) and “demonstrates courage” (exemplary conduct item). Respondents rated the frequency in which their superiors engaged in each of the behavior
using a five-point frequency scale (never, seldom, occasionally, often and very often). The measure was used only at time 2 and the internal consistency reliability was .91.

**Stress.** Stress was measured using the short 12-item General Health Questionnaire (Banks et al., 1980; Goldberg, 1972). The instrument was chosen because its contents seemed most appropriate for this study. The self-report instrument gives an overall index of mental health by having respondents indicate on a four-point scale whether they have recently experienced certain stress-related behavior, cognitions and emotions more than the usual frequency. Sample items are “been able to concentrate on whatever you are doing?” and “lost much sleep over worry?” Banks et al. (1980) reported internal consistencies ranging from .82 to .90 and evidence of discriminant validity for employed and unemployed samples. The internal consistency reliability was .88 at time 1 and .89 at time 2.

**Perception of person-organization fit.** Person-organization fit may be assessed using various methods (Edwards, 1994; Kristof, 1996; O’Reilly et al., 1991). The direct measurement method, i.e., self-report of fit, is relevant to this study since perceived congruence has been hypothesized to be an outcome of organizational enculturation. Given that there is no well-established direct measure of person-organization fit in the literature, the measure has to be developed. Five items (two reverse-scored) were written that address fit with five key aspects of the organization. Respondents were asked how well their goals, core beliefs about work, work values, work behavior and attitude towards work are similar or acceptable to the organization. Sample items are “My core beliefs about work are similar to the organization’s beliefs” and “I have work behavior that would not be acceptable in this organization” (reverse-scored). The measure uses a
five-point Likert scale ("1" is strongly disagree and "5" is strongly agree). The measure was used only at time 2 and the internal consistency reliability was .81.

**Organizational commitment.** Since organizational enculturation concerns beliefs and values change towards those of the organization, the affective commitment of the newcomers was of greater interest than their normative or continuance commitment. Meyer et al. (1993) six-item Affective Commitment Scale was preferred over the Organizational Commitment Questionnaire (Porter, Steers, Mowday, & Boulian, 1974). This was because one of the items of the Organizational Commitment Questionnaire overlapped with the person-organization fit measure while none of the items in Meyer et al. (1993) Affective Commitment Scale overlapped with items in the other measures. In any case, both the scales are highly correlated. The correlation ranged from .71 to .89 in a review of six studies by Allen & Meyer (1996). The scale has three reverse-scored items and adopts a seven-point Likert scale ("1" is strong disagree and "7" is strongly agree). Sample items are "This organization has a great deal of personal meaning for me" and "I do not feel a strong sense of 'belonging' to my organization" (reverse-scored). The measure was used only at time 2 and the internal consistency reliability was .90.

**Task performance.** The task performance measure is based on the overall evaluation that takes place at the end of the recruits' eight weeks of training. The immediate superiors of the recruits rated their proficiency. Proficiency was defined as "Overall impression of the basic soldiering knowledge, skills and fitness of a recruit. It excludes attitude or attitude-related behavior". On the nine-point scale, "1" is "Minimum proficiency. Just barely meeting the minimum standards", "5" is "Average. Standards which most recruits have achieved" and "9" is "Excellent proficiency. Beyond
expectations, top 5% in the platoon”. Hence the single-item rating of proficiency, which focuses on the technical component of performance, provided the indicator for task performance.

**Procedure**

Two waves of data collection were carried out using survey questionnaire. The survey at time 1 (first week of February 2000) was conducted during the first week of the recruits’ basic military training. With the permission of the Commanding Officer of the Basic Military Training Center in the Singapore Armed Forces, four companies of recruits of the end-January 2000 intake (which has a population of about 2500 conscripts) were randomly targeted for the study. At the scheduled time of survey, the companies turned up for the survey in the lecture hall and the recruits were then solicited for their voluntary participation. There were neither incentives given for participation nor disincentives given for non-participation. The survey was administered with the help of a neutral third party, i.e., research assistants from the Applied Behavioral Sciences Department of the Ministry of Defence, Singapore. These research assistants are well trained in the administration of surveys. They ensured that the superiors of the recruits were not present during the survey and that there was no coercion to participate. On average, the recruits took about 45 minutes to complete the survey. The questionnaire for the survey at time 1 measured the recruits’ self-efficacy, role clarity, knowledge, beliefs, values, need motives and stress level. Since the design was longitudinal in nature, the survey was not anonymous. The recruits were made aware of the need for their personal identification and assured of the confidentiality of their data in the letter of solicitation (see Appendix B) which was attached to the questionnaire.
Eight weeks later, at the end of their basic military training, the same sample of recruits was solicited for their participation (see Appendix B for the letter) in the time 2 survey (last week of March 2000). The administrative procedure was similar to the survey at time 1. Again participation was voluntary. Besides measuring the same variables from time 1 survey, the recruits’ perceptions of their superiors, the nature of their experiences and their organizational commitment were also measured. Hence, the recruits took a longer time (about 60 minutes) to complete the survey at time 2.

The immediate and next-level-up superiors of the recruits were also solicited for their participation (see Appendix B for the letter) in the second survey. Again the survey administrative procedure was similar to that for the recruits. The superiors responded to a shorter questionnaire that measures their beliefs, values, pro-organizational culture behavior, person-organizational fit, organizational commitment and evaluations of their subordinates’ performance. They took about 30 minutes to complete the questionnaire.
CHAPTER 5

RESULTS

Overview

This chapter is organized into four main sections. The first section presents the descriptive statistics, correlations and reliabilities of the measures. The second section presents the results relating to Hypotheses 1 to 3, i.e., whether the means and variances changed for the hypothesized constructs between time 1 and 2. The third section presents the results relating to Hypotheses 4 to 6, i.e., how well the hypothesized model of predictors and moderators of organizational enculturation fit the data. Finally, the last section presents the results relating to Hypotheses 7 to 9, i.e., how well the hypothesized model of outcomes of task-role socialization and organizational enculturation fit the data.

Except for the items on demographics and perception of organizational culture, all other items were treated as indicators of latent constructs. Because the perception of organizational culture was analysed at the item level, and also, the items were scored and the scores aggregated to provide an overall index, it was not treated as a latent construct. Whenever possible, the data were analyzed with covariance structure modeling, employing the LISREL 8 software (Jöreskog & Sörbom, 1993). Covariance structure
modeling, which includes structural equation modeling (Kelloway, 1998; Kline, 1998), provides more precise estimates of the parameters than t-tests or multiple regression analyses because it takes into account measurement errors and simultaneously estimates all parameters. Furthermore, covariance structure modeling allows for direct model comparisons through the significance testing of nested models.

Means, SDs, Correlations and Reliabilities

Table 2 presents the means, standard deviations, correlations and reliabilities of all the measures for the recruits. The internal consistency alphas ranged from .53 to .93. Most of the alphas were near or above .70 and about half of them were near or over .80. The task performance measure did not have an internal consistency alpha because it was a single-item measure. Therefore, the task performance measure was assumed to have zero measurement error in subsequent covariance structure modeling.

The zero-order correlation matrix in Table 2 provides an indication of the convergent and discriminant validity of the key measures. As expected, self-efficacy (at both time 1 and time 2) was most positively correlated with role clarity and task performance and strongly negatively correlated with stress. As expected, role clarity (at both time 1 and time 2) was positively correlated with self-efficacy and strongly negatively correlated with stress. However, the moderately strong correlations of self-efficacy and role clarity with person-organization fit and organizational commitment that were observed were quite unexpected. The confidence in subjective knowledge of the organizational culture at time 2 was, as expected, positively correlated with proactive information seeking behavior and superiors’ pro-organizational culture behavior. However, the positive significant correlations of confidence in subjective knowledge with
collectivism and individualism were unexpected. As expected, self-concept related collectivism (at both time 1 and time 2) was most strongly positively correlated with collectivistic work beliefs and most strongly negatively correlated with stress, i.e., those with a stronger collectivistic self-concept reported less stress in the organization which has a collectivistic culture. Collectivistic work beliefs (at both time 1 and time 2), as expected, was most strongly positively correlated with collectivism and most strongly negatively correlated with stress. As expected, collectivism and collectivistic work beliefs (at both time 1 and time 2), correlated significantly positively with person-organization fit and affective commitment to the organization while individualism did not significantly correlate with person-organization fit or affective commitment.

Table 3 presents the means, standard deviations, correlations and reliabilities of all the measures for the superiors. The internal consistency alphas ranged from .65 to .88. Like the findings for recruits in Table 2, collectivism was most strongly positively correlated with collectivistic work beliefs, and both were significantly positively related to knowledge of organizational culture and affective commitment. Individualism, was surprisingly significantly positively correlated with collectivism. However, as expected, it was not significantly correlated with collectivistic work beliefs and affective commitment. Interestingly, collectivism and individualism discriminated, in the expected direction, superiors who reported the frequency in which they engaged in pro-organizational (collectivistic) culture behavior.

In sum, the alphas in Table 2 and Table 3 indicated that the measures were generally reliable and they appeared to operationalize the constructs fairly well based on
the observation that the correlations between measures showed the expected convergence and divergence more often than not.

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<th>M</th>
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<th>5</th>
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<td>-.06</td>
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<td>3.62</td>
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<td>.36*</td>
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<td>-.42*</td>
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<td>.01</td>
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<td>.27*</td>
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<td>.14*</td>
<td>.06</td>
<td>.11*</td>
<td>.05</td>
<td>-.22*</td>
<td>.36*</td>
<td>.22*</td>
</tr>
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</table>

Note.


* p < .05.

Table 2. Means, Standard Deviations, Reliabilities and Correlations for Recruits' Measures (N = 718). continued
Continued from Table 2.

<table>
<thead>
<tr>
<th>Measure</th>
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<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
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<th>17</th>
<th>18</th>
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<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
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<td>11. T2KN</td>
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</tr>
<tr>
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<td>.22*</td>
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</tr>
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<td>.03</td>
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<td>.39*</td>
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<tr>
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<td>.23*</td>
<td>.35*</td>
<td>.02</td>
<td>.20*</td>
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<td>.23*</td>
<td>.47*</td>
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<td>.04</td>
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<td>-.10*</td>
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<td>-.29*</td>
<td>-.17*</td>
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<td>.01</td>
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<td>.08*</td>
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<td>.14*</td>
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<td>-.42*</td>
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<td>22. T2ACS</td>
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<td>.63*</td>
<td>.90</td>
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<td>23. T2TP</td>
<td>.05</td>
<td>.08*</td>
<td>-.06</td>
<td>.12*</td>
<td>.06</td>
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<td>.12*</td>
<td>.07</td>
<td>.11*</td>
<td>-.22*</td>
<td>.20*</td>
<td>.18*</td>
<td>-</td>
</tr>
</tbody>
</table>

Note.


* p < .05.

Table 3. Means, Standard Deviations, Reliabilities and Correlations for Superiors' Measures (N = 60).
Changes between Time 1 and Time 2

This section presents the results of the tests of hypotheses 1 to 3. Essentially, the means and variances of various measures between time 1 and time 2 were compared. The analyses employed graphical examination, MANOVAs, t-tests and covariance structure modeling. Covariance structure modeling can be used to compare means (e.g., Jöreskog & Sörbom, 1993; Kline, 1998). One of the main advantages of using covariance structure modeling to compare means is that it allows one to test the factorial invariance of the measures across time. By establishing that the items for the measures load similarly on the factors across time, one can be more confident of interpreting differences in means as arising from real change rather than changes in the participants' conception of the construct over time. Another advantage of covariance structure modeling is that it gives better estimates of the test of the means by taking into account measurement errors.

Hypothesis 1. Hypothesis 1 concerns the change in means of self-efficacy, role clarity and stress of the recruits. Specifically, hypothesis 1(a) predicted an increase in self-efficacy, hypothesis 1(b) predicted an increase in role clarity and hypothesis 1(c) predicted a decrease in stress level in the newcomers. Figure 5 presents the scatterplots of self-efficacy, role clarity and stress between time 1 and time 2. They indicated no abnormality in the distributions. Table 4 presents the paired-samples t-test results. The findings showed that mean self-efficacy at time 2 was not significantly different from that of time 1 at the .05 alpha level. The means of role clarity and stress were both significantly lower at time 2 than at time 1. The effect size (d) for the decrease in stress was moderately strong (-0.61). The use of covariance structure modeling to compare the means across time is commonly done by using multiple-sample covariance structure
Figure 5. Scatterplots for Recruits' Self-efficacy, Role clarity and Stress across time.
<table>
<thead>
<tr>
<th>Measure</th>
<th>df</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>717</td>
<td>4.54</td>
<td>1.34</td>
<td>717</td>
<td>4.60</td>
<td>1.37</td>
<td>1.42</td>
<td>0.05</td>
</tr>
<tr>
<td>Role clarity</td>
<td>717</td>
<td>5.24</td>
<td>0.93</td>
<td>717</td>
<td>5.12</td>
<td>0.90</td>
<td>-3.78**</td>
<td>-0.14</td>
</tr>
<tr>
<td>Stress</td>
<td>717</td>
<td>2.31</td>
<td>0.56</td>
<td>717</td>
<td>1.98</td>
<td>0.53</td>
<td>-16.15**</td>
<td>-0.61</td>
</tr>
</tbody>
</table>

Note.
* significant at the .05 alpha level.
** significant with Bonferroni correction (p < .02) so that family-wise error was held at .05.

Table 4. T-test results for Self-efficacy, Role Clarity and Stress for Recruits at Time 1 and Time 2.

<table>
<thead>
<tr>
<th>Model specification</th>
<th>df</th>
<th>( \chi^2 )</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>IFI</th>
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</thead>
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<tr>
<td>Model 1. Configural model</td>
<td>412</td>
<td>2813.79</td>
<td>.064</td>
<td>.075</td>
<td>.81</td>
<td>.81</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>Model 2. Factorial invariance model: same factor loadings</td>
<td>431</td>
<td>2835.59</td>
<td>.062</td>
<td>.075</td>
<td>.81</td>
<td>.82</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>Model 2 - Model 1</td>
<td>19</td>
<td>21.80 ns</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 3. Factorial invariance model: same factor loadings and factor variances</td>
<td>434</td>
<td>2839.59</td>
<td>.062</td>
<td>.075</td>
<td>.81</td>
<td>.82</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>Model 3 - Model 2</td>
<td>3</td>
<td>4.00 ns</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 4. Factorial invariance model with mean structure: same factor loadings and factor variances</td>
<td>453</td>
<td>3223.86</td>
<td>.065</td>
<td>.073</td>
<td>.78</td>
<td>.80</td>
<td>.81</td>
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</table>

Note.
ns \( \Delta \chi^2 (19) = 21.8, p > .05; \Delta \chi^2 (3) = 4, p > .05. \)

Table 5. Three-factor (self-efficacy, role clarity and stress) Model Fit indices and Comparisons for Recruits at Time 1 and Time 2.
### Table 6. Standardized Factor Loadings and Squared Multiple Correlations for Confirmatory Factor Model of Self-efficacy, Role Clarity and Stress.

<table>
<thead>
<tr>
<th>Measure and items</th>
<th>Time 1 Factor loading</th>
<th>Time 1 R²</th>
<th>Time 2 Factor loading</th>
<th>Time 2 R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-efficacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am not confident that I can do better than my peers during training. (R)</td>
<td>.57</td>
<td>.32</td>
<td>.61</td>
<td>.37</td>
</tr>
<tr>
<td>I am confident of my abilities to perform now and in my next posting.</td>
<td>.84</td>
<td>.70</td>
<td>.89</td>
<td>.79</td>
</tr>
<tr>
<td>I believe I have the knowledge, skills, character and fitness to go to OCS.</td>
<td>.82</td>
<td>.67</td>
<td>.79</td>
<td>.62</td>
</tr>
<tr>
<td>I do not expect any problems adjusting to the training now or in my next posting.</td>
<td>.68</td>
<td>.46</td>
<td>.75</td>
<td>.56</td>
</tr>
<tr>
<td><strong>Role Clarity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel certain about how much initiative I can exercise.</td>
<td>.65</td>
<td>.42</td>
<td>.66</td>
<td>.44</td>
</tr>
<tr>
<td>Clear goals and objectives exist for me as a recruit.</td>
<td>.71</td>
<td>.50</td>
<td>.72</td>
<td>.52</td>
</tr>
<tr>
<td>I know what my responsibilities are.</td>
<td>.64</td>
<td>.41</td>
<td>.66</td>
<td>.44</td>
</tr>
<tr>
<td>I know exactly what is expected of me.</td>
<td>.67</td>
<td>.44</td>
<td>.70</td>
<td>.49</td>
</tr>
<tr>
<td>My superior gives clear explanation of what has to be done.</td>
<td>.42</td>
<td>.17</td>
<td>.43</td>
<td>.18</td>
</tr>
<tr>
<td>I know how to behave appropriately in discharging my duties.</td>
<td>.54</td>
<td>.32</td>
<td>.58</td>
<td>.33</td>
</tr>
<tr>
<td><strong>Stress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Been able to concentrate on whatever you are doing? (R)</td>
<td>.45</td>
<td>.21</td>
<td>.50</td>
<td>.25</td>
</tr>
<tr>
<td>Felt that you are playing a useful part in things? (R)</td>
<td>.50</td>
<td>.25</td>
<td>.52</td>
<td>.27</td>
</tr>
<tr>
<td>Felt capable of making decisions about things? (R)</td>
<td>.47</td>
<td>.22</td>
<td>.50</td>
<td>.25</td>
</tr>
<tr>
<td>Been able to enjoy your normal day-to-day activities? (R)</td>
<td>.52</td>
<td>.28</td>
<td>.51</td>
<td>.26</td>
</tr>
<tr>
<td>Been able to face up to your problems? (R)</td>
<td>.58</td>
<td>.34</td>
<td>.57</td>
<td>.32</td>
</tr>
<tr>
<td>Been feeling reasonably happy all things considered? (R)</td>
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<td>.40</td>
<td>.62</td>
<td>.38</td>
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<tr>
<td>Lost much sleep over worry?</td>
<td>.55</td>
<td>.31</td>
<td>.57</td>
<td>.33</td>
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<tr>
<td>Felt constantly under strain?</td>
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<td>.45</td>
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<td>.48</td>
</tr>
<tr>
<td>Felt you could not overcome your difficulties?</td>
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<td>.58</td>
<td>.77</td>
<td>.59</td>
</tr>
<tr>
<td>Been feeling unhappy and depressed?</td>
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<td>.81</td>
<td>.66</td>
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<tr>
<td>Been losing confidence in yourself?</td>
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<td>.59</td>
<td>.80</td>
<td>.61</td>
</tr>
<tr>
<td>Been thinking of yourself as a worthless person?</td>
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<td>.44</td>
<td>.71</td>
<td>.51</td>
</tr>
</tbody>
</table>

Note.

All factor loadings are significant \((p < .05)\).
analysis to test a hierarchical set of nested models with increasing constraints on the parameters (Meredith, 1993; Reise, Widaman & Pugh, 1993). The results are presented in Table 5.

The first step in covariance structure modeling fitted a three-factor structure for self-efficacy, role clarity and stress across time 1 and time 2 (test of configural invariance) onto the data. The second step constrained the factor loadings for each factor to be invariant across time and tested the fit of the model to the data (test of factorial invariance, same loadings). The second model was nested in the first model. There was a non-significant change \( \Delta \chi^2 (19) = 21.8, p > .05 \) between the configural model \( \chi^2 (412) = 2813.79 \) and the nested factorial invariance model \( \chi^2 (431) = 2835.59 \). This suggests that we can accept the more parsimonious factorial invariance model which indicated that there was measurement equivalence across time for the three measures. Fit indices of RMSEA (.062), SRMR (.075), NFI (.81), NNFI (.82), CFI (.83) and IFI (.83) for the factorial invariance model indicated a range of acceptable to almost acceptable fit by conventional standards. The values associated with good to acceptable fit for RMSEA is \( \leq .08 \), for SRMR is \( \leq .10 \), and for NFI, NNFI, CFI and IFI are \( \geq .90 \) (Kelloway, 1998; Kline, 1998). Besides considering overall model fit, it is important to look at the significance of individual parameters and the variance accounted for. The within-sample standardized factor loadings and squared multiple correlations from the factorial invariance model are presented in Table 6. All factor loadings were significant and the squared multiple correlation ranged from .17 to 70.

The third step, Model 3, constrained the variances of the three factors to be equal across time and compared the model fit to Model 2. There was a non-significant \( \chi^2 \)
change ($\Delta \chi^2 (3) = 4, p > .05$) indicating that the factor variances were invariant across time. The fourth step, Model 4, incorporated the mean structure for the factorial invariance model. The results confirmed the findings of the earlier t-tests in which there was a significant decrease in the factor mean scores, from time 1 to time 2, for role clarity ($\Delta$ factor mean score = -0.15, $t = -2.40$) and stress ($\Delta$ factor mean score = -0.19, $t = -9.24$), and no significant change for self-efficacy ($\Delta$ factor mean score = 0, $t = 0.02$). In sum, hypothesis 1(a) was not supported, i.e., newcomers' job-related self-efficacy did not increase, hypothesis 1(b) was not supported, i.e., newcomers' role clarity did not increase, and hypothesis 1(c) was supported, i.e., newcomers' stress level did decrease.

Hypothesis 2. Hypothesis 2 concerns the change in recruits' subjective knowledge of the organizational culture over time. Specifically, hypothesis 2(a) predicted newcomers' subjective knowledge of the organizational culture to become more similar to those of their superiors over time, and hypothesis 2(b) predicted newcomers to be more confident of their subjective knowledge over time.

To examine hypothesis 2(a), the means and variances of the recruits' responses to 10 questions concerning their perceptions of the collectivistic beliefs, values and expectations of the organization were examined. Two MANOVAs were carried out to compare the means of the 10 items between the recruits at time 1 and their superiors, and between the recruits at time 2 and their superiors. Both Hotelling's Ts showed significant differences (time 1: $F(10, 759) = 8.61$, $p < .05$; time 2: $F(10, 764) = 5.36$, $p < .05$). Therefore, the analyses were followed up by independent t-tests. Paired-samples t-tests were also conducted to examine the changes between time 1 and time 2 for the recruits. The results of the 33 t-tests comparisons are presented in Table 7.
### Organizational culture items

<table>
<thead>
<tr>
<th>Item</th>
<th>Recruits T1</th>
<th>Recruits T2</th>
<th>Superiors T2</th>
<th>$t^a$</th>
<th>$d$</th>
<th>$t^b$</th>
<th>$d$</th>
<th>$t^c$</th>
<th>$d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Duty before pleasure</td>
<td>4.16</td>
<td>3.94</td>
<td>3.22</td>
<td>5.85**</td>
<td>0.22</td>
<td>5.96**</td>
<td>1.08</td>
<td>4.57**</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>0.84</td>
<td>0.83</td>
<td>1.17</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>2. Room for uniqueness (R)</td>
<td>3.50</td>
<td>3.51</td>
<td>3.33</td>
<td>-0.24</td>
<td>-0.01</td>
<td>1.13</td>
<td>0.15</td>
<td>1.26</td>
<td>0.16</td>
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<tr>
<td></td>
<td>1.11</td>
<td>1.04</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Obedient, team player</td>
<td>4.14</td>
<td>3.99</td>
<td>3.88</td>
<td>3.75**</td>
<td>0.14</td>
<td>2.18*</td>
<td>0.30</td>
<td>0.98</td>
<td>0.13</td>
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<tr>
<td></td>
<td>0.86</td>
<td>0.81</td>
<td>0.90</td>
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<tr>
<td>4. Respect decisions made</td>
<td>4.51</td>
<td>4.46</td>
<td>4.41</td>
<td>1.19</td>
<td>0.04</td>
<td>0.89</td>
<td>0.14</td>
<td>0.50</td>
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<td></td>
<td>0.72</td>
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</tr>
<tr>
<td>5. Achievements based on others' effort</td>
<td>3.69</td>
<td>3.54</td>
<td>3.57</td>
<td>3.48**</td>
<td>0.13</td>
<td>0.91</td>
<td>0.13</td>
<td>-0.26</td>
<td>-0.03</td>
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<tr>
<td></td>
<td>0.94</td>
<td>0.90</td>
<td>1.04</td>
<td></td>
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</tr>
<tr>
<td>6. Leaders get more rewards</td>
<td>3.27</td>
<td>3.48</td>
<td>3.57</td>
<td>-4.46**</td>
<td>-0.16</td>
<td>-2.23*</td>
<td>-0.31</td>
<td>-0.69</td>
<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>0.98</td>
<td>0.98</td>
<td>0.98</td>
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</tr>
<tr>
<td>7. Self-sacrifice for org.</td>
<td>4.01</td>
<td>3.88</td>
<td>3.95</td>
<td>3.62**</td>
<td>0.14</td>
<td>0.58</td>
<td>0.08</td>
<td>-0.63</td>
<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>0.80</td>
<td>0.75</td>
<td>0.71</td>
<td></td>
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</tr>
<tr>
<td>8. Lower ranks valued (R)</td>
<td>3.17</td>
<td>3.39</td>
<td>3.71</td>
<td>-4.89**</td>
<td>-0.19</td>
<td>-3.57**</td>
<td>-0.49</td>
<td>-2.06*</td>
<td>-0.29</td>
</tr>
<tr>
<td></td>
<td>1.10</td>
<td>1.10</td>
<td>1.21</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. Self-sacrifice for peers</td>
<td>3.92</td>
<td>3.74</td>
<td>3.86</td>
<td>5.05**</td>
<td>0.19</td>
<td>0.56</td>
<td>0.07</td>
<td>-1.06</td>
<td>-0.15</td>
</tr>
<tr>
<td></td>
<td>0.81</td>
<td>0.82</td>
<td>0.89</td>
<td></td>
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<tr>
<td>10. Creativity valued (R)</td>
<td>4.01</td>
<td>3.92</td>
<td>3.71</td>
<td>2.46*</td>
<td>0.09</td>
<td>2.14*</td>
<td>0.35</td>
<td>1.49</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>0.83</td>
<td>0.83</td>
<td>1.06</td>
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<tr>
<td>Overall confidence</td>
<td>8.07</td>
<td>8.08</td>
<td>8.36</td>
<td>-0.02</td>
<td>-0.00</td>
<td>-1.13</td>
<td>-0.16</td>
<td>-1.18</td>
<td>-0.15</td>
</tr>
<tr>
<td></td>
<td>1.86</td>
<td>1.77</td>
<td>1.91</td>
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</tr>
</tbody>
</table>

Note. Recruits $N = 718$; Superiors $N = 58$. (R): reverse-scored. $t^a =$ recruits time 1 vs time 2; $t^b =$ recruits time 1 vs superiors; $t^c =$ recruits time 2 vs superiors. * significant at the .05 alpha level. ** significant with Bonferroni correction (p < .005) so that family-wise error was held at .05.

Table 7. T-test results for Perceptions of Organizational Culture between Recruits at time 1, Recruits at time 2 and Superiors at time 2.
The findings showed that the means for 7 of the 10 items significantly changed between time 1 and 2 for the recruits, after applying Bonferroni correction ($p < .005$) so that the family-wise error was held at .05. Most importantly, five out of the seven changes (items 1, 3, 5, 6, 8) were unequivocally in the direction of the superiors’ means, indicating that the recruits’ subjective knowledge of the organizational culture was becoming more similar to those of their superiors, thus supporting the hypothesis. The additional significant differences found (before and after Bonferroni correction) in the t-tests between recruits at time 1 and superiors over the t-tests between recruits at time 2 and superiors were consistent with hypothesis 2(a).

The variances of the 10 items for the recruits at time 1 and time 2 were also examined to see if they were significantly different from those of the superiors. Levene’s test for equality of variances indicated that the variances for two items were significantly different at both time 1 and time 2: item 1 (time 1: $F(58, 717) = 28.07, p < .05$; time 2: $F(58, 718) = 33.80, p < .05$) and item 10 (time 1: $F(58, 717) = 11.19, p < .05$; time 2: $F(58, 718) = 11.09, p < .05$). However, the differences were not in the expected direction, i.e., the variances of the newcomers’ responses for items 1 and 10 were surprisingly smaller than the variances of the superiors’ responses.

To examine hypothesis 2(b), the newcomers’ overall confidence in expressing their subjective knowledge of the organization culture was examined. Figure 6 presents the scatterplot for the overall confidence in subjective knowledge change over time. It indicated no abnormality in distribution. Contrary to expectation, the results (see Table 7) showed that newcomers’ overall confidence in expressing their subjective knowledge of the organizational culture did not significantly increase between time 1 and time 2.
Hence, hypothesis 2(a) was not supported, suggesting that the newcomers' subjective knowledge of the organizational culture did not increase over time.

**Figure 6. Scatterplot of Recruits' Confidence in Perceptions over time.**

**Hypothesis 3.** Hypothesis 3(a) predicted that, over time, the recruits' beliefs and values should become similar to those of their superiors, and hypothesis 3(b) predicted that, over time, the recruits' beliefs and values that are implicated by the organizational culture will increase in homogeneity. The beliefs and values of interest were operationalized using three measures – self-concept related collectivism and individualism, and collectivistic work beliefs. The scatterplots of the measures between time 1 and time 2 are presented in Figure 7. They indicated no abnormality in the distributions.
Figure 7. Scatterplots of Collectivism, Individualism and Collectivistic Work Beliefs across time.
Two sets of analyses were performed to test hypothesis 3(a). The first set of analyses was similar to those performed to test hypothesis 2(a). Two MANOVAs were carried out comparing the means of the three measures between the recruits at time 1 and their superiors, and between the recruits at time 2 and their superiors. Hotelling's T for the comparison between recruits time 1 and superior was not significant (F(3, 771) = 0.79, p < .05). On the other hand, Hotelling's T for the comparison between recruits time 2 and superior was significant (F(3, 772) = 2.84, p < .05). Therefore, the latter analysis was followed up by independent t-tests. Paired-samples t-tests were also conducted to see if the means of the three measures changed for the recruits between time 1 and time 2. The results are presented in Table 8. The findings showed that the means for collectivism and individualism significantly decreased from time 1 to time 2 for the recruits. However, the changes indicated movement away from the means of the superiors, contrary to hypothesis 3(a). With regard to the comparisons between recruits time 2 and superiors, individualism was significantly lower for the recruits than the superiors at the .05 alpha level but was not significant after Bonferroni correction (p < .02) was applied. Hence, the results of the t-tests indicate that hypothesis 3(a) was not supported.

The second set of analyses tested the same mean differences but used covariance structure modeling instead (as with the procedure used to test Hypothesis 1(a)-(c)). The results of all the models tested and compared are presented in Table 9. Specifically, the first step fitted a three-factor structure for collectivism, individualism and collectivistic work beliefs onto the data from recruits at time 1 and time 2 and their superiors (test of configural invariance). Given that there were three sets of data, the second step constrained the factor loadings for each factor to be invariant for recruits at time 1 and
time 2 but not for the superiors. The second model was nested in the first model and there was a non-significant $\chi^2$ change ($\Delta\chi^2 (18) = 19.64, p > .05$) between the configural model ($\chi^2 (558) = 2500.69$) and the nested factorial invariance model ($\chi^2 (576) = 2520.47$). This suggests that we can accept the more parsimonious factorial invariance model which indicated that there was measurement equivalence across time for the recruits for the three measures. The third step, Model 3, further constrained the factor loadings for the superiors' data to be equal to those of the recruits at time 1 and time 2. The results showed that there was a significant $\chi^2$ change ($\Delta\chi^2 (18) = 34.73, p < .05$) between this model ($\chi^2 (594) = 2555.06$) and Model 2, indicating that the factor loadings from the superiors' data were significantly different from the recruits' data at time 1 and time 2. Hence, further analyses were confined to the data from the recruits at time 1 and time 2.

The within-sample standardized factor loadings and squared multiple correlations for the items for the recruits at time 1 and time 2 (Model 3) are presented in Table 10. All factor loadings were significant and the squared multiple correlations ranged from .10 to .49.

The fourth step, Model 4, constrained the variances of the three factors to be equal across recruits time 1 and time 2 and compared the model fit to the model 2. There was a non-significant $\chi^2$ change ($\Delta\chi^2 (3) = 6, p > .05$) indicating that the factor variances were invariant for the recruits across time. The fifth step, Model 5, incorporated the mean structure for the factorial invariance model. The results from the fifth step partially confirmed the findings of the earlier t-tests. The significant decrease in the factor mean score (from time 1 to time 2) for individualism ($\Delta$ factor mean score $= -0.29, t = -4.72$) and the non-significant change for collectivistic work beliefs ($\Delta$ factor mean score $= 0, t = 0.23$) were consistent with the t-tests results. However, the non-significant decrease in
factor mean score (Δ factor mean score = -0.06, t = -1.47) for collectivism was contrary to the t-test results. Given the computational power of covariance structural modeling over t-test, the non-significant change in collectivism is probably the more accurate result of the two. Regardless, the results did not alter the lack of support for hypothesis 3(a).

Hypothesis 3(b) proposed that the recruits' beliefs and values implicated by the organizational culture would increase in homogeneity over time. In other words, it was predicted that the variances of the measures would decrease over time. The results of model 4 in the covariance structure modeling analyses above indicated that the three factor variances were not significantly different between time 1 and time 2. Therefore, the results did not support hypothesis 3(b), i.e., the recruits' beliefs and values that were implicated by the organizational culture did not increase in homogeneity over time.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Recruits</th>
<th></th>
<th></th>
<th></th>
<th>Superiors</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T1</td>
<td>T2</td>
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<td>T2</td>
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<td>t</td>
<td>d</td>
<td>t</td>
<td>b</td>
<td>d</td>
</tr>
<tr>
<td>1. Collectivism</td>
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<td></td>
<td></td>
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<tr>
<td>M</td>
<td>7.05</td>
<td>6.97</td>
<td>7.09</td>
<td>3.23**</td>
<td>0.10</td>
<td>-1.07</td>
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</tr>
<tr>
<td>SD</td>
<td>0.78</td>
<td>0.81</td>
<td>0.79</td>
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<tr>
<td>2. Individualism</td>
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</tr>
<tr>
<td>M</td>
<td>5.50</td>
<td>5.26</td>
<td>5.60</td>
<td>8.07**</td>
<td>0.29</td>
<td>-2.23*</td>
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<td>SD</td>
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<td>3. Collectivistic work beliefs</td>
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<tr>
<td>SD</td>
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<td>0.48</td>
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<td></td>
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</tbody>
</table>

Note.
Recruits N = 718; Superiors N = 60.
t' = recruits time 1 and time 2; t' = recruits time 2 and superiors.
* significant at the .05 alpha level.
** significant with Bonferroni correction (p < .02) so that family-wise error was held at .05.

Table 8. T-test results for Collectivism, Individualism and Collectivistic Work Beliefs between Recruits at time 1. Recruits at time 2 and Superiors at time 2.
<table>
<thead>
<tr>
<th>Model specification</th>
<th>df</th>
<th>$\chi^2$</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>IFI</th>
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</thead>
<tbody>
<tr>
<td>Model 1. Configural model</td>
<td>558</td>
<td>2500.69</td>
<td>.048</td>
<td>.12</td>
<td>.62</td>
<td>.63</td>
<td>.67</td>
<td>.68</td>
</tr>
<tr>
<td>Model 2. Factorial invariance model: same factor loadings for recruits at time 1 and time 2</td>
<td>576</td>
<td>2520.33</td>
<td>.048</td>
<td>.12</td>
<td>.62</td>
<td>.64</td>
<td>.67</td>
<td>.68</td>
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<tr>
<td>Model 2 - Model 1</td>
<td>18</td>
<td>19.64*</td>
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<tr>
<td>Model 3. Factorial invariance model: same factor loadings for recruits (both times) and superiors</td>
<td>594</td>
<td>2555.06</td>
<td>.047</td>
<td>.14</td>
<td>.81</td>
<td>.65</td>
<td>.67</td>
<td>.67</td>
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<tr>
<td>Model 3 - Model 2</td>
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<td>34.73*</td>
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</tr>
<tr>
<td>Model 4. Factorial invariance model: same factor loadings and factor variances for recruits at time 1 and time 2</td>
<td>579</td>
<td>2526.33</td>
<td>.047</td>
<td>.12</td>
<td>.62</td>
<td>.64</td>
<td>.67</td>
<td>.68</td>
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<td>Model 4 - Model 2</td>
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<tr>
<td>Model 5. Model 4 with mean structure</td>
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<td>2695.27</td>
<td>.048</td>
<td>.14</td>
<td>.64</td>
<td>.69</td>
<td>.70</td>
<td>.70</td>
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</tbody>
</table>

Note.

$\Delta \chi^2 (18) = 19.64, p > .05; \Delta \chi^2 (3) = 6.00, p > .05$.

$\Delta \chi^2 (18) = 34.73, p < .05$

Table 9. Three-factor (Collectivism, Individualism and Collectivistic Work Beliefs) Model Fit Indices and Comparisons for Recruits at Time 1 and Time 2 and Superiors.
<table>
<thead>
<tr>
<th>Measure and items</th>
<th>Time 1 Factor loading</th>
<th>R²</th>
<th>Time 2 Factor loading</th>
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<td><strong>Collectivism</strong></td>
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<tr>
<td>The well-being of my co-workers is important to me.</td>
<td>.59</td>
<td>.35</td>
<td>.68</td>
<td>.46</td>
</tr>
<tr>
<td>If a co-worker gets a prize I would feel proud.</td>
<td>.52</td>
<td>.27</td>
<td>.60</td>
<td>.36</td>
</tr>
<tr>
<td>To me, pleasure is spending time with others.</td>
<td>.49</td>
<td>.24</td>
<td>.56</td>
<td>.31</td>
</tr>
<tr>
<td>I feel good when I co-operate with others.</td>
<td>.43</td>
<td>.19</td>
<td>.48</td>
<td>.23</td>
</tr>
<tr>
<td>It is important to me that I respect decisions made by my groups.</td>
<td>.33</td>
<td>.11</td>
<td>.41</td>
<td>.17</td>
</tr>
<tr>
<td>Family members should stick together, no matter what sacrifices are required.</td>
<td>.31</td>
<td>.10</td>
<td>.39</td>
<td>.15</td>
</tr>
<tr>
<td>Parents and children must stay together, as much as possible.</td>
<td>.60</td>
<td>.36</td>
<td>.70</td>
<td>.49</td>
</tr>
<tr>
<td>It is my duty to take care of my family, even when I have to sacrifice what I want.</td>
<td>.47</td>
<td>.22</td>
<td>.57</td>
<td>.33</td>
</tr>
<tr>
<td><strong>Individualism</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winning is everything.</td>
<td>.40</td>
<td>.16</td>
<td>.47</td>
<td>.22</td>
</tr>
<tr>
<td>It is important to me that I do my job better than others.</td>
<td>.31</td>
<td>.10</td>
<td>.34</td>
<td>.12</td>
</tr>
<tr>
<td>I often do &quot;my own thing&quot;.</td>
<td>.56</td>
<td>.31</td>
<td>.59</td>
<td>.35</td>
</tr>
<tr>
<td>Competition is the law of nature.</td>
<td>.48</td>
<td>.23</td>
<td>.52</td>
<td>.27</td>
</tr>
<tr>
<td>When another person does better than I do, I get tense and aroused.</td>
<td>.37</td>
<td>.14</td>
<td>.46</td>
<td>.21</td>
</tr>
<tr>
<td>I rather depend on myself than on others.</td>
<td>.42</td>
<td>.18</td>
<td>.48</td>
<td>.23</td>
</tr>
<tr>
<td>I rely on myself most of the time; I rarely rely on others.</td>
<td>.40</td>
<td>.16</td>
<td>.46</td>
<td>.21</td>
</tr>
<tr>
<td>My personal identity independent from others is very important to me.</td>
<td>.41</td>
<td>.17</td>
<td>.44</td>
<td>.19</td>
</tr>
<tr>
<td><strong>Collectivistic Work Beliefs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survival of the group is very important in an organization.</td>
<td>.47</td>
<td>.22</td>
<td>.50</td>
<td>.25</td>
</tr>
<tr>
<td>Working with a group is better than working alone.</td>
<td>.43</td>
<td>.19</td>
<td>.46</td>
<td>.22</td>
</tr>
<tr>
<td>One should take an active part in all group affairs.</td>
<td>.53</td>
<td>.29</td>
<td>.57</td>
<td>.32</td>
</tr>
<tr>
<td>The group is the most important entity in any organization.</td>
<td>.54</td>
<td>.29</td>
<td>.54</td>
<td>.29</td>
</tr>
<tr>
<td>One’s contribution to the group is the most important thing about his work.</td>
<td>.43</td>
<td>.19</td>
<td>.44</td>
<td>.19</td>
</tr>
</tbody>
</table>

**Note.**

All factor loadings were significant (p < .05).

Table 10. Standardized Factor Loadings and Squared Multiple Correlations for Confirmatory Factor Model of Collectivism, Individualism and Collectivistic Work Beliefs.
Fit of Models of Predictors and Moderators of Organizational Enculturation

Hypotheses 4 to 6 address the predictors and moderators of organizational enculturation. Covariance structure modeling was employed to test the model in Figure 3 which captured the hypotheses. Because it would be extremely difficult to fit a measurement model when the number of items is large (Bentler & Chou, 1987; Harris & Schaubroeck, 1991), it is a common practice to first reduce the number of items by creating sub-groups of items through random grouping of items within a factor. As a result, the eight items in collectivism were reduced to four indicators and the six items in need for affiliation were reduced to three indicators. The other measures, comprising five or less items each, retained their original items as indicators.

Predictors of organizational enculturation. Several steps were involved in testing the model in Figure 3. The first step was to fit the more basic and less constrained model to the data. In other words, the moderators were not included in the model and newcomers’ knowledge was allowed to impact their beliefs and values. Specifically, two additional paths were specified: a path from newcomers’ knowledge at time 1 to their beliefs and values at time 1, and a path from newcomers’ knowledge at time 2 to their beliefs and values at time 2. The second step was to test the fit of Model 2 which had the two paths removed, i.e., equivalent to the model as shown in Figure 3 but less the moderators. The results of the model fit and comparison are presented in Table 11. Since Model 2 was nested in Model 1, the change in \( \chi^2 \) was examined. The results showed that the change \( (\Delta \chi^2 (2) = 22.68, p < .05) \) was significant. This suggests that the more parsimonious Model 2 was significantly different from Model 1 and hence we should be careful in rejecting Model 1 even though Model 2 was more parsimonious and had
similar fit indices. Hence, the structural equations for the Model 1, together with the standardized coefficients and squared multiple correlations, are shown in Figure 8. The fit indices from RMSEA (.070), SRMR (.11), NFI (.81), NNFI (.83), CFI (.85) and IFI (.85) indicate acceptable to almost acceptable fit. An important finding was that substantial amount of variance (.61) in newcomers’ collectivism at time 2 was explained.

In sum, the results supported hypotheses 4(a) and 4(b), i.e., the recruits’ increase in confidence in their subjective knowledge was positively related to their proactive information seeking behavior and their superiors’ pro-organizational culture behavior respectively. The results also supported hypothesis 6(a), i.e., the recruits’ change in beliefs and values towards those of the organisation’s was positively related to the nature of their experiences. However, hypothesis 6(b) was not supported, i.e., the recruits’ need for affiliation was not positively related to changes in their beliefs and values towards those of the organisation. Hypotheses 5(a) and 5(b) were examined in the next two sections.

Trust moderator. The next step was to examine whether the recruits’ trust in their superiors (Platoon Commanders) interacted with their superiors’ pro-organizational culture behavior to have a positive effect on their beliefs and values change as predicted in hypothesis 5(a). Interaction effects in structural equation modeling are typically examined using the indicant product analysis procedure or the multi-sample approach. The latter approach is generally preferred for most circumstances, avoiding the multicollinearity and distributional problems that can be associated with the indicant product approach (Rigdon, Schumacker & Wothke, 1998). Hence, the recruit sample was divided into three approximately equal subsamples using the 33rd and 67th percentiles based on
their mean scores for the "trust in one's superior" measure. Specifically, the cut-offs of 3.29 and 3.86 resulted in a low-score subsample (n=235), a medium-score subsample (n=247) and a high-score subsample (n = 235).

Four models with increasing constraints were fitted to the data. The results are presented in Table 12. Configural invariance across the subsamples was specified in Model 1. In Model 2, the factor loadings were constrained to be equal. The $\chi^2$ difference ($\Delta\chi^2(32) = 38.55, p > .05$) between Model 2 and Model 1 was not significant, indicating that there was measurement equivalence across the subsamples. Examination of the path coefficients of the superior’s pro-organizational culture behavior indicated that the coefficients were significantly different from zero for the low-score and high-score groups but not for the medium-score group. Hence, Model 3 was specified to constrain the coefficient for the low-score and high score groups to be equal. The $\chi^2$ difference ($\Delta\chi^2(1) = 0.45, p > .05$) between Model 3 and Model 2 was not significant, indicating that the constraint imposed did not significantly affect model fit. Finally, Model 4 constrained the path coefficient of the superior’s pro-organizational culture behavior to be equal across the three subsamples. The presence of an interaction effect would be indicated by a significant $\chi^2$ difference between Model 4 and Model 3. This is because the relationship between superiors’ pro-organizational culture behavior recruits’ collectivism at time 2 would not be the same across the subsamples, producing unequal coefficients. The non-significant $\chi^2$ change ($\Delta\chi^2(1) = 3.21, p > .05$) between Model 4 and Model 3 suggests that trust in one’s superior (Platoon Commander) did not interact with the superior’s pro-organizational culture behavior to change the recruit’s collectivism. Thus, hypothesis 5(a) was not supported.
### Table 11. Model Fit Indices and Comparisons for Predictors of Organizational Enculturation.

<table>
<thead>
<tr>
<th>Model specification</th>
<th>df</th>
<th>$\chi^2$</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>IFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1. No moderators, paths from newcomers' knowledge to their beliefs and values</td>
<td>245</td>
<td>1096.06</td>
<td>.070</td>
<td>.11</td>
<td>.82</td>
<td>.83</td>
<td>.85</td>
<td>.85</td>
</tr>
<tr>
<td>Model 2. No moderators, no paths from newcomers' knowledge to their beliefs and values</td>
<td>247</td>
<td>1118.74</td>
<td>.070</td>
<td>.11</td>
<td>.81</td>
<td>.83</td>
<td>.85</td>
<td>.85</td>
</tr>
<tr>
<td>Model 2 - Model 1</td>
<td>2</td>
<td>22.68*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. * $\Delta \chi^2 (2) = 22.68, p < .05.$

### Table 12. Model Fit Indices and Comparisons for the Trust Moderator in Organizational Enculturation.

<table>
<thead>
<tr>
<th>Model specification</th>
<th>df</th>
<th>$\chi^2$</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>IFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1. Configural invariance</td>
<td>735</td>
<td>1573.30</td>
<td>.040</td>
<td>.12</td>
<td>.74</td>
<td>.82</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td>Model 2. Invariant factor loadings</td>
<td>767</td>
<td>1611.85</td>
<td>.039</td>
<td>.12</td>
<td>.73</td>
<td>.83</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td>Model 2 - Model 1</td>
<td>32</td>
<td>38.55ns</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 3. Invariant factor loadings and coefficient (where interaction is predicted) for 2 subsamples</td>
<td>768</td>
<td>1612.30</td>
<td>.039</td>
<td>.12</td>
<td>.73</td>
<td>.83</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td>Model 3 - Model 2</td>
<td>1</td>
<td>0.45ns</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 4. Invariant factor loadings and coefficient (where interaction is predicted) for 3 subsamples</td>
<td>769</td>
<td>1615.51</td>
<td>.039</td>
<td>.12</td>
<td>.73</td>
<td>.83</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td>Model 4 - Model 3</td>
<td>1</td>
<td>3.21ns</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. ns $\Delta \chi^2 (32) = 38.55, p > .05; \Delta \chi^2 (1) = 0.45, p > .05; \Delta \chi^2 (1) = 3.21, p > .05.$
<table>
<thead>
<tr>
<th>Model specification</th>
<th>df</th>
<th>$\chi^2$</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>IFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1. Configural invariance</td>
<td>735</td>
<td>1585.95</td>
<td>.040</td>
<td>.11</td>
<td>.73</td>
<td>.81</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>Model 2. Invariant factor loadings</td>
<td>767</td>
<td>1613.75</td>
<td>.039</td>
<td>.11</td>
<td>.73</td>
<td>.82</td>
<td>.83</td>
<td>.84</td>
</tr>
<tr>
<td>Model 2 - Model 1</td>
<td>32</td>
<td>27.80*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 3. Invariant factor loadings and coefficient (where interaction is predicted) for 2 subsamples</td>
<td>768</td>
<td>1614.34</td>
<td>.039</td>
<td>.11</td>
<td>.73</td>
<td>.82</td>
<td>.83</td>
<td>.84</td>
</tr>
<tr>
<td>Model 3 - Model 2</td>
<td>1</td>
<td>0.59*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model 4. Invariant factor loadings and coefficient (where interaction is predicted) for 3 subsamples</td>
<td>769</td>
<td>1618.58</td>
<td>.039</td>
<td>.11</td>
<td>.73</td>
<td>.82</td>
<td>.83</td>
<td>.83</td>
</tr>
<tr>
<td>Model 4 - Model 3</td>
<td>1</td>
<td>4.24*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note.

* $\Delta \chi^2 (1) = 4.24, \ p < .05$.

Table 13. Model Fit Indices and Comparisons for the Leadership Behavior Moderator in Organizational Enculturation.
Newcomer's subjective knowledge of collectivistic organizational culture (Time 1) → .42* 
Newcomer's subjective knowledge of collectivistic organizational culture (Time 2) 

Newcomer's proactive information seeking behavior (Time 2) → .12* 
Superior's pro-organizational culture behavior (Time 2) → .21* 
Newcomer's self-concept related Collectivism (Time 2) 

Newcomer's self-concept related Collectivism (Time 1) → .12* 
Newcomer's need for affiliation (Time 1) → .69* 
Newcomer's positive experience (Time 2) → .22* 
Newcomer's self-concept related Collectivism (Time 2) 

Figure 8. Structural Equation Model of Predictors of Organizational Enculturation for Collectivism (Standardized Solution)
Figure 9. Structural Equation Model of Predictors and Moderator (Superior’s Leadership Behavior) of Organizational Enculturation for Collectivism (Standardized Solution)
Leadership behavior moderator. The analyses were repeated to examine hypothesis 5(b), i.e., the effects of the superiors’ pro-organizational culture behavior on the recruits’ beliefs and values change will be moderated by the superiors’ charismatic leadership behavior. Again the recruit sample was divided into three approximately equal subsamples using the 33rd and 67th percentiles but this time it was based on their mean scores for the “superior’s charismatic leadership behavior” measure. Specifically, the cut-offs of 3.30 and 3.90 resulted in a low-score subsample (n=229), a medium-score subsample (n=252) and a high-score subsample (n = 236).

Four models with increasing constraints were fitted to the data. The results are presented in Table 13. Configural invariance across the subsamples was specified in Model 1. The program run indicated that one of the error variances was not identified. Such a problem is not uncommon and one possible cause was a poor initial value that was used for estimation. Hence, the value from the previous analysis (of the trust moderator) was used as the initial value and the program run became successful. In Model 2, the factor loadings were constrained to be equal. The $\chi^2$ difference ($\Delta \chi^2 (32) = 27.80, p > .05$) between Model 2 and Model 1 was not significant, indicating that there was measurement equivalence across the subsamples. Examination of the path coefficients of the superior’s pro-organizational culture behavior indicated that the coefficients were significantly different from zero for the medium-score and high-score groups but not for the low-score group. Hence, Model 3 was specified to constrain the coefficient for the medium-score and high score groups to be equal. The $\chi^2$ difference ($\Delta \chi^2 (1) = 0.59, p > .05$) between Model 3 and Model 2 was not significant, indicating that the constraint imposed did not significantly affect model fit. Finally, Model 4 constrained the path
coefficient of the superior's pro-organizational culture behavior to be equal across the three subsamples. As before, the presence of an interaction effect would be indicated by a significant $\chi^2$ difference between Model 4 and Model 3. This is because the relationship between superiors' pro-organizational culture behavior and recruits' collectivism at time 2 would not be the same across the subsamples, producing unequal coefficients. The significant $\chi^2$ change ($\Delta \chi^2 (1) = 4.24, p < .05$) between Model 4 and Model 3 therefore suggests that the superiors' (Platoon Commanders) charismatic leadership behavior interacted with the superiors' pro-organizational culture behavior to change the recruits' collectivism. Thus, hypothesis 5(b) was supported.

Specifically, superior's pro-organizational culture behavior was significantly positively related to newcomers' collectivism when the superior was perceived to be exercising moderate to high levels of charismatic leadership behavior. Conversely, superior's pro-organizational culture behavior was not significantly related to newcomers' collectivism when the superior was perceived to be low on charismatic leadership behavior. The interaction effects are shown in the structural equations for the low-score and high-score subsamples in Figure 9. The fit indices of Model 3, i.e., RMSEA (.039), SRMR (.11), NFI (.73), NNFI (.82), CFI (.83) and IFI (.84), indicate good (RMSEA), almost acceptable (SRMR) and weak fit (NFI, NNFI, CFI and IFI). A good amount of variance (.51 - .53) was explained by the model.

Fit of Models of Outcomes of Task-Role Socialization and Organizational Enculturation

Hypotheses 7 to 9 are propositions about the outcomes of task-role socialization and organizational enculturation. Covariance structure modeling was employed to test the model in Figure 4 (which captured all the hypotheses) based on time 2 data. As
mentioned earlier, to avoid computational problems, it is a common practice to first reduce the number of items by creating sub-groups of items through random grouping of items within a factor. As a result, the eight items in collectivism were reduced to four indicators, the six items in role clarity were reduced to three indicators, the five items in person-organization fit were reduced to three indicators, the six items in affective commitment scale were reduced to three indicators, and the 12 items in stress were reduced to three indicators. Because task performance was measured using the superior’s rating and not all superiors participated in the study, the sample N was reduced to 704. The task performance measure, like the confidence in the perception of the organizational culture, was treated as measured without error since it had only one indicator.

Besides testing how well the hypothesized model in Figure 4 fit the data, an exploratory approach was also adopted to see whether another model with equally logical paths could fit the data better. This was possible given the large N. The strategy was to first fit the model in Figure 4 on half the sample. In doing so, the fit of the model can be assessed and suggestions for improving the model can be obtained. The next step was to cross-validate the refined model using the other half of the sample. If the refined model fits well in the cross-validation sample, then the effects of capitalization on chance can be ruled out and greater confidence can be bestowed on the refined model.

The model as shown in Figure 4 was fitted to the data from 352 recruits, randomly selected from the 704 recruits. The fit indices are shown in Table 14. RMSEA (.076), CFI (.91) and IFI (.91) indicated acceptable fit while NNFI (.89) and NFI (.87) indicated almost acceptable fit. The standardized coefficients and squared multiple correlations are presented in Figure 10. 5 out of the 12 hypothesized direct paths did not reach
significance. In other words, except for hypotheses 7(c), 7(d), 7(f), 8(a) and 9(d), the other hypotheses were supported. The results showed that role clarity was not significantly related to stress (hypothesis 7(c)), stress was not significantly related to task performance (hypothesis 7(d)), role clarity was not significantly related to task performance (hypothesis 7(f)), confidence in subjective knowledge was not significantly related to self-efficacy (hypothesis 8(a)), and organizational commitment was not significantly related to task performance (hypothesis 9(d)). A good amount of variance in organizational commitment (.65), self-efficacy (.59) and stress (.36) were explained. However, not much of the variance in role clarity (.02), person-organizational fit (.15) and task performance (.14) were explained.

The modification indices of the fitted model were examined for suggestions for improvement. As the use of modification indices has the tendency to capitalize on chance to enhance the fit of the model (MacCallum, 1986), the refined model was fitted across the original (calibration) sample and a cross-validation sample (the other half of the 704 recruits) using the multi-sample approach. If the refined model did indeed capitalize on chance, it would not fit the cross-validation sample’s data well when the parameters are constrained to be similar. As before, Model 1 was specified as a configural invariant model where the factor loadings were free to vary across the samples. In Model 2, the factor loadings were constrained to be equal. The results of the fit of Model 1 and Model 2 and the comparison are presented in Table 14. The $\chi^2$ difference ($\Delta \chi^2(14) = 18.76, p > .05$) between Model 2 and Model 1 was not significant, indicating that there was measurement equivalence across the two samples. The next step, Model 3, was to constrain the path coefficients to be invariant across the two samples. The non-significant
$\chi^2$ change ($\Delta \chi^2 (9) = 6.84, p < .05$) between Model 3 and Model 2 suggests that the coefficients were not significantly different from each other across samples, and hence it was unlikely that the modifications to the hypothesized model capitalized on chance. The fit indices of Model 3 showed that the refined model had very good fit to good fit to the data. The standardized coefficients and squared multiple correlations of the refined model for the calibration and cross-validation samples are presented in Figure 11. More variances were accounted for in the refined model, especially for role clarity, stress and self-efficacy.

The main differences between the hypothesized model and the refined model were in three new paths and the lack of direct paths between some of the constructs. The hypothesized model did not predict relationships between the factors of organizational enculturation (collectivism and person-organization fit) with the outcomes of task-role socialization (self-efficacy and role clarity) whereas the refined model indicated that collectivism and person-organization fit were significantly related to role clarity and self-efficacy. Also, the hypothesized model predicted direct paths from subjective knowledge to self-efficacy, role clarity to stress, and role clarity to task performance. But in the refined model, the path from subjective knowledge to self-efficacy was not significant, and self-efficacy completely mediated the influence of role clarity on stress and task performance. Finally, stress and organizational commitment in the hypothesized model had direct effects on task performance, however, in the refined model, the direct effects were not significant.
<table>
<thead>
<tr>
<th>Model specification</th>
<th>df</th>
<th>$\chi^2$</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>IFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesized model in Figure 4</td>
<td>199</td>
<td>601.61</td>
<td>.076</td>
<td>.19</td>
<td>.87</td>
<td>.89</td>
<td>.91</td>
<td>.91</td>
</tr>
<tr>
<td>Model 1. Refined model</td>
<td>402</td>
<td>823.64</td>
<td>.039</td>
<td>.06</td>
<td>.91</td>
<td>.94</td>
<td>.95</td>
<td>.95</td>
</tr>
<tr>
<td>configural invariance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2. Refined model: invariant factor loadings</td>
<td>416</td>
<td>842.14</td>
<td>.038</td>
<td>.06</td>
<td>.91</td>
<td>.94</td>
<td>.95</td>
<td>.95</td>
</tr>
<tr>
<td>Model 2 – Model 1</td>
<td>14</td>
<td>18.50*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3. Refined model: invariant factor loadings and path coefficients</td>
<td>426</td>
<td>850.31</td>
<td>.038</td>
<td>.07</td>
<td>.90</td>
<td>.95</td>
<td>.95</td>
<td>.95</td>
</tr>
<tr>
<td>Model 3 – Model 2</td>
<td>10</td>
<td>8.17*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note.

* $\Delta \chi^2 (14) = 18.50, p > .05$; $\Delta \chi^2 (10) = 8.17, p > .05$.

Table 14. Model Fit Indices and Comparisons for Outcomes of Task-Role Socialization and Organizational Enculturation.
Figure 10. Structural Equation Model of Outcomes of Task-Role Socialization and Organizational Enculturation (Standardized Solution)
Figure 11. Refined Structural Equation Model of Outcomes of Task-Role Socialization and Organizational Enculturation (Standardized Solution)
This chapter is organized into three main sections. The first section discusses the findings and support for the hypotheses. The second section focuses on the contributions of the study and their implications. The third section presents the limitations of the study and identifies future research directions.

Interpretation of Findings and Support for Hypotheses

The study addresses three main questions that were drawn from the organizational enculturation framework (Figure 2). The first question was whether task-role socialization and organizational enculturation occurred in newcomers in a relatively short period of time (eight weeks) in an organization with a strong and homogenous culture and with a strong orientation program. More specifically, changes that were expected to occur as a result of task, role and organizational culture learning were examined with hypotheses 1(a) to 3(b). The results showed that hypotheses 1(c) and 2(a) were supported, hypotheses 1(a), 1(b), 2(b) and 3(b) were not supported and hypothesis 3(a) could not be adequately tested.
Hypotheses 1(a) and 1(b) proposed an increase in self-efficacy and role clarity respectively from task and role learning. Hypothesis 1(c) proposed a corresponding decrease in stress. The findings showed that there was no change in overall self-efficacy, a decrease in overall role clarity and a moderate decrease in stress between week 1 and week 8. The decrease in stress was expected as the newcomers became adapted to their new environment. However, the explanation does not appear to come from self-efficacy or role clarity (even though they were strongly negatively correlated with stress – Table 2 and Figure 11) as evident from the findings that self-efficacy did not significantly increase and that role clarity significantly decreased.

The main reason for the reduction in stress is probably due to the specific context, i.e., the second survey (week 8) took place at the end of the recruits' basic military training, a time when performance evaluation was over and the training schedule was a lot more relaxed. The same context is also the probable reason for the decrease in role clarity and unchanged self-efficacy. The recruits would be receiving their posting notification the following week and adopting new roles as they are posted to more advanced schools for further training. They were probably more uncertain of their role in week 8 (because of the impending change of role) than week 1 when superiors often take time and effort to orientate the recruits by telling them what behavior are expected of them. Similarly, self-efficacy, which was expected to increase but did not, was likely to be affected by the impending expectation of having to learn new knowledge and skills in their new role. When there was no impending role change, Chan (2000) demonstrated that self-efficacy and role clarity did increase over a period of four months for 146 doctoral program newcomers. Another possible reason for the lack of change observed in
the self-efficacy measure is that the measure assessed general job-related self-efficacy and was not task-specific enough to detect changes that might have occurred from task-related learning.

Hypothesis 2(a) was supported by the results. The recruit's perceptions (or subjective knowledge) of the organizational culture did become more similar to those of their superiors between week 1 and week 8. Specifically, the means of 5 out of 10 items for the recruits moved towards the means of the superiors' between time 1 and time 2. For example, the recruits' endorsement that "The SAF believes that a good soldier is one who is obedient and a team-player than one who is independent and creative" was an accurate description of the SAF weakened, over time, in the direction of the endorsement by their superiors. The recruits' endorsement that "Despite the rank structure in the SAF, the opinions of those holding lower ranks are equally valued" was an inaccurate description strengthened, over time, in the direction of the endorsement by their superiors. The finding that the variances for 2 out of the 10 items were significantly smaller for the recruits than superiors suggests that the recruits had a more stereotypical image of the SAF for those items.

Hypothesis 2(b) was not supported by the results. The recruits' confidence in expressing their perceptions (or subjective knowledge) of the organizational culture did not increase between time 1 and time 2, as would be expected from a gain in cultural knowledge from their knowledge acquisition. It appears that the recruits already had (or felt they had) substantial amount of knowledge of the organizational culture upon organizational entry. On hindsight, this is not surprising given that entering the military service is a significant event and certain amount of anticipatory socialization would have
taken place. Since all male citizens are conscripted sometime in their youth in Singapore, the recruits would have easy access to information about the organizational culture from their male siblings, relatives or friends prior to their organizational entry.

In sum, the findings on the recruits’ perceptions indicate that the recruits were highly confident of their subjective knowledge of the organizational culture in week 1 and their confidence did not increase when measured 8 weeks later. Some of the subjective knowledge were highly similar to those of their superiors while others were based on a stereotypical image of the organization. Over time, their subjective knowledge of the organizational culture did converge with those of their superiors. The convergence finding is consistent with Thomas and Anderson (1998) study which found that expectations of recruits in the British military grew in similarity with those of the experienced soldiers.

Hypothesis 3(a), i.e., newcomers’ beliefs and values implicated by the strong organizational culture would become congruent with those of their superiors over time, was not supported by the results. There was no significant change in means in the recruits’ collectivism and collectivistic work beliefs, although their individualism did significantly decrease with a small effect size. Actually, the hypothesis could not be adequately tested because the superiors’ collectivism and collectivistic work beliefs were not significantly higher than those of the recruits at time 1, as would be expected from the longer period of organizational enculturation for the superiors. At the minimum, the superiors had been in the organization for 6 months. In fact, the average tenure of the Section Commanders and Platoon Commanders were 18 months and 3.5 years respectively.
Two reasons are suggested for the lack of higher scores for the superiors. The first reason is the stability of their beliefs and values over time. Clearly, if self-concept related collectivism and collectivistic work beliefs were highly stable, then that would provide an explanation for the lack of change. Drawing from the recruits' data, the test-retest correlations (over a period of two months) from Table 2 showed that collectivism and collectivistic work beliefs were moderately stable, i.e., .61 and .54 respectively. Figure 8 shows that the temporal reliability for collectivism can reach as high as .69. Hence, generalizing the findings to the superiors, it is likely that the inherent stability of the constructs was one important reason for the similar scores observed between the superiors and the newcomers.

The second reason is likely related to the motivation of the superiors to emotionally attach themselves to the organization. Only 7 out of the 60 superiors (11.2%) were career or career-oriented soldiers. The others would serve the required time and leave the organization. In other words, the non-career superiors did not choose to be in the organization and hence would likely be less receptive than career or career-oriented superiors to organizational influences that attempt to shape their personal beliefs and values. To explore this possibility, the superiors were divided into two groups -- career or career-oriented superiors and non-career superiors, and t-tests were performed on the collectivism and collectivistic work beliefs scores. The mean scores of both measures were indeed higher for the career or career-oriented superiors (M = 7.52, SD = 0.67 for collectivism; M = 4.06, SD = 0.22 for collectivistic work beliefs) compared to the non-career oriented superiors (M = 6.99, SD = 0.83 for collectivism; M = 3.81, SD = 0.46 for collectivistic work beliefs). But because of low power (1-β < .10) from the extremely
small sample size of the career or career-oriented superiors, the non-significance differences between both groups cannot be unequivocally interpreted that no true differences exist. After all, the effect sizes for collectivism ($d = 0.65$) and collectivistic work beliefs ($d = 0.57$) were moderately large.

Hypothesis 3(b), i.e., newcomers’ beliefs and values implicated by the strong organizational culture would increase in homogeneity over time, was not supported by the results. There was no significant reduction in variances in all the three measures between time 1 and time 2. Again, the result could be explained by the finding that the superiors were no more collectivistic or no less individualistic than the recruits. Hence, there was no overall strong influence to affect the homogeneity of the recruits’ collectivistic and individualistic beliefs and values.

Hypotheses 4(a) to 6(b) addressed the second main question of the study, i.e., what were the predictors and moderators of organizational enculturation. Figure 8 shows the model that captured the results of the hypotheses without the effects of moderators while Figure 9 shows the results that include the superiors’ charismatic leadership behavior as a moderator. Model comparison indicated that model fit would be significantly affected if paths from knowledge to collectivism were omitted, even though the path coefficients were not strong. Hence the original hypothesized model (Figure 3) was modified to include the two paths as shown in Figure 8 and Figure 9, suggesting that the process of cultural knowledge acquisition might not be totally independent from the process of internalization of organizational beliefs and values. Fit indices tell us that both models (Figure 8 and Figure 9) fit the data sufficiently well. More importantly, a substantial amount of variance in collectivism at time 2 ($0.51 - .61$) was explained and part
of that variance (.10 - .13) was explained by the hypothesized factors other than collectivism at time 1.

Figure 8 shows that there was support for Hypotheses 4(a) and 4(b). Deviations in the recruits' confidence in expressing their subjective knowledge of the organizational culture at time 2 from time 1 were significantly correlated with their proactive information seeking behavior and their superiors' pro-organizational culture behavior. In other words, recruits who answered more of the subjective knowledge questions at time 2 were more proactive information seekers and had superiors who engaged in pro-organizational culture behavior. However, the relationships were not very strong and only a moderate amount of variance in the confidence in subjective knowledge at time 2 (.19 - .27) was accounted for. Furthermore, the relationship between the recruits' proactive information seeking behavior and their knowledge appeared to be affected by different levels of superiors' charismatic leadership behavior (Figure 9).

Hypothesis 5(a) was not supported, i.e., trust in the superiors and the superiors' pro-organizational culture behavior did not interact to affect the recruits' change in collectivism. Surprisingly, the results did not show that trust was a significant moderator. One would have expected a trusted superior to be more influential than a less trusted superior. A couple of reasons are offered here. First, it has been suggested by Mayer et al. (1995) that trust is not unidimensional but comprises perceptions of ability, benevolence and integrity of the trustee. Perhaps the perception of benevolence in the superior, i.e., the concern and willingness to do good to the subordinate, is the essential component that would moderate the effectiveness of the superiors' pro-organizational culture behavior. A unidimensional measure of trust, as the one used in this study, would have masked the
effects. The second reason could be an alternative explanation based on the Elaboration Likelihood Model of Petty and Cacioppo (1986). Superiors’ pro-organizational culture behavior are likely to engage the central route of information processing of the recruits given that they impact on the recruits’ self-concept related beliefs and values. As such, the persuasiveness of the messages themselves (as communicated by the charismatic leadership behavior of the superiors) was likely to be a more important factor than the perceived attributes of the superiors, e.g., credibility or trustworthiness, in facilitating change in the recruits’ collectivism.

Figure 9 shows that Hypothesis 5(b) was supported, i.e., superiors’ pro-organizational culture behavior did systematically covary with the recruits’ change in collectivism and the effect was moderated by the superiors’ charismatic leadership behavior. In other words, recruits who had higher collectivism scores at time 2 (after partialling out the effects of collectivism scores at time 1) reported they had superiors who were high in pro-organizational culture behavior and charismatic leadership behavior. Put in another way, it appeared that superiors who used effective behavior to communicate and emphasize collectivism did help the recruits internalize such beliefs and values. However, the results suggested a cut-off point instead of an increasing effect of charismatic leadership behavior on pro-organizational culture behavior. As long as the superiors were perceived to exercise at least a moderate amount of charismatic leadership behavior, there was a fixed significant positive relationship between their pro-organizational culture behavior and changes in the recruits’ collectivism.
Hypothesis 6(a) was supported by the results. As shown in Figure 8 and Figure 9, the recruits' positive evaluation of their experience significantly covaried with their collectivism at time 2 beyond the influence from the superiors' pro-organizational culture behavior. Contrary to prediction, hypothesis 6(b) was not supported, i.e., the recruits' need for affiliation at time 1 did not explain additional variance in collectivism at time 2. However, a weak relationship did appear when superiors' charismatic leadership behavior was high (see Figure 9). One possibility for the lack of relationship between need for affiliation and the predicted change is the context of the situation. As mentioned earlier, the recruits did not apply to join the military, they were conscripted. As such, although recruits high in need for affiliation were eager to achieve social integration, they were surrounded by peers who did not feel a great need to emotionally attach themselves to the organization. Hence there is little pressure for the high need for affiliation recruits to internalize the beliefs and values of the organizational culture. However, when recruits were led by superiors they held in regard, need for affiliation did weakly correlate with change in collectivism.

Hypotheses 7(a) to 9(d) addressed the third main question of the study, i.e., what were the outcomes of organizational enculturation and how did they compare with task and role socialization (see Figure 10). Role clarity did have a positive relationship with self-efficacy (hypothesis 7(a) was supported). Self-efficacy did negatively covary with stress (hypothesis 7(b) was supported) but the effects of role clarity on stress appeared to be mediated completely by self-efficacy (hypothesis 7(c) was not supported). Similarly, self-efficacy positively covaried with task performance (hypothesis 7(e) was supported) but the path from role clarity to task performance was not direct but mediated completely.
by self-efficacy (hypothesis 7(f) was not supported). Contrary to expectation, stress did not significantly relate to task performance (hypothesis 7(d) was not supported). One possible reason is that the stress measured is the recruits' "background" or general level of stress. Task performance would have been better predicted by specific task-related anxiety than a general level of stress.

Hypothesis 8(a) was not supported. The expected positive relationship between confidence in subjective knowledge and self-efficacy was not found. Instead, the relationship was mediated by role clarity. Hypothesis 8(b) was supported. There was a weak relationship between confidence in subjective knowledge of the organizational culture and role clarity (see Figure 10), supporting the assumption that role expectations are embedded in the context of the organizational culture.

Hypotheses 9(a) to 9(d) addressed the outcomes of internalization of organizational beliefs and values. Specifically, what were the outcomes of high collectivism given the context? The results supported hypotheses 9(a), 9(b) and 9(c) but not 9(d) (see Figure 10). As predicted in hypothesis 9(a), recruits who had self-concept related beliefs and values that were congruent to the beliefs and values of the organizational culture, i.e., collectivism, did perceive themselves to have a better fit with the organization than those who had less congruent beliefs and values. This is consistent with previous studies reviewed (Kristof, 1996) that "objective" measures of person-environment fit are generally positively correlated with self-perceived person-environment fit. In other words, people are generally aware of their own beliefs and values and those of the organization to make a reasonable judgement of fit.
Hypothesis 9(b) was supported by the results. As predicted and consistent with the literature, perceived person-organization fit was negatively related to stress. Similarly, hypothesis 9(c) was supported by the results and consistent with the literature. Perceived person-organization fit was positively related to organizational commitment. However, the strength of the relationships was not equal. The relationship with organizational commitment was very strong while the relationship with stress was weak.

Hypothesis 9(d), which predicted a weak positive relationship between organizational commitment and task performance, was not supported. The result was not too surprising since the relationship between organizational commitment and job performance (in which task performance is a component) has been noted to be a tenuous one in the literature (e.g., Meyer & Allen, 1997). Job or task performance is generally known to be better predicted by task-related knowledge and skills, general cognitive ability and situational determinants.

The aim of the model in Figure 10 was to simultaneously examine the outcomes of task and role socialization and organizational enculturation as proposed in hypotheses 7(a) to 9(d). While the model did a reasonably good job in explaining the overall pattern of covariance in the data, exploratory analysis showed that the model could be improved if five paths were removed and three others added. The paths removed were the non-significant paths. Because of the post-hoc nature of adding the paths, they were allowed only after they were considered theoretically plausible. The refined model, as shown in Figure 11, shows a new path from collectivism to role clarity, perceived person-organization fit to role clarity, and perceived person-organization fit to self-efficacy. It appears that when the recruits' personal beliefs and values were congruent with those of
the organizational culture, they perceived greater clarity in their role. It is plausible that such recruits had cognitive frames that allow them to better understand their role demands and expectations (which are embedded in the context of the culture) imposed on them than those who had beliefs and values that were less congruent with those of the organization's. It also appears that when the recruits felt they fit in the organization, they perceived greater clarity in their role. Further, perceiving oneself to have fit with the organization also positively related to self-efficacy. It is plausible since the perception of fit carries the connotation that "I should do well since I fit in", the latter being a source for self-efficacy.

Summary. The results showed that the newcomers were highly confident of their subjective knowledge of the organizational culture at their first week in the organization. However, their subjective knowledge appeared to be somewhat different from the subjective knowledge of their superiors. Eight weeks later, the newcomers' confidence in their subjective knowledge of the organizational culture remained at the same level. However, their subjective knowledge of the beliefs and values of the organization did become more similar to those of their superiors.

As for internalization of the organizational beliefs and values as their own, no overall change in mean scores was found in the newcomers across time. As expected, the newcomers' beliefs and values were relatively stable. Nevertheless, changes did occur between week 1 and week 8, and part of the changes covaried with the nature of the newcomer's experience and the superior's pro-organizational culture behavior, the latter being moderated by the superior's charismatic leadership behavior. In other words, it appeared that some of the internalization of the beliefs and values of the organizational
culture occurred when the newcomers had a good experience and superiors who were able to promote the beliefs and values of the organizational culture in a convincing manner.

Finally, the results showed that successful organizational enculturation, as indicated by having more cultural knowledge and personal beliefs and values congruent with those of the organization's, had desirable outcomes. For example, congruent beliefs and values were positively related to organizational commitment and task performance, and negatively related to stress. Unexpectedly and interestingly, the results also suggested that organizational enculturation has a moderate influence on role clarity and self-efficacy which were the primary outcomes of task and role socialization and thought to be independent from the influence of organizational enculturation.

Conclusions and Implications

There are four main contributions from this dissertation. Three of them are in the substantive domain and the fourth is methodological. The first contribution is in clarifying and expanding the traditional view of culture learning or acculturation (the term preferred by some scholars). However, as explained in chapter one, enculturation rather than acculturation is the more appropriate term to use for newcomers’ learning of the organizational culture. Although theories on organizational socialization (e.g., Feldman, 1981; Van Maanen & Schein, 1979) typically acknowledge that newcomers engage in culture learning, no distinction has been made between the processes and outcomes of knowledge acquisition and internalization of the organizational beliefs and values. Culture learning and acculturation has been used interchangeably to mean different things. For example, Van Maanen and Schein (1979) and Louis (1990)
conceptualization of acculturation is one of acquisition and use of cultural knowledge whereas Bauer et al. (1998) viewed acculturation as internalization of organizational beliefs and values.

This dissertation has explicitly delineated and expounded on the two different processes involved, i.e., knowledge acquisition and internalization, in what should be more appropriately termed organizational enculturation. As proposed in the organizational enculturation framework, knowledge acquisition occurs during culture learning and is necessary but not sufficient for internalization. Indeed, the study has shown that both processes were relatively independent of each other and they had different determinants and outcomes. Hence, this study has increased our understanding on an important but neglected area of organizational socialization. The implication is that future work on organizational enculturation needs to be more precise about which of the two processes is being examined in order to further advance our knowledge in this area.

The second contribution is the moderately successful modeling of the predictors and moderators for the internalization of organizational beliefs and values. To date, no published study has been found that examined factors that cause self-concept related beliefs and values to change in the direction toward those espoused by the organization. This could be the first to provide direct empirical evidence that leadership and the nature of one's experience influence the internalization of organizational beliefs and values. In doing so, the study revealed a relatively unexplored area of leadership, i.e., the ability of leadership behavior to effect personal beliefs and values change. Much of the leadership research (House & Podsakoff, 1994) has focused on the leader's behavior on the followers' performance, behavior, motivation and satisfaction. This study has shown that
leaders who engage in pro-organizational culture behavior and charismatic leadership behavior can help newcomers internalize the beliefs and values of the organization. It also lends support to the self-concept based charismatic leadership theory of House and Shamir (1993) and Shamir et al. (1993).

The finding that a superior’s behavior and the nature of one’s experiences can affect the newcomers’ beliefs and values has an implication for the use of orientation programs. Organizations that strongly believe in the importance of newcomers embracing the beliefs and values of the organization may have better success by having a centralized orientation program that is designed to let the newcomers positively experience the beliefs and values espoused by the organization. Further, it should be run by insiders who are able to convincingly persuade the newcomers the importance of embracing those beliefs and values. The purpose of the program is therefore to facilitate cultural knowledge acquisition and internalization, which would hopefully inoculate them against influences inconsistent with the organizational beliefs and values in their workplace.

The third contribution is the successful modeling of the outcomes of task and role socialization and organizational enculturation. Two things were achieved here. First, it explicitly brings the person-organization fit research into organizational socialization. So far, only one other study has done so. Chatman (1991) studied the socialization of new auditors in eight accounting firms and found that those whose values matched the organization’s insiders were more satisfied, had greater intent to stay and lower turnover than those who had less similar values. This study has logically incorporated person-organization fit as a mediator for the positive outcomes of internalization of organizational beliefs and values. The results showed that higher person-organization fit
was related to organizational commitment, low stress and task performance, a finding which is consistent with the extant literature.

Second, results from the model of outcomes suggested that organizational enculturation was more connected with the outcomes of task and role learning than previously thought. Subjective knowledge of organizational culture and congruent beliefs and values with those of the organization were positively related to the newcomers’ perceived role clarity and self-efficacy. The main implication of the discovery here is that organizations or employers can ill afford to just focus on newcomers’ task mastery and role clarity during orientation, especially if they plan on having committed and happy workers stay on in the organization. Given that selection is based on performance-validated criteria, what organizations can do is to have strategies for recruitment and orientation to increase the pool of applicants and newcomers who would fit in the organization. For example, accurate information about the organizational culture should be provided during recruitment so that potential applicants who are adverse to the beliefs and values of the organization might reconsider their application. As for orientation, the strategy has already been suggested in the previous section. Organizations with recruitment and orientation strategies that take into consideration person-organization fit would probably find themselves with cost savings in recruitment and selection (from low turnover).

The fourth contribution is methodological one. Collectivism and individualism have been used to describe cultures at the level of the society or country and at the level of the individual (Kagitçibasi, 1997; Triandis, 1995), and the former level has been linked to the latter (Markus & Kitayama, 1991; Triandis, 1995). This study extended the level of
collectivism and individualism to the level of the organization and hence provided a means to describe and categorize organizational cultures, an area in which a commonly accepted taxonomy has yet to emerge. In doing so, the existing literature from the study of collectivism at the societal and individual levels was utilized in the design of the study and the generation of hypotheses. For example, the knowledge of collectivism and individualism at the societal level allowed the study to unambiguously classify the culture of the military organization as collectivism, or more specifically, vertical collectivism. This provided a specific context for testing a set of related beliefs and values at the individual level that was supported by past research. As such, the hypotheses that internalization of organizational beliefs and values should lead to higher levels of collectivism at the individual level, and higher collectivism at the individual level should be related to higher person-organization fit in the military organization could be formulated. Perhaps the lack of empirical research on internalization of organizational beliefs and values in the past has been due to the difficulty in unambiguously classifying the organizational culture and at the same time relating it to a set of beliefs and values at the individual level. Hence, the application of the established construct of collectivism at the societal and individual level to the problem has provided a way of overcoming the impasse.

Limitations and Future Research Directions

There are a number of limitations in this study. Although the sample and the context in which the study was conducted had several advantages, e.g., no restriction of range and strong unambiguous culture (see design considerations in chapter four), they also imposed limitation on the generalizability of the findings. Specifically, the
newcomer participants were all males from a narrow age group (18-20 years old) undergoing a strong orientation program in the military organization in which many would not have been in it if they were given the choice. Therefore, the findings aptly describe the results of organizational enculturation of involuntary newcomers in a rather unique context.

The lack of motivation of the newcomers to be in the organization, the strong orientation program and the strong homogeneous culture of the military are factors that could potentially influence the generalizability of the results to newcomers in organizations of the corporate world. This is because such newcomers voluntarily join their organizations and most organizations have cultures and orientation programs that are not as strong and engaging as the military. Hence, one immediate direction for future research is to see if the current findings can be replicated for the organizational enculturation of voluntary newcomers in business organizations.

Another significant limitation of the study is the operationalization of the two aspects of subjective knowledge – “quantity” and “accuracy”. In this study, the extent (i.e., “quantity”) of subjective knowledge of the organizational culture was assumed to be a function of the respondents’ overall confidence in expressing their perceptions of the organizational culture. Although the measure of confidence was anchored in the “do not know” response category, unfortunately, the category was positioned on the mid-point of the five-point response scale. Hence, respondents might have confused the “do not know” category with the “neutral” or “moderate” categories that are typically associated with the mid-point of a response scale. The overall confidence index therefore probably did not adequately capture the “quantity” aspect in subjective knowledge of the newcomers as it
was intended. An improvement to the measurement would be to have “do not know” as a separate response category outside of the five-point scale and have the mid-point of the response format as “neither accurate or inaccurate”.

As for the “accuracy” of the newcomers’ subjective knowledge, it was analysed at the item level by examining the similarity between the newcomers’ responses and their superiors’. It would be worthwhile to develop an overall measure of perception that reflects “accuracy” and examine its relationships with the various constructs in the organizational enculturation framework, as was done with the “quantity” aspect of subjective knowledge in this study. After all, it can also be argued that newcomers’ proactive information seeking behavior and superiors’ pro-organizational culture behavior are likely to enhance the “accuracy” of the newcomers’ subjective knowledge of the organizational culture.

Two other limitations of the study concern the timing and number of data collection points. Ideally, the first data collection should not be week 1 of organizational entry but prior to organizational entry given only two data points. This would have ruled out the effects of even the first few days of organizational socialization, which might have been as significant as the imprinting in ducklings, given that there is no prior knowledge of the rate of socialization in such a context. Because it was not practically feasible to survey the newcomers prior to week 1, the week 1 measures of the newcomers’ self-efficacy, knowledge and collectivism might have been somewhat tainted, reducing the effect size differences between week 1 and week 8 measures.

As for the number of data collection points, there should be at least four. Four data points are the minimum to model the trajectory of linear change. As many as 10
would be needed to adequately model non-linear change. The two data points in this study limited our understanding only to the quantity of change that occurred between week 1 and week 8. With more repeated measures, interindividual differences in intraindividual change using latent growth modeling (Chan, 2000; Stoolmiller, 1995) can be studied to enhance our understanding of organizational enculturation. Further, the study has only shown on one occasion that the nature of one's experience and superiors' pro- organizational culture behavior correlated with the change in collectivism. Again more repeated measures of collectivism and the accompanying time-varying covariates, analysed using multilevel modeling (Kreft & de Leeuw, 1998), can provide more direct and unequivocal evidence for the finding. Therefore, future studies should have more measurement occasions, preferably with the first measure taken prior to organizational entry, in order to better understand the nature and correlates of change in organizational enculturation.

Another limitation is the lack of measurement of the superiors' subjective knowledge at time 1. The finding that shows the superiors' responses to the 10 items on perceptions of organizational culture to be more different from the recruits' responses at time 1 than their responses at time 2 was based on the superiors' responses at time 2. An assumption was made that since they were in the organization for at least six months and most around 18 months, had their perceptions been measured at time 1, it would not have been significantly different from their perceptions at time 2. Without the measurement of the superiors' perceptions at time 1, the attribution of the change observed in the recruits' perceptions towards their superiors to the process of organizational enculturation rested
on the untested assumption that the superiors’ perceptions remained constant and was not affected by any events that might have occurred between the two times.

There are several potential areas for future research. Some of them have already been mentioned, e.g., replication with another sample, use of a better measure of subjective knowledge and use of more powerful repeated measures designs and analyses to get at the trajectory and correlates of change. Other areas of investigation include some of the other predictors and moderators proposed in the organizational enculturation framework. Work in these areas will serve to improve upon the models of the processes and outcomes of organizational enculturation.

One future direction is to study proximal predictors and outcomes. For example, given the organizational enculturation framework in Figure 2, one of the key factors involved is the attention and sense-making of cultural information by the newcomers. It would be informative to directly measure to what extent the cultural information surprised the newcomers, how they perceived and processed the information, and how they coped with information and expectations from the organizational culture that conflicted with their personal beliefs and values. In capturing these aspects, a better understanding of the enculturation process might emerge. We might have a better idea of why the proposed predictors of need for affiliation and trust in the superior did not have the predicted effects. Similarly, the model of outcomes could be improved with more proximal predictors and outcomes. For example, as mentioned earlier, task performance is a distal outcome for organizational enculturation. More proximal outcomes for organizational enculturation, such as disciplinary records, organizational citizenship behavior and turnover, should be studied.
The influence of co-workers or peers would be another important factor to investigate. The literature on socialization in sociology (e.g., Gecas, 1981) has shown that influence from peers becomes increasingly important as the child ages. Work group and small group research (e.g., Levine & Moreland, 1991, 1998) have also highlighted the importance of considering the effects of the group on the individual. Within the organizational socialization literature, Morrison (1993b) has shown that newcomers seek social and cultural information more frequently from their peers than their superiors. In short, it is probably correct to say that co-workers or peers represent a potent force in shaping the knowledge, beliefs and values of newcomers. Future research should begin to explore questions such as what aspects of organizational enculturation get affected by the co-workers, how the composition of the co-workers may affect the processes and outcomes, and how the influences from co-workers may interact with the influences from the superiors or individual attributes.

Another important factor to examine is the strength of the initial beliefs and values of newcomers. Studies of change or growth are generally concerned about the effects of the initial status on the rate of change (Stoolmiller, 1995; Willett & Sayer, 1994). It is posited that the strength of the initial beliefs and values of newcomers can influence the rate of internalization. The persuasion and attitude change literature (Petty et al., 1997; Petty & Wegener, 1998) has shown that people tend to reject information, arguments and influence attempts that are too incongruent with their beliefs. Also, those who hold strong and unambivalent attitudes are less vulnerable to persuasion than those who hold moderate or ambivalent attitudes. Generalizing to beliefs and values, newcomers who hold strong and unambivalent beliefs and values that are contrary to the
organization's are less likely to change them than those who hold weak and ambivalent beliefs and values. Such newcomers were referred to as “status quo (incongruent)” in the organizational enculturation framework in Figure 2. As for newcomers whose initial beliefs and values are congruent with the organizational culture, they will experience few challenges to their beliefs and values and hence are referred to as “status quo (congruent)” in Figure 2. The group that is expected to undergo the most internalization is newcomers who hold weak and ambivalent beliefs and values. Given that the different groups are expected to have different rates of internalization, it is posited that the same predictors will have different impact for the different groups. Again, only a study with multiple repeated measures can adequately examine the relationship between initial status and rate of change.

Finally, extending the current framework to incorporate the processes and outcomes of organizational identification (Ashforth & Mael, 1989; Albert, Ashforth & Dutton, 2000) appears to be a promising direction to take. As acknowledged in the introduction, although internalization of organizational beliefs and values and organizational identification are distinct concepts, they are likely to be closely related to one another. This dissertation has deliberately limited the scope of study to internalization. Hence, it would be interesting for future research to examine the connection between the two within the framework of organizational enculturation.

Conclusion

Organizational enculturation, a subdomain of organizational socialization, though acknowledged to be important by many scholars, presently lacked conceptual clarity and empirical research. This dissertation has taken a small step towards addressing that need.
It proposed a framework for research and described the results of a study that examined some of the factors and outcomes of organizational enculturation. The findings are encouraging, fully or partially supporting a number of the hypotheses, and hence, providing preliminary support to some of the processes and outcomes proposed in the organizational enculturation framework. Given the implications and potential benefits to the organization, it would be a worthwhile endeavour to pursue the research further, in particular, to replicate the findings on a different sample and context, i.e., voluntary newcomers in a business organisation, using a better measure of subjective knowledge of organizational culture.
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entering unfamiliar organizational settings. Administrative Science Quarterly, 25, 226-
251.

ethnographers. In B. Schneider (Ed.), Organizational climate and culture (pp. 85-129).

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and occupations: Extension and test of a three-component conceptualization. Journal of
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APPENDIX A

MEASURES FOR SURVEYS

<table>
<thead>
<tr>
<th>Measure</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics and Career</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Task-role learning outcomes</strong></td>
<td></td>
</tr>
<tr>
<td>• Self-efficacy</td>
<td>Jones (1986), scale modified</td>
</tr>
<tr>
<td>• Role clarity</td>
<td>Rizzo et al. (1970), scale modified.</td>
</tr>
<tr>
<td><strong>Organizational enculturation</strong></td>
<td></td>
</tr>
<tr>
<td>• Knowledge of organizational culture</td>
<td>New, based on Triandis (1995).</td>
</tr>
<tr>
<td>• Collectivism and Individualism</td>
<td>Triandis (1995), and Triandis and Gelfand (1998).</td>
</tr>
<tr>
<td>• Beliefs about work</td>
<td>Buchholz (1978), scale shortened.</td>
</tr>
<tr>
<td><strong>Individual differences</strong></td>
<td></td>
</tr>
<tr>
<td>• Need for affiliation</td>
<td>Steers and Braunstein (1976), scale modified.</td>
</tr>
<tr>
<td>• Proactive information seeking behavior</td>
<td>Morrison (1993b), scale shortened.</td>
</tr>
<tr>
<td>• Nature of one’s experiences</td>
<td>New.</td>
</tr>
<tr>
<td><strong>Perceptions of superior</strong></td>
<td></td>
</tr>
<tr>
<td>• Trust</td>
<td>Shamir et al. (1998).</td>
</tr>
<tr>
<td>(collectivism) behavior</td>
<td>New, based on subscales in Behling and McFillen (1996), Shamir et al. (1998), and Schriesheim and Hinkin (1990).</td>
</tr>
<tr>
<td>• Charismatic leadership behavior</td>
<td></td>
</tr>
<tr>
<td><strong>Other outcomes</strong></td>
<td></td>
</tr>
<tr>
<td>• Stress</td>
<td>Banks (1980).</td>
</tr>
<tr>
<td>• Perception of person-organization fit</td>
<td>New.</td>
</tr>
<tr>
<td>• Organizational commitment</td>
<td>Meyer et al. (1993) Affective Commitment Scale.</td>
</tr>
<tr>
<td>• Task performance</td>
<td>New.</td>
</tr>
</tbody>
</table>
DEMOGRAPHICS AND CAREER

1. Race:
   1  2  3  4
   Chinese  Malay  Indian  Other

2. Age:
   1  2  3  4  5  6  7  8  9
   17  18  19  20  21  22  23  24  25 years old

3. What was your GCE ‘O’ level aggregate score for your best 6 subjects (including English)?
   1  2  3  4  5  6  7  8  9
   6-7  8-9  10-11  12-13  14-15  16-17  18-19  20-21 >22 points

4. Will you consider a career in the SAF during your national service?
   1  2  3  4
   Definitely will  Open to the  Quite a good chance  I am a regular (or in
   not consider  possibility  of signing-on  the process of
   signing the papers)

SELF-EFFICACY

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

How do you feel as a recruit. Please use the 7-point scale above to rate how strongly you agree or disagree with the following statements.

1. I feel capable of mastering the knowledge and skills required as a recruit.
2. My past experiences and accomplishments give me confidence to do well as a recruit.
3. I am not confident that I can do better than my peers during training. (R)
4. I am confident of my abilities to perform now and in my next posting.
5. I believe I have the knowledge, skills, character and fitness to go to OCS.
6. I do not expect any problems adjusting to the training now or in my next posting.
7. I do not expect myself to achieve high training standards. (R).
ROLE CLARITY

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

How do you feel as a recruit. Please use the 7-point scale above to rate how strongly you agree or disagree with the following statements.

1. I feel certain about how much initiative I can exercise.
2. Clear goals and objectives exist for me as a recruit.
3. I know what my responsibilities are.
4. I know exactly what is expected of me.
5. My superior gives clear explanation of what has to be done.
6. I am not sure what the performance standards are for me. (R)
7. There is a lack of information about the consequences of failure to perform. (R)
8. I know how to behave appropriately in discharging my duties.
9. There is often confusion over whose instructions to follow. (R)
10. I know exactly what I need to do if I want to be the best recruit.

KNOWLEDGE OF ORGANIZATIONAL CULTURE

<table>
<thead>
<tr>
<th>Very Inaccurate</th>
<th>Inaccurate</th>
<th>Do not Know</th>
<th>Accurate</th>
<th>Very Accurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Beliefs, Values and Expectations of the SAF. Below are statements that reflect various views of the SAF. Rate each statement on how accurately it describes the SAF based on what you know. Use “Do not know” only if you feel highly uncertain.

1. “Duty to the SAF and others before personal pleasure” is commonly practised in the SAF.
2. There is much room for individual uniqueness and expression in the SAF. (R)
3. The SAF believes that a good soldier is one who is obedient and a team-player than one who is independent and creative.
4. The SAF expects soldiers to respect the decisions by higher authorities whatever they are.
5. The SAF believes that each individual’s achievements are dependent on those around him than his own ability and effort.
6. The SAF does not believe that everyone contributes equally to its goals, therefore those who lead should receive greater rewards.
7. Individuals in the SAF are expected to compromise their own goals and needs for the benefit of the organization.
8. Despite the rank structure in the SAF, the opinions of those holding lower ranks are equally valued. (R)

9. The SAF expects every soldier to sacrifice his self-interest for his peers.

10. The SAF believes that individual creativity and innovation are more important than teamwork for the success of missions. (R)

COLLECTIVISM AND INDIVIDUALISM

We want to know how strongly you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Unsure/Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Collectivism
1. The well-being of my co-workers is important to me.
2. If a co-worker gets a prize I would feel proud.
3. To me, pleasure is spending time with others.
4. I feel good when I co-operate with others.
5. It is important to me that I respect decisions made by my groups.
6. Family members should stick together, no matter what sacrifices are required.
7. Parents and children must stay together, as much as possible.
8. It is my duty to take care of my family, even when I have to sacrifice what I want.

Individualism
1. Winning is everything.
2. It is important to me that I do my job better than others.
3. I often do “my own thing”.
4. Competition is the law of nature.
5. When another person does better than I do, I get tense and aroused.
6. I rather depend on myself than on others.
7. I rely on myself most of the time; I rarely rely on others.
8. My personal identity independent from others is very important to me.
BELIEFS ABOUT WORK

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please rate how strongly you agree or disagree with the following statements.

1. Survival of the group is very important in an organization.
2. Working with a group is better than working alone.
3. One should take an active part in all group affairs.
4. The group is the most important entity in any organization.
5. One’s contribution to the group is the most important thing about his work.

NEED FOR AFFILIATION

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>Almost Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Usually</th>
<th>Almost Always</th>
<th>Almost Always</th>
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<tr>
<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Below are statements that describe various things people do or try to do on their jobs. We would like to know which of these statements you feel most accurately describe you at your work.

1. When I have a choice, I try to work in a group instead of by myself.
2. I pay a good deal of attention to the feelings of others at work.
3. I find myself talking to those around me about non-work related matters.
4. My energy at work is derived from the people I work with.
5. When I make a decision that involves others, my priority is to satisfy everyone rather than to choose the optimal solution.
6. I make an effort to keep good relationships with everyone.
PROACTIVE INFORMATION SEEKING BEHAVIOR

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>1-5 times</th>
<th>6-10 times</th>
<th>10-20 times</th>
<th>about everyday</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

To determine the behaviors and attitudes that the SAF values and expects, how frequently (based on the last 30 days), have you done each of the following:
1. Ask your superior(s).
2. Ask your peers (section and platoon mates).
3. Observe how others behave.

NATURE OF ONE'S EXPERIENCE
1. What is the level of satisfaction with your BMT experience?

<table>
<thead>
<tr>
<th></th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Very High</th>
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<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

2. How meaningful has your BMT experience been?

<table>
<thead>
<tr>
<th></th>
<th>Very meaningless</th>
<th>Meaningless</th>
<th>Neutral</th>
<th>Meaningful</th>
<th>Very meaningful</th>
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<tbody>
<tr>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

3. How happy are you with your experience in BMT?

<table>
<thead>
<tr>
<th></th>
<th>Very unhappy</th>
<th>Unhappy</th>
<th>Neutral</th>
<th>Happy</th>
<th>Very Happy</th>
</tr>
</thead>
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<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

TRUST IN SUPERIOR

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I have complete faith in my PC.
2. I respect him.
3. I am proud to be under his charge.
4. I trust his judgement and decisions completely.
5. He represents values that are important to me.
6. My values are similar to his values.
7. He is a good model for me to follow.
SUPERIOR'S PRO-ORGANIZATIONAL CULTURE (COLLECTIVISM) BEHAVIOR

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Below are a list of statements that describe various possible behavior of superiors. Please indicate *how frequently* your PC engages in these behavior.

**My PC . . .**
1. encourages the sacrifice of self-interest for the benefit of the section/platoon.
2. encourages the section/platoon to stick together, no matter what sacrifices are needed from each one.
3. emphasizes respecting the decisions made by higher authorities.
4. stresses the need to follow the chain-of-command in communication.
5. emphasizes the importance of obedience and teamwork.

SUPERIOR'S CHARISMATIC LEADERSHIP BEHAVIOR

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Below are a list of statements that describe various possible behavior of superiors. Please indicate *how frequently* your PC engages in these behavior.

**My PC . . .**
1. appeals to our moral sense.
2. makes the work to be done sound exciting and challenging.
3. demonstrates courage
4. helps us see the goal or our work in a more meaningful way.
5. displays enthusiasm in his requests or speeches.
6. compliments us when we do a good job.
7. is convincing in his communication.
8. uses logic to convince.
9. creates opportunities for us to experience success.
10. provides information about the benefits and cost of taking an action.
STRESS

<table>
<thead>
<tr>
<th>Much less than usual</th>
<th>Less than usual</th>
<th>Same as usual</th>
<th>More than usual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Have you recently
1. Been able to concentrate on whatever you are doing? (R)
2. Felt that you are playing a useful part in things? (R)
3. Felt capable of making decisions about things? (R)
4. Been able to enjoy your normal day-to-day activities? (R)
5. Been able to face up to your problems? (R)
6. Been feeling reasonably happy all things considered? (R)

<table>
<thead>
<tr>
<th>Not at all</th>
<th>No more than usual</th>
<th>Rather more than usual</th>
<th>Much more than usual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Have you recently
7. Lost much sleep over worry?
8. Felt constantly under strain?
9. Felt you could not overcome your difficulties?
10. Been feeling unhappy and depressed?
11. Been losing confidence in yourself?
12. Been thinking of yourself as a worthless person?

PERSON-ORGANIZATION FIT

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Please use the 5-point scale above to rate how strongly you agree or disagree with the following statements
1. I have goals that do not fit with the organization’s goals. (R)
2. My core beliefs about work are similar to the organization’s beliefs.
3. My work values match up well with the organization’s values.
4. I have work behavior that would not be acceptable in this organization. (R)
5. My personal attitude towards work would be acceptable in this organization.
ORGANIZATIONAL COMMITMENT

Please use the 7-point scale above to rate how strongly you agree or disagree with the following statements.

1. I would be happy to have a career with this organization.
2. I really feel as if this organization’s problems are my own.
3. I do not feel a strong sense of “belonging” to my organization. (R)
4. I do not feel “emotionally attached” to this organization. (R)
5. I do not feel like “part of the family” at my organization. (R)
6. This organization has a great deal of personal meaning for me.

SUPERIOR’S ASSESSMENT OF RECRUITS’ TASK PERFORMANCE

This part requires you to rate the proficiency of each recruit in your section. You will use about 10-14 lines for each, depending on the size of your section. Each line represents a recruit. The ordering will follow the sequencing in your platoon’s nominal roll, unless the survey administrator informs you otherwise.

Proficiency: overall impression of the basic soldiering knowledge, skills and fitness of a recruit. It excludes attitude or attitude-related behavior.

- Excellent proficiency
  - Beyond expectations, top 5% in the platoon
- Average
  - Standards which most recruits have achieved
- Minimum proficiency
  - Just barely meeting the minimum standards

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APPENDIX B

LETTERS OF SOLICITATION TO RECRUITS AND THEIR SUPERIORS FOR SURVEYS AT TIME 1 AND TIME 2
20 Jan 2000

Dear Sir,

Organizational Enculturation Study and Recruits' Survey at Beginning of BMT

The purpose of this letter is to explain what the study and survey is about, the significance it has for research and BMT, how your identity will be protected and what constitutes your consent and voluntary participation.

What is the study and survey about?

The study is part of a Ph.D. research project to investigate newcomers' experiences in an organization. Specifically, we are interested in finding out the state of a newcomer's beliefs, values, attitudes, perceptions and well-being at the beginning of training, and whether and how they change over time. CO BMTC has given us permission to seek your participation and personnel from the Applied Behavioral Sciences Dept (ABSD) are assisting us in the data collection. Because the study looks at change, there will be a second survey several weeks later with similar questions. We believe you will find none of the questions embarrassing or highly personal in nature. This survey will take about 45-60 minutes to complete.

What are the implications of the study?

The study represents an important area of research that has not been well developed. Your participation will make a contribution towards this effort. CO BMTC will receive a report with data combined from everyone months after your BMT. The report could potentially further enhance the training and recruits' well-being in BMT. For these reasons, CO BMTC and ABSD are supporting us in our research.

Protection of data and your identity

Because we need to survey you again and link the responses of the two surveys together, we would need you to identify yourself if you choose to participate. Your NRIC will be used for this sole purpose. Your responses will not be made into a permanent record in any database. We assure you that the information you provide will be treated with the strictest confidence. ABSD's personnel are assisting in the data collection to ensure the protection of your data and identity. Your data will be destroyed when the research project is concluded, probably in 5-6 years' time. This survey will not affect you in your military service in any way.
Your consent and participation

Your participation is voluntary. We strongly appeal to you to participate for the benefits mentioned above. By answering the questions, we will assume that you have consented to participate at your own free will. You may decide not to answer any question if you feel uncomfortable with it and you may also withdraw your participation any time during the survey. If you choose not to participate, you will have to wait for your peers to complete their questionnaires. This is to prevent your superior from noticing your non-participation and to ensure that everyone comes and leaves the survey area together.

We thank you for your time and hope that you will participate and complete all questions as frankly as possible. If you have any questions, please do not hesitate to ask the survey administrators from ABSD.

Sincerely,

Dr. Frederick T. L. Leong
Assoc. Professor
(614) 292-8219
email: leong.10@osu.edu

Star Soh
Doctoral Student
(614) 764-7486
email: soh.1@osu.edu
20 Mar 2000

Dear Sir,

Organizational Enculturation Study and Recruits' Survey at End of BMT

Eight weeks ago you participated in a survey and we thank you for your time and effort. This is the second survey of that study. The purpose of this letter is to remind you what the study and survey is about, the significance it has for research and BMT, how your identity will be protected and what constitutes your consent and voluntary participation.

What is the study and survey about?

The study is part of a Ph.D. research project to investigate newcomers' experiences in an organization. Specifically, we are interested in finding out whether and how recruits' beliefs, values, attitudes, perceptions and well-being change over time. CO BMTC has given us permission to seek your participation and personnel from the Applied Behavioral Sciences Dept (ABSD) are assisting us in the data collection. This survey is similar to the one you took nine weeks ago. We believe you will find none of the questions embarrassing or highly personal in nature. This survey will take about 45-60 minutes to complete.

What are the implications of the study?

The study represents an important area of research that has not been well developed. Your participation will make a contribution towards this effort. CO BMTC will receive a report with data combined from everyone months after your BMT. The report could potentially further enhance the training and recruits' well-being in BMT. For these reasons, CO BMTC and ABSD are supporting us in our research.

Protection of data and your identity

Because we need to link the responses of the earlier survey with this one, we would need you to identify yourself if you choose to participate. Your NRIC will be used for this sole purpose. Your responses will not be made into a permanent record in any database. We assure you that the information you provide will be treated with the strictest confidence. ABSD's personnel are assisting in the data collection to ensure the protection of your data and identity. Your data will be destroyed when the research project is
concluded, probably in 5-6 years’ time. This survey will not affect you in your military service in any way.

Your consent and participation

Your participation is voluntary. We strongly appeal to you to participate for the benefits mentioned above. By answering the questions, we will assume that you have consented to participate at your own free will. You may decide not to answer any question if you feel uncomfortable with it and you may also withdraw your participation any time during the survey. If you choose not to participate, you will have to wait for your peers to complete their questionnaires. This is to prevent your superior from noticing your non-participation and to ensure that everyone comes and leaves the survey area together.

We thank you for your time and hope that you will participate and complete all questions as frankly as possible. If you have any questions, please do not hesitate to ask the survey administrators from ABSD.

Sincerely,

Dr Frederick T. L. Leong
Assoc. Professor
(614) 292-8219
email: leong.10@osu.edu

Star Soh
Doctoral Student
(614) 764-7486
email: soh.1@osu.edu
20 Mar 2000

Dear Sir,

Organizational Enculturation Study and Superiors' Survey at End of BMT

The purpose of this letter is to explain what the study and survey is about, the significance it has for research and BMT, how your identity will be protected and what constitutes your consent and voluntary participation.

What is the study and survey about?

The study is part of a Ph.D. research project to investigate newcomers' experiences in an organization. Specifically, we are interested in finding out whether recruits' beliefs, values, attitudes, perceptions and well-being change over time, your role in shaping them and the impact on their performance. CO BMTC has given us permission to seek your participation and personnel from the Applied Behavioral Sciences Dept (ABSD) are assisting us in the data collection. We believe you will find none of the questions embarrassing or highly personal in nature. They are mostly about your beliefs, values and attitudes, your role as an instructor and the ratings of your subordinates' performance. This survey will take about 35-45 minutes to complete.

What are the implications of the study?

The study represents an important area of research that has not been well developed. Your participation will make a contribution towards this effort. CO BMTC will receive a report with data combined from everyone several months later. The report could potentially further enhance the training and recruits' well-being in BMT. For these reasons, CO BMTC and ABSD are supporting us in our research.

Protection of data and your identity

Because we need to link the superior to each recruit for data analysis, we would need you to identify yourself if you choose to participate. Your company, platoon and section will be used for this sole purpose. Because two answer sheets will be used for this survey and the need to link up them up uniquely, we also ask that you fill in the last four digits of NRIC number. Your responses will not be made into a permanent record in any database. We assure you that the information you provide will be treated with the strictest confidence. ABSD's personnel are assisting in the data collection to ensure the protection of your data and identity. Your data will be destroyed when the research project is...
concluded, probably in 5-6 years’ time. This survey will not affect you in your military service in any way.

Your consent and participation

Your participation is voluntary. However, we strongly appeal to you to participate for the benefits mentioned above. In addition, given that you will provide evaluation to a section of recruits in this study, your non-participation will result in a substantial loss of data for analysis, affecting the reliability of the overall findings.

By answering the questions, we will assume that you have consented to participate at your own free will. You may decide not to answer any question if you feel uncomfortable with it and you may also withdraw your participation any time during the survey.

We thank you for your time and hope that you will participate and complete all questions as frankly as possible. If you have any questions, please do not hesitate to ask the survey administrators from ABSD.

Sincerely,

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APPENDIX C

SAMPLES OF LISREL 8 PROGRAMS USED IN ANALYSES

1. Mean differences of self-efficacy, role clarity and stress (Model 4)
2. Mean differences of collectivism, individualism and collectivistic work beliefs (Model 5)
3. Model of predictors (Model 1)
4. Model of predictors and moderator (leadership behavior) (Model 4)
5. Model of outcomes (Hypothesized model)
6. Refined model of outcomes (Model 3)
TEST OF WEAK FACTORIAL INVARIANCE OF A 3-FACTOR MODEL (SEF_4, RC_6 AND STR) WITH INvariant VARIANCES AND MEAN STRUCTURE

TIME 1 DATA
DA NG=2 NI=22 NO=718
LA FI=a:\L-H1-M4.TXT
KM FI=a:\L-H1-M4.TXT FU
ME FI=a:\L-H1-M4.TXT
SD FI=a:\L-H1-M4.TXT
MO NX=22 NK=3 TX=FR KA=FI LK
SEF_4 RC_6 STR
FR LX 2 1 LX 3 1 LX 4 1
FR LX 6 2 LX 7 2 LX 8 2 LX 9 2 LX 10 2
FR LX 12 3 LX 13 3 LX 14 3 LX 15 3 LX 16 3 LX 17 3 LX 18 3 LX 19 3 LX 20 3 LX 21 3 LX 22 3
FI LX 1 1 LX 5 2 LX 11 3
VA 1 LX 1 1 LX 5 2 LX 11 3
OU SC XM
TIME 2 DATA
DA NO=718
LA FI=a:\L-H1-M4.TXT
KM FI=a:\L-H1-M4.TXT FU
ME FI=a:\L-H1-M4.TXT
SD FI=a:\L-H1-M4.TXT
MO LX=1N TX=1N KA=FR LK
SEF_4 RC_6 STR
EQ PH(1,1,1) PH(1,1)
EQ PH(1,2,2) PH(2,2)
EQ PH(1,3,3) PH(3,3)
OU SC XM

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TEST OF WEAK FACTORIAL INVARIANCE OF A 3-FACTOR MODEL (C8, 18 AND ORG) WITH INVARIANT VARIANCES AND MEAN STRUCTURE FOR 2 OUT OF 3 SAMPLES

TIME 1 DATA
DA NG=3 NI=21 NO=718
LA FI=a:\L-H3-M5.TXT
KM FI=a:\L-H3-M5.TXT FU
ME FI=a:\L-H3-M5.TXT
SD FI=a:\L-H3-M5.TXT
MO NX=21 NK=3 TX=FR KA=FI

C8 18 ORG
FR LX 2 1 LX 3 1 LX 4 1 LX 5 1 LX 6 1 LX 7 1 LX 8 1
FR LX 10 2 LX 11 2 LX 12 2 LX 13 2 LX 14 2 LX 15 2 LX 16 2
FR LX 18 3 LX 19 3 LX 20 3 LX 21 3
FI LX 1 1 LX 9 2 LX 17 3
VA 1 LX 1 1 LX 9 2 LX 17 3
OU SC XM

TIME 2 DATA
DA NO=718
LA FI=a:\L-H3-M5.TXT
KM FI=a:\L-H3-M5.TXT FU
ME FI=a:\L-H3-M5.TXT
SD FI=a:\L-H3-M5.TXT
MO LX=IN TX=IN KA=FR

C8 18 ORG
EQ PH(1,1,1) PH(1,1)
EQ PH(1,2,2) PH(2,2)
EQ PH(1,3,3) PH(3,3)
OU SC XM
SUPERIORS DATA
DA NO=60
LA FI=a:\L-H3-M5.TXT
KM FI=a:\L-H3-M5.TXT FU
ME FI=a:\L-H3-M5.TXT
SD FI=a:\L-H3-M5.TXT
MO
LK
C8 I8 ORG
FR LX 2 1 LX 3 1 LX 4 1 LX 5 1 LX 6 1 LX 7 1 LX 8 1
FR LX 10 2 LX 11 2 LX 12 2 LX 13 2 LX 14 2 LX 15 2 LX 16 2
FR LX 18 3 LX 19 3 LX 20 3 LX 21 3
FI LX 1 1 LX 9 2 LX 17 3
VA 1 LX 1 1 LX 9 2 LX 17 3
OU SC XM
MODEL OF PREDICTORS WITH PATHS FROM KNT1 TO CT1 AND KNT2 TO CT2

DA NI=24 NO=718
LA FI=a:\L-H4-M1.TXT
KM FI=a:\L-H4-M1.TXT FU
ME FI=a:\L-H4-M1.TXT
SD FI=a:\L-H4-M1.TXT
MO NY=9 NX=15 NE=3 NK=5 BE=FI,FU PS=DI,SY PH=DI,SY
LE
KNT2 CT2 CT1
LK
KNT1 PBT2 NAFT1 EXPT2 LVCT2
FR LY 3 2 LY 4 2 LY 5 2
FR LY 7 3 LY 8 3 LY 9 3
FR LX 3 2 LX 4 2
FR LX 6 3 LX 7 3
FR LX 9 4 LX 10 4
FR LX 12 5 LX 13 5 LX 14 5 LX 15 5
FR BE 2 1 BE 2 3
FI GA 1 3 GA 1 4 GA 2 1 GA 2 2 GA 3 2 GA 3 3 GA 3 4 GA 3 5
FI TE 1 1 TD 1 1
VA 1 LY 1 1 LY 2 2 LY 6 3
VA 1 LX 1 1 LX 2 2 LX 5 3 LX 8 4 LX 11 5
OU AD=OFF SC XM
MODEL OF PREDICTORS WITH CHARISMATIC LEADERSHIP AS MODERATOR
THREE SUBSAMPLES (LO, ME, HI) CREATED USING MODERATOR
LX, LY & GA = INVARIANT, MODEL WITH PATHS FROM KN TO C

GROUP 1 -- LO CHARISMATIC LEADERSHIP
DA NI=24 NO=229
LA FI=a:\L-H5-M4.TXT
KM FI=a:\L-H5-M4.TXT FU
ME FI=a:\L-H5-M4.TXT
SD FI=a:\L-H5-M4.TXT
MO NY=9 NX=15 NE=3 NK=5 BE=FI,FU PS=DI,SY PH=DI,SY LE
LK
KNT2 CT2 CT1
LK
KNT1 PBT2 NAFT1 EXPT2 LVCT2
FR LY 3 2 LY 4 2 LY 5 2
FR LY 7 3 LY 8 3 LY 9 3
FR LX 3 2 LX 4 2
FR LX 6 3 LX 7 3
FR LX 9 4 LX 10 4
FR LX 12 5 LX 13 5 LX 14 5 LX 15 5
FR BE 2 1 BE 2 3
FI GA 1 3 GA 1 4 GA 2 1 GA 2 2 GA 3 2 GA 3 3 GA 3 4 GA 3 5
FI TE 1 1 TD 1 1
VA 1 LY 1 1 LY 2 2 LY 6 3
VA 1 LX 1 1 LX 2 2 LX 5 3 LX 8 4 LX 11 5
ST .41 TD .55
OU AD=OFF XM SC

GROUP 2 -- MEDIUM CHARISMATIC LEADERSHIP
DA NI=24 NO=252
LA FI=a:\L-H5-M4.TXT
KM FI=a:\L-H5-M4.TXT FU
ME FI=a:\L-H5-M4.TXT
GROUP 3 HI CHARISMATIC LEADERSHIP
HYPOTHEZIZED MODEL OF OUTCOMES TESTED USING HALF OF THE
SAMPLE
DA NG=1 NI=22 NO=351
LA FI=a:\L-H7-M.TXT
KM FI=a:\L-H7-M.TXT FU
ME FI=a:\L-H7-M.TXT
SD FI=a:\L-H7-M.TXT
MO NY=17 NX=5 NE=6 NK=2 BE=FI,FU GA=FI,FU PS=DI,SY PH=DI,SY
LE
TP OC STR PEF SEF RC
LK
CKN
FR LY 3 2 LY 4 2
FR LY 6 3 LY 7 3
FR LY 9 4 LY 10 4
FR LY 12 5 LY 13 5 LY 14 5
FR LY 16 6 LY 17 6
FR LX 2 1 LX 3 1 LX 4 1
FR BE 1 2 BE 1 3 BE 1 5 BE 1 6
FR BE 2 4
FR BE 3 4 BE 3 5 BE 3 6
FR BE 5 6
FR GA 4 1 GA 5 2 GA 6 2
FI TE 1 1
FI TD 5 5
VA 1 LY 1 1 LY 2 2 LY 5 3 LY 8 4 LY 11 5 LY 15 6
VA 1 LX 1 1 LX 5 2
OU AD=OFF SC
REFINED MODEL OF OUTCOMES -- PATHS FROM C TO RC (GA 6 1), PEF TO RC (BE 6 4), PEF TO SEF (BE 5, 4)
LESS OC TO TP (BE 1 2), RC TO TP (BE 1 6), KN TO SE (GA 5 2), RC TO STR (BE 3 6) AND STR TO TP (BE 1 3)
LX, LY, BE & GA=IN
GROUP 1
DA NG=2 NI=22 NO=351
LA FI=a:\L-H7-M3.TXT
KM FI=a:\L-H7-M3.TXT FU
ME FI=a:\L-H7-M3.TXT
SD FI=a:\L-H7-M3.TXT
MO NY=17 NX=5 NE=6 NK=2 BE=FI,FU GA=FI,FU PS=DI,SY PH=DI,SY
LE
TP OC STR PEF SEF RC
LK
C KN
FR LY 3 2 LY 4 2
FR LY 6 3 LY 7 3
FR LY 9 4 LY 10 4
FR LY 12 5 LY 13 5 LY 14 5
FR LY 16 6 LY 17 6
FR LX 2 1 LX 3 1 LX 4 1
FR BE 1 5
FR BE 2 4
FR BE 3 4 BE 3 5
FR BE 5 4 BE 5 6
FR BE 6 4
FR GA 4 1 GA 6 1 GA 6 2
FI TE 1 1
FI TD 5 5
VA 1 LY 1 1 LY 2 2 LY 5 3 LY 8 4 LY 11 5 LY 15 6
VA 1 LX 1 1 LX 5 2
OU AD=OFF SC XM
GROUP 2
DA NI=22 NO=351
LA FI=a:\L-H7-M3.TXT
KM FI=a:\L-H7-M3.TXT FU
ME FI=a:\L-H7-M3.TXT
SD FI=a:\L-H7-M3.TXT
MO LX=IN LY=IN GA=IN BE=IN
LE
TP OC STR PEF SEF RC
LK
CKN
FI TE 1 1
FI TD 5 5
OU AD=OFF SC XM