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When is a threat more or less of a threat? The sensitivity of psychologically central identities to threat and the resulting impact on work

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Abstract

When is a threat more or less of a threat? The sensitivity of psychologically central identities to threat and the resulting impact on work

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Psychologically central identities are those that are so important to individuals' self-definition that they are top-of-mind for individuals *across* situations. This becomes a critical consideration when these identities interfere with employees' behavior at work. In this dissertation, I support the existence of psychological centrality with two construct validity studies and test my predictions with an experiment and field study. I found support for the distinction of psychological centrality from other identification dimensions and created a reliable psychological centrality scale. With the experiment and field study, I demonstrated the negative emotions, anger, and cognitive interference that result from identity threat and subsequent effects on undesirable work behaviors and poor job attitudes. Finally, I identified

a contextual factor that can minimize identity threat – openness to experience work group identity. My dissertation contributes to the field by making psychological centrality known as a construct that can be considered when studying a multitude of organizational behavior phenomena. I also begin to uncover organizational practices that can minimize identity threat.

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DEDICATION

My five years of work and this dissertation are dedicated to the most important people in my life, my husband, Patrick Johnson, and my children, Tyler and Sidney Johnson.

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CHAPTER 1

INTRODUCTION

Employees possess a wide variety of identities (e.g., mother, student, engineer, supervisor, and so forth) to help navigate the various social environments (e.g., family, university, work, and so forth) of their lives, and some of these identities become more subjectively self-referential than others. *Psychological centrality* captures this idea, referring to the person's assessment about the extent to which specific identities are central to their self-definition (Rosenberg, 1979). This construct has been underemphasized within organization science identity research but is pivotal. Psychologically central identities are much more likely to become activated among employees' many identities, whether or not they are appropriate to a particular situation (Rosenberg, 1979). This can occur because employees are particularly attuned to events that contain harm to their psychologically central identities (see Stryker & Serpe, 1994). This increased attention to *harm to identity* events increases the likelihood that employees will perceive the events as an *identity threat*. Harm to identity refers to objective interpersonal or group events, and identity threat represents the perception that the events have the potential to diminish the value, undermine or change the meanings, or prevent enactment of an identity (Petriglieri, 2011). For example, if a start-up is acquired by a major company, the acquisition is an event that contains potential harm to the identity of being an "employee". However, the event is only perceived as an identity threat if an employee evaluates the event as diminishing the value or changing the meaning of his/her identity, and the employee is more likely to perceive the event as a threat if his/her "employee" identity is psychologically central.

This sensitivity to identity threat is of concern to organizations because if an employee experiences harm to a psychologically central identity, he or she is more likely to experience the

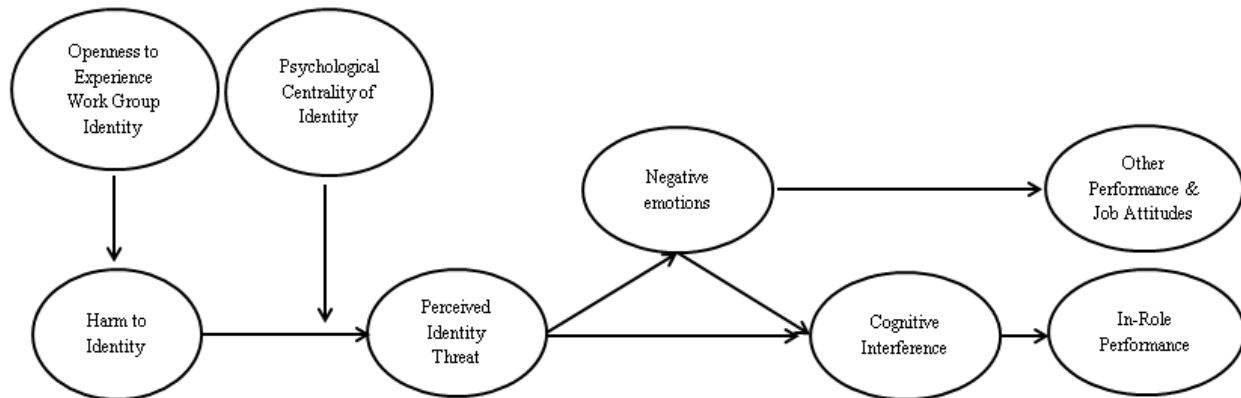
emotional and cognitive ramifications of threat. When individuals feel that their psychologically central identities are not valued, contain a meaning different from expectations, or cannot be enacted, the harm to their identity results in perceived identity threat and therefore negative emotions and cognitive interference, or cognitive resources being diverted towards the threat. This dissertation will argue that employees who are cognitively focused on a threatened identity are less able to perform their work.

This dissertation will also maintain that organizations can manage threat to psychologically central identities by facilitating work group identities that minimize harm to employees' identities. Organizations that support an openness to experience identity within their work groups embody the central, distinctive and enduring attributes (Albert & Whetten, 1985) of *openness to experience* (Costa & McCrae, 1992) so that employees are tolerant and accepting of the diverse range of identities their colleagues may value, resulting in fewer instances of harm to employees' identities. Organizations that foster this openness to experience work group identity minimize threat to employees' psychologically central identities.

This dissertation will make three contributions to organization science. First, I emphasize the importance of studying how psychologically central identities are to employees. These psychologically central identities play a critical role in determining which identities among many influence employee behavior, and also deserve attention because employees are sensitive to harm related to these identities. Second, I propose and generate evidence to support the negative emotions and cognitive interference that identity threat poses for employees and the resulting effect on their performance and job attitudes. Finally, I introduce the idea of organizations being able to manage identity threat by minimizing harm to identities which will ultimately result in

higher levels of performance and more positive attitudes toward work. My model is summarized below in Figure 1.

Figure 1. Theoretical model



CHAPTER 2

IDENTITY LITERATURE REVIEW

I. INTRODUCTION

This dissertation argues that the psychological centrality of employees' identities plays a critical role in how employees behave at work. Employees possess multi-faceted identities as a result of multiple identities at several levels of self-representation (i.e., personal, relational, collective; Brewer & Gardner, 1996), a range of identity motives (Vignoles, Regalia, Manzi, Gollodge, & Scabini, 2006), and work versus non-work identities (Ramarajan & Reid, 2013). While the literature on identity salience including social identity (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and identity theory (Stryker, 1980; Stryker & Serpe, 1982) provides insight into how multiple identities affect behavior, I suggest that psychological centrality plays an especially important role. According to these theories, multiple factors influence which identity among many are salient (i.e., high likelihood of activation; Stryker &

Serpe, 1982) and activated (i.e., played out in a situation; Stets & Burke, 2000) in a particular moment. Some of these factors are situational (e.g., comparative fit in which a social category or identity maximizes similarities with ingroup and differences from outgroup; Tajfel & Turner, 1986) but one of them is internal which is psychological centrality, or how subjectively important an identity is to one's self-concept (Rosenberg, 1979). The organizational literature has primarily taken a social identity perspective (as opposed to an identity theory perspective) emphasizing the situation as triggering the salience of identities (Ashforth & Mael, 1989; Hogg, 2000). However, the relative salience of multiple identities (i.e., salience hierarchies; Stryker & Serpe, 1982) described by identity theory (Stryker & Serpe, 1982) which is also influenced by psychological centrality provides a more holistic understanding of how multiple identities interact to influence behavior. Psychological centrality is particularly important because these identities are more likely to be activated within a situation even if they are not relevant. Although there have been some studies of psychological centrality within psychology (Stryker & Serpe, 1994; Thoits, 1992; Vignoles et al., 2006) and it can be argued that it is a dimension of the identification construct (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Leach et al., 2008), I argue that there is more to psychological centrality. In chapter 2, I describe the gaps in the psychological centrality construct as being too narrowly defined based on self-esteem and ambiguous as to what identities are compared against (Rosenberg, 1979). And in chapter 3, I develop an argument based on the authenticity literature (e.g., Kernis & Goldman, 2006; Wood, Linley, Maltby, Baliousis, & Joseph, 2008) for advancing the psychological centrality construct to represent the congruence between an identity and one's authentic self which provides a more solid basis for how individuals determine which identities are psychologically central.

To illustrate the critical role of psychological centrality, I consider its effect within the context of identity threats and suggest that individuals are more vulnerable to harm to their psychologically central identities resulting in lower levels of performance and job attitudes, and that organizations can manage identity threat. Organizational and psychology (especially stereotype threat) scholars have studied the types, sources, and responses to identity threat both theoretically and empirically (e.g., Branscombe, Ellemers, Spears, & Doosje, 1999a; Elsbach, 2003; Petriglieri, 2011; Richman & Leary, 2009; Schmader, Johns, & Forbes, 2008; Steele, 1997). This literature review uncovers gaps within the organizational literature that the stereotype threat, emotions, and stress literatures inform. These gaps include how identity threat is perceived, the emotional and cognitive mechanisms underlying identity threat, identity threat's detrimental impact on performance and job attitudes, and how context can minimize identity threat. Finally, I review the work on how organizations influence employee identity including the literature on identity work and construction (Creed, DeJordy, & Lok, 2010; Dutton, Morgan Roberts, & Bednar, 2010; Ibarra & Barbulescu, 2010; Kreiner, Hollensbe, & Sheep, 2006b; Pratt, Rockmann, & Kaufmann, 2006; Roberts, 2005; Swann, Johnson, & Bosson, 2009) and organizational identification (Ashforth, Harrison, & Corley, 2008; Cooper & Thatcher, 2010; Dutton, Dukerich, & Harquail, 1994; Elsbach, 1999; Pratt, 1998, 2000).

II. MULTI-FACETED IDENTITIES AND IDENTITY SALIENCE

To begin with, I define identity and psychological centrality, and clarify that the primary focus of my literature review and theoretical model is identity at the individual level analysis. I describe the multi-faceted nature of identities that result from multiple levels of self-representation (and multiple identities within each level), various identity motives, and the fact that employees have both work and non-work identities. To then explain how these multiple

identities influence behavior, I review the identity salience literature. After defining identity salience and identity activation, I propose that psychological centrality has been underemphasized and therefore the identity theory perspective should be considered in addition to social identity theory within the organizational literature.

Definition of identity. *Identity* is essentially individuals' answer to the question "Who am I?", representing the meanings that individuals define themselves with (Gecas, 1982). It is distinguishable from *self-concept* which can be defined as "the concept the individual has of himself as a physical, social, and spiritual or moral being" (3: Gecas, 1982) or "the totality of the individual's thoughts and feelings having reference to himself as an object" (7: Rosenberg, 1979). The self-concept is individuals' view of themselves, and identity provides the content (i.e., meanings) and structure (i.e., relationships among the content) of the self-concept (Gecas, 1982; Rosenberg, 1979). Identity is also distinct from *identification* which is most commonly studied in relation to a collective or organization and is defined as a sense of oneness with a collective (Ashforth & Mael, 1989) or an overlap in attributes between a collective and oneself (Dutton et al., 1994). More than just *identity* which represents individuals' self-definitions, *identification* reflects the extent to which individuals define themselves by the identity including how much they value the identity and feel positively towards it (Ashforth et al., 2008). The primary focus of my literature review and theoretical model is on the individual level of analysis (i.e., identities of individuals not collectives) although I later review literature relevant to a contextual construct in my theoretical model of openness to experience work group identity which is at the group level of analysis.

Definition of psychological centrality. Psychological centrality is defined as the significance of an identity to one's self-concept; an identity may be "central or peripheral,

cardinal or secondary, a major or minor part of the self” (18: Rosenberg, 1979). In other words, of the various identities that an individual possesses, some are subjectively and relatively more important than others. Rosenberg (1979) defines the self-concept as an object with individuals standing outside of themselves and describing who they think they are with respect to this object. These descriptions of themselves are the *content* of the self-concept. For instance, an individual may describe him- or herself in multiple ways such as “ambitious”, “parent”, or “student”, and the collection of all of these self-descriptions, or identities, make up the content of one’s self-concept. However, the self-concept is not simply a collection of various identities, but importantly, has a *structure* which is a set of relationships among the components of the self-concept. Psychological centrality is one way of describing the relationships among the content components of the self-concept. For example, psychological centrality represents how subjectively important identities such as “ambitious”, “parent”, or “student” are to one’s sense of self. I develop the construct in more depth in section III.

Multi-faceted identities. The complexity of identities derives from various identities at multiple levels of self-representation (Brewer & Gardner, 1996), the fact that they are acquired to fulfill various identity motives (Vignoles et al., 2006), and the extent to which they are work-related (Ramarajan & Reid, 2013).

Individuals possess a set of self-meanings that derive from their own personal attributes but also from their relationships and membership in groups. Because I am concerned with how individuals’ multiple identities influence their work behavior, I consider identities at all levels of self-representation including personal, relational and collective (Brewer & Gardner, 1996). Personal identities include idiosyncratic characteristics and values (e.g., ambitious or stubborn) about individuals that differentiate them from others. Relational and collective identities are

social identities that derive from dyadic relationships and group memberships, respectively. The difference between relational and collective identities is based on type of attraction and level of personalization (Sluss & Ashforth, 2007). Relational identities (e.g., subordinate, CEO) arise from interpersonal relationships where individuals are connected to specific others, while collective identities (e.g., organization, team member) result from members being attracted to social categories and depersonalizing themselves so they can encompass the general characteristics of the members of the group. This discussion of the multiple levels of self-representation begins to illustrate the complexity of individuals' identities.

Identities also fulfill multiple identity motives including self-esteem, belonging, distinctiveness, continuity, uncertainty reduction, and efficacy (Riketta, 2008; Vignoles et al., 2006). The self-esteem motive describes individuals' drive towards maintaining positive self-concepts (Gecas, 1982). Individuals are also motivated by belonging or the need to have enduring and positive relationships with other people through dyadic interactions or membership in groups (Baumeister & Leary, 1995). Although individuals need to feel belonging, they also have a motive towards possessing a level of distinctiveness or differentiation from others (Brewer, 1991; Leonardelli, Pickett, & Brewer, 2010). Continuity refers to the motivation to maintain a sense of "continuity across time and situation" within identity (Breakwell, 1986: 24). Uncertainty reduction refers to people's need for meaning, knowledge, and understanding of self and the social world (Hogg, 2000; Swann, 1983). The efficacy motive makes individuals seek feelings of competence (Deci & Ryan, 2000) or that they are productive and in control. To fulfill these various needs, individuals require many identities at multiple levels of representation.

Finally, employees' multi-faceted identities consist of both work- and non-work identities. Work identities include identities such as "manager" and "financial analyst" while

non-work identities include gender, religion and family identities (Ramarajan & Reid, 2013).

This distinction between work- and non-work identities adds further complexity for employees as they navigate how these different identities influence their behavior at work.

Given that employees possess multiple identities that relate to each other in innumerable ways, there is much to understand regarding which and how these identities affect employees' work behavior. The question of which identity individuals enact among the many identities they possess rests on the concept of identity salience.

Identity salience. Following identity theory (Stryker & Serpe, 1982, 1994), I define *identity salience* as the probability in a given moment that an identity (or identities) held by an individual will actively affect the individual's thoughts and actions in the immediately subsequent moment. Within the organizational literature, social identity theory is the dominant perspective equating identity salience with activation and describing the activation of a specific identity primarily based on the fit between contextual characteristics and the identities that individuals possess (e.g., Hogg & Terry, 2000). However, I emphasize the importance of the identity theory perspective because I argue that an *internal* factor, psychological centrality, plays a critical role in addition to contextual factors in influencing employee behavior and has been underemphasized in the organizational literature. Psychological centrality influences the organization of employees' identities within what has been called a salience hierarchy (Stryker, 1980), with those identities toward the top of the hierarchy having a greater likelihood of being activated. In the following section, I distinguish identity salience from identity activation, describe identity salience from a social identity perspective, and then describe why it's critical to also consider the identity theory perspective.

Definitions of identity salience and activation. The definitions and use of the terms *identity salience* and *identity activation* have differed across social identity theory and identity theory. Identity salience can have two meanings including the likelihood of an identity to be activated and the actual activation of an identity in a particular situation (Stets & Burke, 2000). When an identity is activated, the identity is actually played out in the situation (Stets & Burke, 2000). Within social identity theory, the terms are used interchangeably such that the definition of a salient identity is an identity which is actively influencing a group member's cognition and behavior (Oakes, 1987). The discussion of salience within the social identity literature is focused on social categories or group memberships and what influences whether a social category is salient or activated for an individual. This is different from identity theory which distinguishes between identity salience and identity activation.

Within identity theory, identity salience refers to the probability of an identity becoming activated within a situation (Stryker, 1980) and identity activation describes whether the identity is psychologically engaged and driving behavior (Stets & Burke, 2000). By distinguishing identity salience from identity activation, identity theorists can investigate how internal and contextual factors influence the salience or probability of activation separate from activation (Stets & Burke, 2000). Distinguishing between these terms is important because internal factors influence how salient identities are for individuals and these identities may become activated as a result or despite the context. So while a work situation may call for specific work identities, I argue that *psychological centrality* makes some identities highly salient even if they are not appropriate (i.e., do not fit comparatively or normatively) to a specific work situation (Rosenberg, 1979). First, I describe the social identity perspective of identity salience and then elaborate on the identity theory perspective including psychological centrality.

Social identity theory. Social identity theory describes a social category or identity as becoming activated when the identities are a *comparative* or *normative fit* with the context (Oakes, 1987). The concept of fit derives from the social cognition concept of *applicability* which refers to the cognitive process individuals experience within social situations where stored knowledge that matches the characteristics of the present situation is activated (Higgins, 1996). When the characteristics of a situation fit with information that individuals associate with the situation, that information comes to the forefront of individuals' minds and may influence their behavior within that situation (i.e., activation). A social category can become activated for an individual as a function of *comparative fit* where applying the social category maximizes similarities among those within the category and differences from those outside of it. Another type of applicability, *normative fit*, describes a social category that matches the situational characteristics to the expectations, beliefs, and theories one attributes to the social category (Haslam, Oakes, Reynolds, & Turner, 1999). Both comparative and normative fit are factors that influence activation depending on the interaction between situational characteristics and individuals' cognition.

While situational characteristics can activate information or identities within individuals' minds, social cognition theory acknowledges that information cannot be activated unless it is cognitively accessible for the individual. *Accessibility* refers to the "activation potential of available knowledge" (134: Higgins, 1996). Information that is more accessible is more easily retrieved within individuals' minds. Accessibility aligns with identity salience in that they both describe the likelihood of information becoming activated within a situation. The accessibility of information is influenced by how frequently the individual has encountered the information in relation to the situational characteristics, and how important or valued the information is to the

individual (Higgins, 2000). Within social identity theory, social categories are more accessible within individuals' minds if they are in a social context where the identity has been frequently used or if an identity is important to individuals (Hogg & Terry, 2000). While frequency and importance both influence accessibility, frequency results from repeated interactions between individuals and situations while importance derives internally from within individuals. The concepts of frequency and importance are similar to those of identity theory called *commitment* and *psychological centrality*, respectively. While importance has been described within social identity theory, I argue in this dissertation that the role of importance in identity activation has been underemphasized in the organizational literature.

I propose that applying an identity theory perspective which places greater emphasis on *psychological centrality* and its influence on *identity salience hierarchies* takes into account the influence that some identities may have on employees' work behavior across situations. Within the identity theory section, I describe commitment and its commonalities with frequency, and salience hierarchies. I then dedicate a separate section to expand upon the internal factor that I am arguing has been overlooked despite the critical influence it can have on employee behavior - psychological centrality.

Identity theory. A key aspect of identities within identity theory is *commitment*. Commitment is defined as the degree to which others depend on individuals being a particular type of person (Stryker & Serpe, 1982). The more others depend on the individual to enact a specific identity, the more committed the individual is to the identity. More specifically, commitment is a result of the number and strength of ties individuals have to others through the enactment of an identity. Therefore, if many people depend on an individual to enact a specific identity and those people are important to the individual, the individual is committed to the

identity to a greater degree. The higher the level of commitment to an identity, the higher its salience or likelihood of being activated within a situation (Stryker & Serpe, 1982). Commitment is similar to the frequency concept within social identity theory in that they both influence how cognitively accessible or salient identities are for individuals as a result of repeated interactions with external influences whether those influences are people (commitment) or situational characteristics (frequency).

Commitment is one of the factors that contributes to individuals' salience hierarchies (McCall & Simmons, 1966; Rosenberg, 1979; Stryker & Serpe, 1982, 1994). A salience hierarchy is the organization of an individual's identities according to their probability of activation within a situation (Stryker & Serpe, 1982). Therefore, those identities at the top of a salience hierarchy are more likely to become activated in any given situation. The salience hierarchy is a critical component of the identity salience and identity activation process because it illustrates that individuals have many identities, these identities differ in their likelihood of activation, and there may be several identities at the cusp of activation in any moment. This differs from social identity theory which is focused on the contextual characteristics that can activate one social category. The salience hierarchy offers explanation for how an individual's multi-faceted identities are organized and related to each other in terms of their likelihood of influencing behavior. The contextual factors of comparative fit, normative fit, frequency, and commitment influence the likelihood of an identity being activated and therefore where the identity falls within the salience hierarchy but there is also a critical internal factor that plays a role. If an identity is psychologically central to an individual, it can possess a position high within the salience hierarchy, regardless of the contextual characteristics.

This idea of a psychologically central identity influencing employees' behavior across work situations is one focus of this dissertation. Even if employees possess a subset of identities that are good fit with the work context, they may possess ill-fitting identities that are so psychologically central to them, that these identities also influence their work behavior. The salience hierarchy acts as a type of "personality" variable that individuals possess with some identities remaining in the upper level of the salience hierarchy and therefore on the cusp of activation *across* situations (Stryker, 1980). Identity theory discusses individuals actually taking an agentic role and seeking out opportunities to enact identities that are positioned high within their salience hierarchies (Stryker, 1980). In other words, for identities high within the salience hierarchy, individuals may either interpret the situation as calling for these identities or simply enact these identities despite the situation. For the internal factor of psychological centrality to be so powerful as to influence behavior despite the situation, I argue that there must be more depth to the construct than has been defined thus far. In the next section, I review the psychological centrality literature and the gaps within the psychological centrality construct. In chapter 3, I propose advancing the meaning of the construct based on the authenticity literature. I suggest that a deeper depiction of the construct is necessary to provide a solid ground for understanding why some identities become more subjectively self-referential than others and how they can be so critical to individuals' self-concepts that they can become activated, whether or not they are appropriate to a particular work situation.

III. PSYCHOLOGICAL CENTRALITY

Early Theories of Psychological Centrality. Rosenberg (1979) argues that it is necessary to consider how central identities are to individuals' self-concepts because the resulting structure of identities is relevant to individuals' global self-esteem. He conceptualized the identities of

individuals' self-concepts as being organized hierarchically into a system of self-values, with self-values representing standards that individuals think they should be judged against in determining their self-worth. Evaluations made about individuals' identities that are more central to their self-concepts should have a larger impact on their global self-esteem than those identities that are less central. For example, among two individuals who receive positive evaluations for their athletic ability, the individual with a psychologically central athlete identity will experience a boost in self-esteem while another individual who places *athlete* low in their hierarchy will be less affected (Anthony, Holmes, & Wood, 2007). This hierarchical structure of identities is created by individuals based on how important individuals feel that different identities are to their self-worth. Identities higher in the hierarchy are considered more psychologically central than identities lower in the hierarchy.

A similar concept to psychological centrality is *prominence* or how important role-identities are to individuals (McCall & Simmons, 1966). According to McCall and Simmons (1966), role-identities are individuals' imaginative view of themselves and how they'd like to feel and look when enacting a role. McCall and Simmons (1966) conceptualized a prominence hierarchy that represents an organization of individuals' role-identities based on the degree of support a role identity provides to individuals' self-views and others' view of them, how committed and invested individuals are to a role-identity, and the intrinsic and extrinsic gratifications obtained in performing a role identity. If a role-identity is strongly associated with individuals' ideal view of themselves or is encouraged and supported by others, that identity will hold more prominence to the individual. If individuals base their self-esteem on the performance of a role-identity or invest substantial material resources into a role-identity, that role-identity will be more prominent to individuals. Finally, role-identities are more prominent to individuals

if they result in extrinsic reward (e.g., money, fame) or intrinsic gratification. The resulting prominence hierarchy is thought to indicate how an individual will behave over a longer period of time and across situations.

Distinction from identity salience. An important clarification is that consistent with identity theory, I conceptualize psychological centrality as contributing to identity salience (Stryker & Serpe, 1994). In other words, identities that are more subjectively important to individuals are more likely to be activated but as discussed earlier, psychological centrality is one factor in addition to contextual factors that influence identity salience. Stryker and Serpe (1994) differentiate identity salience from psychological centrality based on degree of self-awareness. They see individuals as consciously determining the psychological centrality of identities while identity salience can occur without self-awareness. They therefore conceived of psychological centrality as contributing to the salience hierarchy. While some studies differentiate salience from psychological centrality (the term most often used in these studies is “importance”) (Ashforth & Johnson, 2001; Farmer & Van Dyne, 2010), many others equate salience and psychological centrality (Callero, 1985; Petriglieri, 2011; Thoits, 1983; Thoits, 1992, 2012). These studies discuss identities being organized into a hierarchy based on importance which means the more important identities are more likely to be activated. This thinking does not consider the additional contextual factors that can influence likelihood of activation. Therefore, in line with identity theory, I conceive of psychological centrality as contributing to the salience hierarchy in order to accommodate the contextual factors discussed in both social identity theory and identity theory. Within the organizational literature, questions may arise on the difference between psychological centrality and identification so I make this distinction next.

Relationship with identification. Recent work on the identification construct has suggested that it is made up of multiple dimensions that reflect cognitive, affective, and behavioral aspects of identification with one of the dimensions being *centrality* (Ashmore et al., 2004; Edwards, 2005; Leach et al., 2008). Leach et al. (2008) empirically tested a multi-dimensional identification construct in response to the majority of empirical work on identification utilizing a uni-dimensional construct that has been argued to be inadequate (Ashmore et al., 2004) as well as the increasing number of studies measuring identification (Riketta, 2005).

Through seven studies Leach et al. (2008) found support for five dimensions ladder up to a two-dimensional model of *self-definition* and *self-investment*. The self-definition dimension of identification describes individuals' perception of themselves as possessing the attributes of the in-group prototype. It includes the components of *individual self-stereotyping* and *in-group homogeneity*. Individual self-stereotyping refers to the extent to which individuals perceive themselves as similar to the in-group prototype and in-group homogeneity describes the degree to which individuals view all of the members of the group as similar to each other. The self-investment dimension of identification represents individuals' positive feelings toward or strength of bond with the group including three components of *satisfaction*, *solidarity*, and *centrality*. Satisfaction refers to the positive feelings individuals have for their group, solidarity represents the sense of a psychological bond with a group, and centrality is the salience or importance of the group to the individual. The distinction between the five components helps to clarify the various definitions and measurements that have occurred for identification in the organizational literature by demonstrating that different studies may actually have been

measuring different dimensions of identification (Riketta, 2005). It also suggests that psychological centrality is related to identification but is one component of it.

The construct of *psychological centrality* fills an important gap within the identity literature by recognizing that individuals possess identities that are accessible across situations and suggesting that accessibility depends on how central or prominent the identities are to individuals' self-concepts. However, existing conceptualizations don't provide sufficient clarity into the meaning of psychological centrality. Next, I discuss the questions that the early psychological centrality concepts do not address.

Gaps within Psychological Centrality. The psychological centrality and prominence literatures describe individuals evaluating identities by comparing them to their self-concepts (Rosenberg, 1979) or ideal selves (McCall & Simmons, 1966), and evaluating the identities based on their relevance to individuals' self-esteem. However, more recent literature has recognized that individuals have multiple motives related to their identities, not just self-esteem (Hogg, 2000; Vignoles et al., 2006). Further, relying on global self-esteem to assess psychological centrality is problematic because self-esteem can be specific to a context (Pierce, Gardner, Cummings, & Dunham, 1989). In addition to the difficulty with basing the construct of *psychological centrality* on identities' impact on self-esteem, the construct does not make clear what exactly individuals are evaluating against to determine the centrality or prominence of identities. Rosenberg (1979) and McCall and Simmons (1966) describe individuals comparing identities to their views of themselves but where do these self-views come from?

Self-esteem can be defined as an indication of how capable and worthy individuals think they are based on their own evaluations of themselves (Pierce et al., 1989). Individuals possess a certain level of self-esteem and then they are also motivated to enhance their self-esteem. The

self-esteem motive can be defined as “the motivation to maintain and enhance a positive conception of oneself” (20: Gecas, 1982). Individuals are driven to develop a positive sense of self and if self-esteem is undermined, individuals can experience depression and lower levels of well-being (see review by Sedikides & Gregg, 2003). Within the identity literature, self-esteem has been generally accepted as an identity motive (Sedikides & Gregg, 2003). Individuals identify with groups that in their minds enhance their self-esteem through qualities of the group prototype and in comparison to that of other groups (Hogg, 2000). However, self-esteem is not the only motive for identity acquisition. As discussed in my section on multi-faceted identities, there are several other motives that have been identified as being strongly related to identity formation such as uncertainty reduction, belonging, distinctiveness, continuity, and efficacy.

Vignoles and colleagues (2006) argue and find support for the idea that satisfaction of a combination of these motives can lead to individuals considering an identity as more or less central. In this study, *centrality* was defined as how central versus marginal an identity is to individuals’ self-concept and important an identity is to defining the individuals (Vignoles et al., 2006). Several studies found that an identity’s perceived centrality was predicted by self-esteem, but the consideration of additional identity motives explained additional variance in perceived centrality (Vignoles, Chryssochoou, & Breakwell, 2002; Vignoles et al., 2006). These findings suggest that individuals may be basing their assessments of the psychological centrality of their identities on multiple motives rather than just self-esteem as suggested by Rosenberg (1979).

Another limitation of grounding the construct of psychological centrality in self-esteem is that research suggests that individuals’ behaviors are influenced by self-esteem with respect to a specific target rather than global self-esteem (Tharenou, 1979). In other words, if individuals are enacting a particular role, their role-specific self-esteem is implicated, and if they are performing

a task, their task-specific self-esteem will be most relevant. The development and testing of the construct, organization-based self-esteem (Pierce et al., 1989), is an example of a specific type of self-esteem that has been found to be more predictive of organizational members' behaviors than global self-esteem. Therefore, the suggestion that individuals deem identities as more or less central based on global self-esteem is not so simple. Individuals' level of global self-esteem would be expected to influence their overall feelings of self-worth but more specific self-esteem related to the situation at hand would arguably have a higher level of influence when thinking about which identities are central to individuals. This context-specific conceptualization of self-esteem defies the conceptual underpinning of psychological centrality which suggests that there are internal factors that influence identities to be accessible *across* situations.

In addition to questioning whether psychological centrality can be solely based on self-esteem, the other critical question is what exactly psychological centrality is being evaluated against. Rosenberg (1979) and McCall and Simmons (1966) describe individuals comparing identities to their views of themselves or ideal selves, respectively, to evaluate psychological centrality. However, it is unclear how individuals arrive at their views of themselves or the qualities they would like themselves to possess.

In chapter 3, I develop my argument that the psychological centrality of identities is actually evaluated based on how congruent identities are to individuals' authentic self. Drawing from authenticity literature, I propose that it is the authentic self, or who a person truly is (Schlegel, Hicks, King, & Arndt, 2011), that individuals are evaluating identities against in determining psychological centrality. The authentic self is critical because behaving in accordance with one's authentic self is related to higher levels of psychological well-being (e.g.,

Kifer, Heller, Perunovic, & Galinsky, 2013; Schlegel & Hicks, 2011; Schlegel et al., 2011; Wood et al., 2008).

The criticality of considering the psychological centrality of identities for employees at work becomes apparent when these identities become activated and interfere with employees' work performance. To illustrate the profound influence psychological centrality can have on employee behavior, I investigate the sensitivity of individuals to threat to their psychologically central identities.

IV. IDENTITY THREAT

The identity threat literature is widespread across the fields of psychology, sociology, and organizational research, and has been studied under a range of topics including rejection, social exclusion, ostracism, prejudice, discrimination, and stereotype threat. As such, there are no broadly accepted models of identity threat with the exception of a well-established study of stereotype threat. Therefore, I utilize various sources to obtain a holistic view of identity threat, how events are perceived as threatening, and how identity threat may be minimized. I draw from Petriglieri's (2011) view of identity threat, the stereotype literature (Steele, 1997; Steele & Aronson, 1995; Steele, Spencer, & Aronson, 2002), and multiple theoretical and empirical papers on identity threat and rejection. My review of the identity threat literature lends clarity regarding the construct of identity threat including its definition, the different types and sources of identity threat, the different types of responses to identity threat, and interventions that have been tested. This review also uncovers four gaps within the organizational literature regarding identity threat: 1) narrow understanding of what factors influence if an experience is perceived as an identity threat, 2) limited knowledge regarding the emotional and cognitive mechanisms that result from identity threat, 3) no investigation into the impact of identity threat on employee

performance and job attitudes, and 4) virtually no study of how context can reduce identity threat. Therefore, in chapter 3, I develop explanations for how identity threat is perceived, the cognitive impact of identity threat and its influence on performance, and how organizations can reduce harm to identities.

Definition, types, sources. An identity threat occurs when “experiences (are) appraised as indicating potential harm to the value, meanings, or enactment of an identity” (644: Petriglieri, 2011). Within this definition, Petriglieri (2011) describes three forms of harm to identities including harm to the value, meanings, or enactment of identities, or a combination of these types. Included within harm to the value of identities is stereotype or categorization threat. Stereotype or categorization threat refers to being categorized into a social group and being assigned the stereotypical characteristics of that group when the individual does not want to be categorized in that manner (Branscombe et al., 1999a; Steele & Aronson, 1995). An elaboration of these three types of harm to identities is detailed next.

Types. The *value* of identities to individuals is represented by their positive feelings towards the identity (Branscombe et al., 1999a). Richman and Leary (2009) also discuss relational value or the “degree to which a person regards his or her relationship with another individual as valuable or important” (p. 82; Leary, 2005). Individuals derive positive affect or belonging from their relationships with others (relational identity) and membership in groups (collective identity). Therefore, threats to value can occur when an outgroup devalues the identities of ingroup members through negative comparison (Tajfel & Turner, 1986) or when individuals feel an identity they possess is not regarded highly by others (Baumeister & Leary, 1995; Richman & Leary, 2009).

Examples of negative comparison harming the positive value associated with an identity include *Business Week* rankings that describe a school different from business school members' preexisting conceptions, threatening the value they associate with their organizational (school) identity (Elsbach & Kramer, 1996). Another example of negative comparison is called *collective threat* and describes the worry that a member of one's social group may behave in a way that reinforces negative stereotypes (Cohen & Garcia, 2005). This phenomenon is demonstrated by female tokens (i.e., females in high-prestige workgroups) or African-Americans feeling that their value will be lowered if they support other females (Duguid, 2011) or select an African-American candidate for hire (Lewis & Sherman, 2003), respectively, because they may be associated with negative stereotypes. Negative comparison is also behind the expansive study of stereotype threat. A stereotype is the application of the attributes of a social group to the members of the group which can be a threat if the attributes applied to a group member are negative (Steele & Aronson, 1995). The value of identities can be harmed when an identity is seen negatively whether through comparisons with an outgroup or members of an ingroup.

Threats to relational value include negative interpersonal events such as rejection, criticism, and stigmatization in relation to individuals' identities. Examples of rejection include negative reactions from coworkers regarding an individual's gay/lesbian identity (Griffith & Hebl, 2002) and negative stereotypes coworkers apply to employees based on their demographic memberships (e.g., Aronson et al., 1999; Schmader & Johns, 2003). Criticizing individuals' personal attributes and identities can threaten the value individuals associate with an identity such as insulting comments about an individual's private life and questioning one's abilities (Aquino & Douglas, 2003), challenging an individual's perspective in his/her area of expertise (Williams, 2007), and not understanding the scope or complexity of a professional's work

(Vough, Cardador, Bednar, Dane, & Pratt, 2013). Stigmatization also harms the value of an identity by definition; a stigma is a characteristic that an individual possesses or is perceived to possess that represents an identity that is negatively valued (Smart & Wegner, 1999).

Stigmatized identities that have been studied include gay/lesbian (Griffith & Hebl, 2002), having HIV (Pachankis, 2007), having an eating disorder (Smart & Wegner, 1999), and “dirty work” occupations such as garbage collector and abortionist (Kreiner, Ashforth, & Sluss, 2006a).

Individuals derive value from their identities so an experience that harms the positive meanings of an identity or relational value associated with an identity may be interpreted as a threat.

Harm to the *meaning* that individuals attribute to their identities can occur when an experience suggests that an identity will no longer be associated with the meaning in the future. For example, individuals’ moral identity is threatened when they lie because the meaning they associate with their moral identity may no longer hold in the future (Mulder & Aquino, 2013). An individual’s organizational identity may be threatened if an employee is strongly identified with their organization and their organization is acquired by another firm or exposed to external pressures such as competition or recession (Clark, Gioia, Ketchen, & Thomas, 2010; Ravasi & Schultz, 2006). In these situations, employees’ organizational identity may no longer have the same meaning in the future because the organization has to change its identity in light of the merger or in response to competition. Individuals’ identities contain particular self-definitions and if these meanings change, individuals may perceive a threat.

Finally, individuals may find that an experience limits their ability to *enact* an identity in the future. For example, when an organization transitioned to non-territorial workspaces where employees no longer had specified desks and instead reserved desks when they were in the office, employees experienced limited ability to display their personal and social identities at

work (Elsbach, 2003). Not being able to display physical artifacts that portrayed their personal and social identities was a threat to employees' identities because they could no longer express aspects of themselves that fulfilled their need for distinctiveness (Brewer, 1991; Leonardelli et al., 2010). Another example is when Hispanic students in their first year at predominantly Anglo universities felt their ethnicity was incompatible with their new environment and they couldn't talk to their new friends at school about their family or culture (Ethier & Deaux, 1994).

Individuals' behavior is affected by their identities so they may perceive a threat if an experience limits their ability to act according to their identities. Identity threat also derives from various sources.

Sources. There is a wide range of experiences that can be the source of identity threat including events, interpersonal interactions, intergroup interactions, and personal actions (Branscombe et al., 1999a; Petriglieri, 2011). The examples presented in the previous section demonstrate the different ways that experiences can harm identities and they also illustrate the different sources of identity threat. Events as identity threats include mergers (Clark et al., 2010), increased competition or changes in the economic climate (Ravasi & Schultz, 2006), an organization's decision to change to non-territorial workspaces (Elsbach, 2003), and students starting college (Ethier & Deaux, 1994). Interpersonal interactions are the source of stereotype threats (e.g., Aronson et al., 1999; Schmader & Johns, 2003) and threats to relational value in which a coworker rejects, insults, or challenges another employee's identities (Aquino & Douglas, 2003; Griffith & Hebl, 2002; Vough et al., 2013; Williams, 2007). Separate from events and interpersonal interactions, identity threat can result from interactions between groups which itself has multiple sources.

Between groups, the source of threat can be the outgroup, a third party, a salient intergroup comparison, or the ingroup itself (Branscombe et al., 1999a). The outgroup may make a negative comparison through their behavior towards the ingroup or sharing of information about the ingroup (Tajfel & Turner, 1986). A third party may make a negative comparison between two groups such as the newly published *Business Week* rankings of business schools that resulted in a threat to business school members who felt their ranking was lower in relation to other schools than their preconceptions (Elsbach & Kramer, 1996). The threat perceived by female tokens is an example of a salient intergroup comparison and threat by the ingroup. Since females are a minority in high prestige workgroups, gender is salient (i.e., top of mind). The threat derives from members of the female tokens' ingroup – other women. The female tokens perceived two types of threats from other female candidates: a competitive threat if the female candidate is highly qualified and could therefore be viewed as more valuable than the female token or a collective threat if the female candidate is moderately qualified, reinforcing negative stereotypes about being female (Duguid, 2011). The source of both types of threat is in the mind of the ingroup member herself. The source of the threat also comes from the individuals themselves in the example of lying and its threat to one's moral identity (Mulder & Aquino, 2013). Identity threats can derive from an event, other groups, or people, and individuals may respond in numerous ways to the threat.

Responses. Within the psychological and organizational literature, responses to identity threats have been described in terms of the action individuals take with regard to the source of threat or the identity itself. Within actions targeted towards the source of the threat, they can be specifically related to the threatened identity or broader reactions as a result of the threat. One especially important response not specifically targeted towards the identity or relationship

involved is individuals' performance. While performance has not been studied in relation to identity threat within the organizational literature, it has been the primary focus of stereotype threat studies (reviewed in chapter 3). Related to the source of identity threat, Petriglieri (2011) described identity-protection responses which include actions directed at the source of threat in an effort to affirm the threatened identity without changing the identity. Richman and Leary (2009) also described responses targeted towards the source of the threat but not specifically for the purpose of protecting the threatened identity. These responses include prosocial, withdrawal/avoidance, and antisocial responses toward the people involved in the relationship. Responses related to the identity itself are described as identity-restructuring responses by Petriglieri (2011) and are focused on adjusting threatened identities. Finally, responses to identity threat can be reflected in poorer task performance which has been the focus of stereotype threat studies (Steele, 1997; Steele & Aronson, 1995; Steele et al., 2002).

Within identity-protection responses, individuals may engage in *derogation* (condemning the opinions of the threatening others), *concealment* (hiding the threatened identity when with disapproving others) or *positive-distinctiveness* (trying to change the view of threatening others by emphasizing positive aspects) (Petriglieri, 2011). Kreiner, Ashforth, and Sluss (2006a) describe *social weighting* which is a type of derogation response where stigmatized individuals focus on positive views about their identity and discount negative views. Examples of the derogation response occurred in response to threats of stigmatized identities within dirty work occupations. Mortuary students were instructed to attribute the public's criticisms to ignorance (Cahill, 1999) and hospital cleaners focused on positive interactions with families rather than negative interactions with doctors (Dutton, Debebe, & Wrzesniewski, 1996). Concealing identities was demonstrated in the study of sexual orientation in which some gay men and

lesbians decided to conceal (not disclose) their sexual identities if they perceived low organizational support for being gay (Griffith & Hebl, 2002). Examples of positive-distinctiveness responses to identity threats are employees' use of portable physical artifacts and salient behavior to affirm their identities in non-territorial work environments (Elsbach, 2003) and professionals informing clients and demonstrating to them the scope and complexity of their work so clients better appreciate and value their professional identities (Vough et al., 2013). Business school members who felt threatened as a result of *Business Week* ratings also reacted with a positive-distinctiveness response by emphasizing alternate positive identity dimensions such as being the regional leader, and thinking of themselves within alternative comparison groups such as their position among public institutions (Elsbach & Kramer, 1996). With identity-protection responses, individuals maintain their identities and engage in actions that help them to keep the positive value they derive from their identities.

Other responses targeted towards the source of threat may be reactions by threatened individuals in general rather than specifically for the purpose of maintaining the threatened identity. Prosocial responses to rejection are behaviors that result from a heightened desire for connecting to others. Antisocial responses involve anger, defensiveness, and wanting to harm the source of the threat, and withdrawal/avoidance responses are distancing from the source of the harm in order to avoid further rejection (Richman & Leary, 2009). An example of a prosocial response to rejection is Hispanic students seeking other collectives on campus that are consistent with their Hispanic identity when they felt unable to enact their Hispanic identity on their new predominantly Anglo university (Ethier & Deaux, 1994). Antisocial responses such as saying or doing something to purposefully harm coworkers were found in response to identity threat especially when the threatened individual had favorable attitudes toward revenge, was younger,

and was of lower status and exposed to a low level of aggressive modeling (Aquino & Douglas, 2003). An experiment on stereotype threat found that women displayed aggressive behavior in response to a partner providing negative feedback on their math test score (compared to women who were not threatened) by blasting their partner with noise that was more intense and of longer duration (Inzlicht & Kang, 2010). Withdrawal/avoidance response is illustrated by gay and lesbian employees who experience lower levels of job satisfaction and higher levels of job anxiety when their coworkers had negative reactions to their gay/lesbian identity (Griffith & Hebl, 2002). These prosocial, antisocial, and withdrawal/avoidance behaviors are related to the source of the threat but not necessarily with the purpose of affirming the threatened identity with the source.

Identity-restructuring responses are focused on adjusting the threatened identity and include *importance-change* (adjusting threatened identity to be less important), *meaning-change* (changing meanings tied to the threatened identity) and *identity-exit* (disengaging from identity). In response to mergers and external threats such as recession and competition, organizations have responded by changing the meanings associated with their organizational identities (Clark et al., 2010; Ravasi & Schultz, 2006). Individuals in dirty work occupations may reframe their occupational identity to emphasize positive aspects such as personal injury lawyers talking about how their work makes manufacturers accountable for defective products (Ashforth, Kreiner, Clark, & Fugate, 2007). An example of an identity-exit response is female token leaders not supporting other females or essentially disengaging from the female identity in response to their perceived competitive and collective threat that results from being compared to or associated with other females (Duguid, 2011). Another example of disengaging from an identity is an abortion clinic staff member describing his/her role as a physician assistant in a women's health

clinic (Ashforth et al., 2007). These identity-restructuring responses are focused on the threatened identity itself and allow for the value or meaning of the identity to the individual to be adjusted.

In addition to identifying the types of identity threat and responses to identity threat, studies have tested various interventions for reducing stereotype threat.

Interventions. Interventions for reducing the impact of stereotype threat have been tested within the psychology literature. Information contrary to the negative stereotype or affirming the ability of the group can reduce perceived stereotype threat. Identity safety (telling female participants that research has not found differences in leadership ability based on gender) was found to eliminate the effect of a negative stereotype that men are better leaders than women on female participants' selection of a leadership role (Davies, Spencer, & Steele, 2005). Similarly, telling female participants under stereotype threat (that women are not as good at math as men) that college students are good at math eliminated the negative effects of stereotype threat on performance (Rydell, McConnell, & Beilock, 2009). The effect of stereotype threat on performance can also be minimized by providing a positive role model of the individual's group (Marx & Roman, 2002; Shapiro, Williams, & Hambarchyan, 2013) or having individuals affirm a valued attribute about themselves. Examples include women (Martens, Johns, Greenberg, & Schimel, 2006) or African-American students (Shapiro et al., 2013) participating in an exercise where they write about the personal characteristic most important to them or Latino American students participating in values affirmation writing exercises throughout the school year (Sherman et al., 2013). Providing information contrary to a negative stereotype, being exposed to a positive role model of the group, and affirming a valued attribute about a threatened individual have been found to reduce the effects of stereotype threat.

Another way that an intervention can reduce the effect of stereotype threat is by reappraising the situation or meaning associated with negative feelings. Women who were aware of the negative stereotype of women being worse than men at math were told to view the math test they were about to take objectively and to take on a neutral attitude (Inzlicht & Kang, 2010). This coping strategy armed participants with neutral rather than negative thoughts and feelings that can interfere with performance. Another coping strategy is to reappraise the meaning women attributed to their feelings of anxiety such as telling women that anxiety is good for performance (Johns, Inzlicht, & Schmader, 2008) and simply informing women before taking a test that stereotype threat might lead to feeling anxious (Johns, Schmader, & Martens, 2005). These intervention examples provide support for how stereotype threat can be minimized.

Summary. A review of the identity threat literature both within organizational studies and psychology provides a framework for the types and sources of identity threat, as well as responses to identity threat. Identity threat results when an event is perceived as harming the value, meanings, or enactment of an identity and individuals respond with actions targeted towards the source of the threat, adjustment of the threatened identity, or decrements in performance. Finally, some situational interventions have been explored within the stereotype literature for how stereotype threat can be reduced such as discounting a negative stereotype, affirming the abilities of a group or individual, and reappraising the situation or meaning associated with negative feelings. Within the organizational literature, there is minimal investigation into contextual characteristics that can reduce the appraisal or impact of threat on individuals. In the next section, I review the literature that exists around how organizations influence employees' identities.

V. ORGANIZATIONS' INFLUENCE ON EMPLOYEE IDENTITY

There is a long history of research investigating how organizations influence employees' identities (e.g., Ashforth et al., 2008; Ashforth & Mael, 1989; Dutton et al., 1994; Hogg & Terry, 2000; Pratt, 1998). Social identity and self-categorization theory provide a social-psychological basis for explaining how employees acquire identities within organizations (Ashforth & Mael, 1989; Hogg, 2000; Turner et al., 1987). Two substantial areas of study on how organizations influence employees' identities are identity work and construction (Creed et al., 2010; Dutton et al., 2010; Ibarra & Barbulescu, 2010; Kreiner et al., 2006b; Pratt et al., 2006; Roberts, 2005; Swann et al., 2009) including socialization (Cable, Gino, & Staats, 2013; Van Maanen, 1979), and organizational identification (Ashforth et al., 2008; Cooper & Thatcher, 2010; Dutton et al., 1994; Elsbach, 1999; Pratt, 1998, 2000). Broadly speaking, in relation to identity, these areas of study describe how organizations influence the content and salience of employees' identities. Content refers to the self-meanings individuals attribute to themselves (Gecas, 1982) and salience refers to the likelihood of an identity to become activated (Stryker & Serpe, 1982). There has not been a thorough investigation into how organizations can affect employees' identities by influencing identity threats. While the research on identity work and construction essentially includes a discussion of identity threats, the organizations' role in this area of study is the cause of identity threat rather than reducing it. I first discuss the types of identities that are the focus of organizations' efforts, and then review the findings within each of these streams of research on organizations and employee identity.

At the beginning of this dissertation, I discussed the multiple levels of self-representation from which individuals can derive identities including a collective level (Brewer & Gardner, 1996). While the organizational environment introduces both relational and collective identities to employees (Sluss & Ashforth, 2007), the focus of much of the literature on how organizations

influence employees' identities is on collective identities. Collective identities refer to those identities that employees acquire through membership in social categories, work groups, and the greater organization. Relational identities are those identities that develop between two people such as between colleagues, and supervisors and subordinates. Not surprisingly, in relation to employees' identities, in addition to the social categories that employees are members of (e.g., gender, race), the identities that organizations influence are those related to work whether they are functional (e.g., marketing, engineer), hierarchical (e.g., manager, CEO), a work group (e.g., Microsoft Windows, Microsoft Explorer), or the organization (e.g., Microsoft). A more specific collective identity that is a focus of the literature on identity work and construction is *professional or occupational identity*. Professional identity refers to self-meaning an individual possesses related to a specific profession such as law, medicine, and accountancy (Pratt et al., 2006) and occupational identity describes self-meaning related to a job, vocation or occupation (Kreiner et al., 2006b). Professional or occupational identities are the focus in the study of identity work and construction as these scholars are trying to understand how employees develop their identities within organizations. Organizational identity is of interest in organizational identification work because the focus here is on whether employees acquire self-meaning related to specific workgroups and the organization. Next, I review the theoretical and empirical work on how organizations influence employees' identities.

As in any social context, individuals experience social identity and self-categorization processes within organizations resulting in categorization into groups and therefore, acquisition of relational and collective identities. Social identity theory suggests that employees engage in intergroup comparison which results in them categorizing themselves into social groups where intragroup similarities and intergroup differences are maximized (Ashforth & Mael, 1989). As

members of a social group, employees begin to take on the prototypical characteristics of a group member as described by self-categorization theory, an extension of social identity theory (Hogg & Terry, 2000; Turner et al., 1987). Organizations influence the content or self-meanings of employees' identities by exposing them to relational, workgroup and organizational identities that employees may or may not identify with. Organizations can also make particular identities salient by manipulating intergroup comparison such as communicating to employees a specific organization or group they should compare themselves with (Hogg & Terry, 2000) or using cues such as mission statements, contracts, physical settings, training, and rituals (Ashforth & Mael, 1989; Swann et al., 2009). These identity cues can either prime the organizational identities or provide descriptive information about the prototypical attributes of a member of the collective (Ashforth et al., 2008). The psychological processes described by social identity and self-categorization theory apply to employees within organizations, and the study of identity work and construction delves deeper into how employees develop their identities.

Identity work and construction is a burgeoning area of study and refers to the active development of individuals' identities within a social context (Pratt et al., 2006). Theoretically, identity construction occurs through sensebreaking and sensemaking between employees and their organizations. Empirically, qualitative and case method studies have been undertaken in an effort to uncover the intricacies of how identity construction occurs. Sensebreaking related to identity involves questioning who one is, acknowledging gaps in identity, and exploring how to fill the gap in their identity (Ashforth, et al., 2008). Sensegiving related to employees within organizations refers to organizations providing guidance to employees on what their identity should be within the organization (Ashforth, et al., 2008). Finally, through sensemaking, employees interpret their experiences within the organization, determine what they mean for

their identities, and make adjustments to their identities. Through this process of sensebreaking, sensegiving, and sensemaking employees are thought to evolve their identities within organizations.

Empirically, the models for identity construction explain tensions among multiple identities, how the identity changes, and individual and organizational outcomes. For example, tensions arise for medical residents as they discover what it means to be a medical professional (Pratt et al., 2006), professionals between their desired and perceived images (Roberts, 2005), episcopal priests between their personal and social identities (Kreiner, et al., 2006b), and gay, lesbian, bisexual, and transgender (GLBT) ministers between their stigmatized GLBT and church role identity (Creed et al., 2010). Organizations impose upon employees these types of tensions between their multiple identities and require employees to engage in decisions on whether and how to adjust their identities. These tensions can be thought of as threats to employees' identities in that they may pose potential harm to identities (Petriglieri, 2011). Therefore, some of the types of tactics individuals engage in as a result of these tensions fall along similar lines as the responses to identity threat discussed in the previous section. However, the difference between the identity threat and tension response tactics is that the former is primarily referring to one identity while the latter is focused on multiple identities. In line with the *concealment* identity threat response, the identity construction literature describes employees taking actions so that others categorize them in a more valued social category rather than the devalued category (i.e., social recategorization) (Roberts, 2005). *Positive distinctiveness* tactics are described in which employees emphasize the valuable aspects of the identity in tension through integrating the positive aspects of a social identity into a professional identity (Roberts, 2005). And in line with the *identity-restructuring* responses to identity threat, employees

engaged in identity work can change the meaning of their identity by enriching it (i.e., gaining a more nuanced understanding of the identity) or patching it (i.e., adding to a well-established identity) (Pratt et al., 2006), or adjust the hierarchy of importance among identities (Kreiner et al., 2006b). Additional tactics discussed include compartmentalization or separating personal identities from social identities and merging identities by integrating multiple identities to create a new identity (Kreiner et al., 2006b). Some of these identity construction models then discuss the influence of successful identity construction on employees' well-being (Roberts, 2005) and member identification (Pratt et al., 2006). Work on employee socialization investigates how organizations influence employees' identities upon entry with a recent study demonstrating that organizations that focus on employees' personal identities during socialization experienced higher levels of customer satisfaction and employee retention compared to emphasizing organizational identities (Cable et al., 2013). Organizations provide a context that requires employees to engage in identity work and shapes employees identities by providing various self-meanings that employees adopt. Organizations also influence the level of employees' identification with organizations.

Organizational identification has been discussed several times throughout this dissertation but here, I specifically focus on how organizations may influence the extent to which employees identify with organizational identities. Since I extensively defined identification and reviewed the multitude of empirical studies and their findings at the beginning of my dissertation, I now focus on describing the tactics or practices that organizations can engage in with the goal of increasing employees' identification with the organization. Again, organizational identification is commonly defined as a sense of oneness with an organization (Ashforth & Mael, 1989) or a perceived overlap in attributes between an organization and

employee (Dutton et al., 1994). Theoretically, employees are more likely to categorize or define themselves with organizational identities when the organization is distinctive, outgroups are salient, there is minimal intragroup competition, and organizational members are more similar to each other than members of other organizations (Ashforth & Mael, 1989; Dutton et al., 1994; Pratt, 1998). These antecedents make the distinction between ingroup and outgroup clearer resulting in employees being able to better define themselves as members of their organizations. An empirical example is that dissimilarity among teams was found to be negatively related to team identification if they did not have congruent goals and task interdependence (Van der Vegt, Van de Vliert, & Oosterhof, 2003). The members of the teams did not have similarities to facilitate the categorization of themselves as team members. Since employees also derive satisfaction or self-enhancement from their organizational identities, organizations that have higher levels of prestige and are more attractive are more likely to have identified employees (Ashforth & Mael, 1989; Dutton et al., 1994; Pratt, 1998). These antecedents increase employees' self-worth and therefore are more likely to result in identification. Empirically, meta-analyses have shown that the contextual characteristics of job scope/challenge and organizational prestige are positively related to organizational identification (Riketta, 2005). Job scope/challenge likely influences organizational identification in a way similar to organizational prestige which is to contribute to employees' self-esteem, making identification more likely. Other empirical studies demonstrated that attractiveness of organizational identity and construed external image, (Dukerich, Golden, & Shortell, 2002) and external prestige and communication climate (Smidts, Pruyn, & van Riel, 2001) were positively related to organizational identification. Qualities that enhance the organizational identity contribute to the likelihood of employees' identification with the organization because employees derive feelings of self-worth

through identification. The study of organizational identification provides another perspective on how organizations influence employees' identities which is through increasing the extent to which employees identify with organizational identities.

Another way organizations can have an impact on employee identity is by providing a context that supports or hinders threats to employees' identities. Organizations may engage in practices that influence whether harm to employees' identities is prevalent or minimal. One empirical study tested whether organizations had nondiscrimination policies, active displayed support for gay/lesbian activities, and diversity training on gay/lesbian issues (Griffith & Hebl, 2002). Gay/lesbian employees in organizations with these types of activities experienced lower levels of perceived job discrimination and more positive reactions from coworkers and supervisors. In her study of non-territorial workspaces Elsbach (2003) acknowledges that she focused on how organizations threatened employees' identity and not what the organizations could do to affirm employees' identity. How organizations affect the extent to which employees experience identity threat at work is an area of study with much left to be understood.

VI. SUMMARY OF CHAPTER 2

My review of the literature on identity, identity salience, psychological centrality, identity threat, and organizations and employee identity reveal several gaps that my theoretical model fills. To understand how multiple identities may affect employee behavior, I suggest that rather than relying only on social identity theory to explain employee behavior, the organizational literature should also utilize identity theory and the salience hierarchies that individuals possess to provide explanation for how multiple identities may come to affect behavior. Identities can be ordered in terms of their salience such that some identities are more likely to become activated and affect behavior within a given situation than other identities. Identity theory also emphasizes

a critical internal factor called psychological centrality that can influence behavior in addition to the situational factors traditionally discussed within the organizational literature. Psychological centrality is a key factor to consider because it can result in identities being chronically positioned high within salience hierarchies, across situations.

Psychological centrality is described as how central identities are to individuals' self-concepts but early theories base this evaluation solely on identities' contribution to self-esteem and leave unanswered exactly what individuals are evaluating centrality against. These gaps make it difficult to explain how individuals determine which identities are psychologically central.

One important implication of psychologically central identities is that individuals are especially vulnerable to threats to them. The study of identity threat within the organizational literature has demonstrated the types, sources, and responses to identity threat but has not explored this role of psychological centrality and its effect of increasing the likelihood of perceiving threat. In addition to the opportunity to illustrate the vulnerability of psychologically central identities to threat, there is a lack of investigation within the organizational literature into how harm to identity experiences are perceived as identity threats, how identity threat emotionally and cognitively impacts employees, the detrimental effect of identity threat on performance and job attitudes, and how context can minimize identity threat. In the next chapter, I provide theoretical support for the proposed relationships in my model.

CHAPTER 3

THEORETICAL MODEL AND HYPOTHESES DEVELOPMENT

I. INTRODUCTION

As described in chapter 2, individuals possess multiple identities and I suggest that utilizing an identity theory framework facilitates understanding how these identities influence behavior with the concept of salience hierarchies. These salience hierarchies are organized such that identities at the top of the hierarchy having a higher likelihood of becoming activated and influencing behavior in the present situation. One critical factor that influences identities' position within the salience hierarchy that has been under-emphasized within the organizational literature is psychological centrality. The psychological centrality of an identity plays a crucial role because it is an internal factor that individuals possess across situations. This means that psychologically central identities have a high probability of affecting employees' behaviors at work whether they are relevant to the situation or not.

My theoretical model examines a particular situation that highlights the critical role that psychological centrality can have on employee behavior which is that of identity threat. Since employees possess psychologically central identities that are highly salient, these identities are especially sensitive to identity threat. If employees are faced with harm in relation to these psychologically central identities, they are more likely to perceive the event as a threat and therefore experience negative emotions and cognitive interference which then impacts their work performance and job attitudes. In the following sections, I develop my theoretical justification for my model and the related hypotheses.

In section II, using the stress and emotions, and stereotype threat literatures, I propose how identity threat is perceived in organizations and delve into how the psychological centrality of an identity increases the likelihood of an event being perceived as a threat. Based on the authenticity literature, I propose that psychological centrality is represented by the congruence between an identity and the authentic self. When harm to an identity is present, it is more likely

to be perceived as a threat if it is psychologically central. In section III, I describe the negative emotions and cognitive interference employees experience as a result of identity threat and suggest it negatively impacts their performance and job attitudes at work. Finally, in section IV, I describe a contextual factor, openness to experience work group identity, which I propose minimizes harm to identities.

II. PERCEIVED IDENTITY THREAT AND PSYCHOLOGICAL CENTRALITY

In chapter 2, I discussed different types of identity threat including harm to the value, meanings, or enactment of an identity (Petriglieri, 2011) and the empirical studies that have investigated identity threat. Implicit in these empirical studies is an assumption that individuals actually perceive these situations as threatening. However, harm to the value, meaning or enactment of identities may or may not be perceived as a threat by a particular individual.

To make the distinction between harm to an identity and actual perceived identity threat, I refer to the presence of harm to an identity in my theoretical model as “harm to identity”. Harm to a particular identity occurs when an individual or group disparages, challenges the meaning of, or hinders the enactment of the identity. Employees may have experiences of harm to their identities but may not necessarily perceive them as threatening. Within the organizational literature, our understanding of how harm to an identity is perceived as an identity threat is limited, so I borrow from both the stress and emotions, and stereotype literatures to explain this process.

Stress and emotions. According to the stress and emotions literature, individuals differ in how they appraise situations including how they interpret events and react to them (Lazarus & Folkman, 1984). This literature investigates the cognitive processes that individuals undergo when faced with situations and seeks to explain the factors that influence different interpretations

and reactions. *Cognitive appraisal* describes the evaluation individuals assign to a situation and it includes a primary and secondary appraisal. The primary appraisal is individuals' determination of whether the situation is harmful or beneficial now or in the future. The secondary appraisal is individuals' evaluation of what they can do in response to the situation. The primary appraisal process is relevant to whether a harmful identity event is perceived as threatening.

Within the primary appraisal process, individuals can categorize a situation as “1) irrelevant, 2) benign-positive, or 3) stressful” (32: Lazarus & Folkman, 1984). An irrelevant categorization means the situation has no relevance to one's well-being and a benign-positive determination indicates the situation has the potential to preserve or enhance one's well-being. If a situation is deemed as stressful, there are three potential interpretations including harm/loss, challenge, or threat. The situation is appraised as a harm/loss if damage or harm has already occurred. If an individual perceives a situation as containing potential for growth, they appraise it as a challenge. Individuals perceive a situation as a threat if it contains potential for harm or loss in the future. Lazarus and Folkman (1984) readily acknowledge that a situation in which harm or loss has already occurred may also be perceived as threatening because it can also hold the potential for more harm or loss in the future. This work on emotions is the basis for Petriglieri's (2011) definition of identity threat: “experiences appraised as indicating potential harm to the value, meanings, or enactment of an identity” (p. 644). This work supports my first hypothesis that the presence of harm to an identity is positively related to perceived identity threat. I also support this hypothesis with the stereotype threat literature.

Perception of stereotype threat. Schmader, Johns, and Forbes' (2008) depiction of how stereotype threat is perceived lends further support for the positive relationship between harm to an identity and perceived identity threat. A stereotype is when a characteristic that is perceived to

be representative of a social group is attributed to a group member, and a threat occurs when the attribute is negative (Steele & Aronson, 1995). Their depiction of stereotype threat suggests that stereotype threat results from a cognitive imbalance in the links between three core concepts of self, group, and ability domain within a situation. In order for a stereotype threat to occur, the links between the concepts of self, group, and ability domain must be activated and in a cognitive imbalance. The concept of activation within this depiction refers to the idea that the links or relationships are top-of-mind for individuals. These links can become activated by either contextual factors or individual differences. A cognitive imbalance results when the links are activated between self and group in a positive manner (e.g., women are thinking of their female identity within a situation), group and ability domain in a negative manner (e.g., women are made aware that females are thought to have a lower ability in math than men), and self and ability in a positive manner (e.g., it is important to women that they are good at math). In other words, if an individual feels he/she is a member of a group and possesses a specific ability, a negative stereotype of that group regarding the ability results in stereotype threat. In the example above, women perceive stereotype threat and perform lower in math when this cognitive imbalance is in place.

This depiction of how stereotype threat is perceived can be applied to a more general identity threat that can occur in organizations. Rather than a negative activation of the link between concepts of group and ability domain, I propose that a negative activation of the link between identity at any level of self-representation (personal, relational, or collective; Brewer & Gardner, 1996) and value, meanings, or enactment (instead of just “ability domain”) contributes to the perception of identity threat. When describing identity threat in general, it is not only group or collective identities that can be threatened, but any identity at the personal, relational or

collective level. In my review in chapter 2 of the types of harm that can occur to identities, I described harm to personal identities such as questioning individuals' personal life and abilities (Aquino & Douglas, 2003), relational identities as seen when coworkers negatively react to a colleague's gay identity (Griffith & Hebl, 2002), and collective identities such as with stereotype threat to a minority group (e.g., Aronson, et al., 1999). Further, harm can occur to the value, meanings, or enactment of an identity, not only by a negative attribution of an ability domain to a group. Therefore, the cognitive process that occurs when perceiving stereotype threat further supports my first hypothesis.

Hypothesis 1: Harm to identity will be positively related to perceived identity threat.

Advancement of psychological centrality construct. In chapter 2, I presented the definition of psychological centrality as how important or significant identities are to individuals' self-concepts (Rosenberg, 1979). To evaluate psychological centrality, individuals are described as comparing identities to their views of themselves and determining the extent to which the identities contribute to their self-esteem. I described the gaps in this definition of psychological centrality as threefold. First, work on global- versus specific-self-esteem (Pierce, et al., 1989; Tharenou, 1979) suggests that evaluating an identity's psychological centrality according to its contribution to self-esteem is not straightforward since the context can influence the type of self-esteem implicated. Second, psychological centrality cannot solely be determined based on contribution to self-esteem because empirical studies have shown that the perceived centrality of identities is explained by additional motives beyond self-esteem (Vignoles et al., 2002; Vignoles et al., 2006). Third, evaluating identities by comparing them to self-views does not provide

sufficient explanation for what exactly individuals are comparing identities against and why this self-comparison is so critical. Overall, this definition is problematic because it does not provide sufficient grounding for how individuals determine which identities are psychologically central. I propose that the authenticity literature provides a more solid foundation for psychological centrality. More than self-esteem, I propose that identities are psychologically central because they enable individuals to behave in accordance with their authentic self. And when evaluating the psychological centrality of identities, I suggest that individuals compare identities with their authentic self such that identities that are more congruent with their authentic self are more psychologically central.

Authentic self. The true self is “who a person really is, regardless of his or her outward behavior” (745: Schlegel et al., 2011). The idea of an authentic, true- or core-self dates back to Ancient Greek philosophy with Aristotle’s belief that the highest good a person can achieve is living in accordance with one’s true self (Aristotle, 1998). Historical views describe the true self as being made up of “innate, immutable characteristics that the individual needs to ‘discover’ in order to live a fulfilling life” (989: Schlegel et al., 2011) Schlegel and colleagues (2011) review historical theories of the authentic self and describe the varying views. One perspective that derives from self-determination theory (SDT) is that the true self is ever-changing and that authentic behavior exists as long as an individual feels they are behaving in a self-determined, autonomous manner (e.g., Ryan & Deci, 2000). This is in contrast to the essentialist approach which is more consistent with historical theorists and the belief that individuals have a set of unique traits which define who they are and stay consistent over time (e.g., Gergen, 1991). Rather than the *feeling* of behaving authentically which is the focus of SDT, the essentialist perspective focuses on what individuals *believe* about their true self. These two points of view

suggest different methods for measuring the true self. The SDT approach suggests that feelings of authenticity or autonomy can be measured, and Schlegel and colleagues (2011) acknowledge that the essentialist view is more difficult to measure because one cannot be sure that the true self is accurately being captured. Therefore, Schlegel et al. (2011) allow individuals to rely on their own beliefs in describing their true self (e.g., Schlegel, Vess, & Arndt, 2012). Evidence for the validity of measuring the true self or authenticity with self-report measures is seen with the plethora of empirical studies demonstrating the positive effects of behaving in line with what individuals perceive as their authentic self (see review in next section). Consistent with these existing studies, I utilize self-report measures to assess individuals' perceptions of the extent to which their identities allow them to behave authentically.

Authenticity. The authenticity literature suggests that individuals experience positive outcomes when they can cognitively access (Schlegel & Hicks, 2011; Schlegel et al., 2011) and behave in accordance with their authentic self (Kernis, 2003; Kernis & Goldman, 2006). When individuals behave in accordance with their authentic self, they are described as behaving authentically. This outward behavior is the focus of the authenticity literature with *authenticity* being defined as the “unobstructed operation of one’s true- or core-self in one’s daily enterprise” (13: Kernis, 2003). When individuals are functioning authentically, they are acting in accordance with their authentic self both cognitively and behaviorally.

There are four components to authentic functioning: awareness, unbiased processing, action, and relational orientation (Kernis, 2003). *Awareness* involves individuals being mindful of their own feelings, thoughts, motivations, and identities. Recognizing one’s own strengths, weaknesses, and emotions is the first step towards being able to understand one’s self. In addition to being aware of who one is, *unbiased processing* refers to accepting of both internal

and external information about oneself with openness and without denying, distorting or exaggerating it. Authentic individuals can embrace information about themselves objectively. *Action* or behavior means that individuals are acting consistent with the values, preferences and needs of their true self; individuals are not acting falsely. Finally, *relational orientation* describes individuals who seek to be genuine and true in their relationships with significant others. They want close others to understand them for who they are and value this openness and sincerity in their relationships. Together, these four components describe individuals who are thinking and behaving in ways that are congruent with their core, true self because they value themselves for who they are and they want their significant others to see them that way also.

Numerous empirical studies have been conducted on authenticity, finding that higher levels of authentic functioning lead to higher levels of subjective well-being such as greater mental health and lower perceived stress (Ryan, LaGuardia, & Rawsthorne, 2005), higher positive mood, life satisfaction and meaning in life (Bettencourt & Sheldon, 2001), life satisfaction and positive emotion (Brunell et al., 2010), lower anxiety, depression and stress (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997), higher meaning in life (Schlegel, Hicks, Arndt, & King, 2009; Schlegel et al., 2011) and lower levels of negative individual outcomes such as defensiveness (Feldman Barrett, Williams, & Fong, 2002; Lakey, Kernis, Heppner, & Lance, 2008) and negative affect (Kernis & Goldman, 2006). Recent studies further illustrate the positive individual outcomes that result from authentic functioning including well-being (Kifer et al., 2013; Wood et al., 2008), positive mood (Lenton et al., 2013), and higher levels of engagement and job satisfaction (Cable et al., 2013). Authentic leadership was found to relate to organizational citizenship behaviors (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) and follower feelings of empowerment (Leroy, Palanski, & Simons, 2012). The consistent

evidence generated in authenticity studies supports how critical it is to individuals to be able to behave in accordance with their authentic self.

The psychological benefits of authentic functioning suggests that identities that allow individuals to behave authentically are especially critical to individuals. I propose that psychological centrality represents the extent to which identities are congruent with the authentic self. Authenticity provides explanation for how individuals determine which identities are psychologically central and what they are comparing identities against. Individuals seek identities that are aligned with their authentic self because they experience higher levels of psychological well-being when behaving authentically.

Psychological centrality and perceived identity threat. Psychologically central identities are representative of individuals' authentic self and individuals want to behave in accordance with these identities. Therefore, they may interpret situations as calling for these identities or simply behave in accordance with the identity despite the situation (Stryker, 1980). As discussed in depth in chapter 2, psychologically central identities possess higher positions within individuals' salience hierarchies and therefore have a higher likelihood of activation across all types of situations (Stryker & Serpe, 1982). For example, individuals who consider their *leader* identity as highly central or authentic want to be a leader and be acknowledged as a leader in situations whether they are social or at work. In other words, their leader identity is highly salient or top-of-mind for them all of the time. If a situation calls for a leader, these individuals with highly central leader identities are more likely to behave as the leader. Even if a situation does not formally call for a leader, a group of people uncertain about what to do may result in the individual with the highly central leader identity taking charge of the situation and enacting their leader identity.

In relation to identity threat, I propose that individuals are more likely to perceive situations containing harm as threatening if the situation is relevant to a psychologically central identity. Psychologically central identities are more salient so individuals are more likely to notice or pay attention to a situation that is containing potential harm if it is related to a psychologically central identity. For example, if an individual's leader identity is highly central to him/her and someone else is assigned as the leader in a team meeting, he/she may perceive the situation as an identity threat. However, another individual in the team meeting who does not feel that being a leader is highly central to his/her identity and was also overlooked for the leadership position, may not perceive the situation as threatening. Psychologically central identities are sensitive to identity threat because these identities are highly salient across situations.

Studies of the influence of identification on stereotype threat lend some empirical support for this relationship. As discussed in chapter 2, the definition and measurement of identification has varied widely with centrality being identified as a sub-dimension within identification (Leach et al., 2008). The multiple dimensions of identification also appear to explain the differential effects found among the empirical studies of identification and stereotype threat in which some studies found that identification had a buffering effect against threat while others found it to enhance the effect of threat.

My interpretation of the empirical studies of identification within the stereotype literature is that they measured identification as either solidarity (Branscombe, Schmitt, & Harvey, 1999b; Wong, Eccles, & Sameroff, 2003) or centrality (Bair & Steele, 2010; Cohen & Garcia, 2005; Schmader, 2002) which explains the mixed results on whether identification had a positive or negative effect on threatened individuals. Solidarity was measured as a sense of belonging and

psychological attachment to a social group, and centrality was evaluated as the importance of the group to individuals' self-concepts (Leach et al., 2008). Some studies found that higher levels of identification with a social group protected threatened individuals from negative outcomes (Branscombe et al., 1999b; Cohen & Garcia, 2005; Ethier & Deaux, 1994; Wong et al., 2003) while other studies found that higher levels of identification led to enhanced negative effects of stereotype threat (Bair & Steele, 2010; Schmader, 2002).

Higher levels of identification with a social group protected individuals from the negative consequences of stereotype threat if identification represented individuals' solidarity with or belonging to a social group. Highly identified African-Americans experienced higher levels of personal and collective well-being in the face of perceived prejudice (Branscombe et al., 1999b) and smaller decreases in academic performance and stronger self-competency perceptions (Wong et al., 2003). Hispanic students with strong ties to their culture experienced higher levels of ethnic identification and lower levels of perceived threat in response to their environment at a primarily Anglo university (Ethier & Deaux, 1994). These studies suggest that having a strong psychological attachment and belonging to a social group can buffer the cognitive and affective impact of threat.

The other line of thinking is that higher levels of identification will lead to greater negative effects suffered by the individual as a result of stereotype threat. My review suggests that the negative impact of identification occurs when identification is measured as the centrality of the identity to individuals' self-concepts. Studies show that women perform worse on a math test in the presence of stereotype threat when women feel their gender identity is central to their self-concepts (Schmader, 2002) and Black participants experience greater levels of self-control depletion after interacting with a White partner with racist views if they have high levels of racial

centrality (Bair & Steele, 2010). Leach et al. (2008) found that the centrality of the Dutch identity best predicted perceived threat compared to other dimensions of identification like solidarity. These studies suggest that the centrality of an identity makes the identity more salient and therefore susceptible to threat. Centrality does not buffer individuals from negative feedback like solidarity does. These empirical studies support my theoretical argument that harm to an identity is more likely to be perceived as a threat if related to a psychologically central identity.

This proposition also aligns with Schmader and colleagues' (2008) concept of cognitive imbalance. One of the links required in order for a situation to be appraised as a stereotype threat is if there is a positive activation in the link between the self and group. In other words, women ("self") are more likely to perceive a stereotype threat if their female identity ("group") is highly salient to them. The female identity can be salient because the situation makes it salient such as asking female participants to indicate their gender at the beginning of an experiment (Danaher & Crandall, 2008) or being female is a highly central identity. Similarly, I suggest that a situation is more likely to be perceived as an identity threat if there is a positive activation of the link between identity and authentic self (i.e., if an identity is more congruent with one's authentic self). An identity that is more representative of the authentic self, or more psychologically central, is more salient. Therefore, a situation that contains potential harm to the value, meanings, or enactment of an identity is more likely to be perceived as an identity threat if the identity is more psychologically central.

Hypothesis 2: Psychological centrality of an identity moderates the relationship between harm to identity and perceived identity threat such that the more psychologically central an identity, the higher the likelihood that harm to that identity will be perceived as an identity threat.

Within organizations, identity threat is important because it can result in negative emotions, cognitive interference, and subsequent decrements in performance and job attitudes. As identified in chapter 2, identity threat studies within the organizational literature have not studied a consistent outcome or performance in particular (with the exception of stereotype threat within psychology). To understand how identity threat may affect employees' performance and job attitudes, I first describe the emotional and cognitive mechanisms that result from perceived identity threat in section III.

III. NEGATIVE EMOTIONAL AND COGNITIVE EFFECTS OF IDENTITY THREAT

The review of the identity threat literature in chapter 2 revealed that identity threat studies within the organizational literature have investigated responses to the source of the identity or the identity itself with virtually no focus on the emotional and cognitive mechanisms that result from identity threat. I propose that identity threat fosters negative emotions which then lead to cognitive interference and decrements in performance and job attitudes.

Negative emotions. Earlier, I discussed the cognitive appraisal processes that individuals undergo when faced with situations (Lazarus & Folkman, 1984). In later work, Lazarus expanded his explanation of the cognitive appraisal process in order to explain the specific emotions that result when evaluating a situation (Lazarus, 1991b). Appraisal is a recognition and evaluation of knowledge based on what the context means for individuals' goals and well-being. Lazarus (1991a) argues that it is the appraisal of a situation that results in emotions because individuals have something to win or lose. Lazarus (1991b) expands his concept of primary appraisal to include three components of *goal relevance*, *goal congruence or incongruence*, and

type of ego-involvement. First, goal relevance describes the extent to which a situation is related to what individuals care about. Emotions from a situation only result if individuals have a personal stake in the situation. If a situation has relevance to individuals' goals, then the type of emotions that results depends on whether the situation is congruent or incongruent with the individuals' goals. A situation is congruent with individuals' personal goals if it facilitates their achievement of them, and positive emotions result. If the situation thwarts individuals' ability to achieve their personal goals, the situation is incongruent with what the individuals want, and the emotions that result are negative. The types of negative emotions related to the thwarting of a goal are "anger, fright-anxiety, guilt-shame, sadness, envy-jealousy, and disgust" (82: Lazarus, 1991b). When individuals perceive identity threat, it is in response to an event in which their identity is harmed. Harm to individuals' identity is incongruent with goals of personal well-being as it challenges the value and meanings individuals associate with possessing the identity, or the ability of the individual to enact or display the identity. If the value or meanings individuals associate with an identity is diminished, this is counter to the individuals' well-being. Similarly, if individuals are unable to enact identities, the situation is thwarting individuals' ability to be themselves. Therefore, I propose that perceived identity threat results in negative emotions.

Finally, type of ego-involvement represents the different types of personal goals or commitments that may be implicated in a situation including self-esteem, moral values, ideas, and life goals (Lazarus 1991b). Specific positive and negative emotions result depending on which personal goal is being affected in a situation. If the harm in a situation is to individuals' self-esteem and it can be attributed to or blamed on another, *anger* is the specific emotion that results. In the case of identity threat, individuals' self-esteem is implicated because the situation is relevant to one of the identities individuals possess. One of the motives fulfilled by identities is

self-esteem (Gecas, 1982; Rosenberg, 1979). Identities represent the attributes, relationships, and group memberships that individuals value about themselves (Rosenberg, 1979). When individuals perceive a threat to one of their identities, they are experiencing harm to one of the sources of their self-worth or self-esteem. Harm to an identity is by definition harm to one's self-esteem. The second factor that indicates anger as the specific emotion in a situation is whether there is a source of blame for the harm. The harm that occurs in relation to an identity originates from someone or some group. A person or group is devaluing an identity, changing the meanings of an identity, or preventing an individual from enacting his/her identity; the threatened individuals have an external source of blame. Therefore, I propose that perceived identity threat will result in negative emotions in general, and anger more specifically.

Hypotheses 3: Perceived identity threat will be positively related to negative emotions [anger].

Cognitive interference. Several lines of research lend support for the negative cognitive effects that result from identity threat including literature on stress and intrusive thoughts (e.g., Horowitz, 1975; Parkinson & Rachman, 1981), stress and emotions (e.g., Lazarus & Folkman, 1984), and stereotype threat (e.g., Schmader et al., 2008). First, an important finding within the stress literature was that even mild (rather than major clinical or trauma-related) levels of stress may result in intrusive thoughts (Horowitz, 1975). *Intrusive thoughts* are “repetitive thoughts, images or impulses that are unacceptable and/or unwanted, and are attributable to an internal source” (111: Parkinson & Rachman, 1981). These intrusive thoughts generally contain worry, produce distress and discomfort, and are often difficult to remove or control.

The concept of intrusive thoughts was expanded upon by Sarason (1984) to understand the effect of test anxiety on cognitive interference. *Cognitive interference* is defined as the presence of intrusive thoughts while individuals are working on a task (Sarason, Sarason, Keefe, Hayes, & Shearin, 1986). In other words, this construct measures the extent to which there are extra thoughts in one's mind when he/she is trying to focus. Early experiments showing the effects of mild stress tested the existence of intrusive unwanted thoughts after watching a distressing movie clip (Horowitz, 1975). Separate from a distressing movie clip, test anxiety provides another example of a stressful or threatening experience that has been studied in relation to intrusive thoughts. Test anxiety is a personality characteristic that represents the extent to which people find evaluative situations threatening (Sarason, 1984). Sarason's work includes the creation of a scale to measure the cognitive interference construct, and testing to demonstrate the positive relationship between test anxiety and cognitive interference (Sarason, 1984; Sarason et al., 1986).

I utilize the cognitive interference construct and propose that perceived identity threat results in the increased presence of intrusive unwanted thoughts, or cognitive interference. To better describe *why* threatening situations result in cognitive interference, I draw from the stress and emotions, and stereotype threat literatures. As discussed earlier, the stress and emotions literature describes the cognitive appraisal process that individuals undergo when evaluating situations (Lazarus & Folkman, 1984; Lazarus, 1991b). During the primary appraisal process, individuals determine whether the situation has relevance to their well-being. If they determine that the situation contains potential harm (i.e., threat), they then engage in a secondary appraisal process in which they determine how they can manage or cope with the situation (Lazarus, 1991b). The three components of the secondary appraisal process include *blame or credit*,

coping potential, and *future expectations*. If threatened individuals can attribute the harm to a person or group and they perceive the harm was under the person or group's control, then blame is assigned (or credit in the case of a challenge). Coping potential describes whether threatened individuals believe they can behave in a manner that will change the situation or protect themselves, and how they can do so. Future expectancy refers to whether threatened individuals believe their actions can and will improve or worsen the harm. The extent of the secondary cognitive appraisal in response to harm indicates that threatened individuals' cognition is consumed by thoughts following an identity threat. An identity threat would result in thoughts such as determining who to blame for harming their identity, deciding how they should behave to cope or deal with the damage to their identity, and assessing whether these coping behaviors have the possibility of minimizing the harm. These responses to identity threat utilize cognitive resources, suggesting an increase in cognitive interference.

The stereotype threat literature provides further support for the utilization of cognitive resources following threat. One of the responses to stereotype threat according to Schmader and colleagues (2008) is increased levels of self-monitoring processes. Individuals engage in increased monitoring processes in response to the threat because they become more conscious of themselves and their performance, and are more vigilant of cues of threat and failure. Individuals focus on trying to avoid failure which results in individuals using more controlled cognitive processing to monitor their performance rather than automated processing (Seibt & Förster, 2004). Worrying about and monitoring performance utilizes cognitive resources and therefore contributes to the reduction in working memory efficiency (Beilock, Rydell, & McConnell, 2007). Threat also results in individuals becoming more vigilant of information related to the threat (Davis & Whalen, 2001) and cues of their failure which can include actual errors on a task

(Forbes, Schmader, & Allen, 2008) or feelings of anxiety during a task (Johns et al., 2008). This suggests that individuals experiencing threat to a specific identity will be more likely to notice information related to the identity, and pay attention to evidence that the threat to the identity has merit. Overall, I propose that when individuals experience identity threat, they become consumed with intrusive thoughts including who to blame for the harm and how they can cope, worry about whether they are performing well in the current situation, and increased vigilance on situations or cues of failure related to their threatened identity.

Hypothesis 4: Perceived identity threat will be positively related to cognitive interference.

There may also be an indirect effect of perceived identity threat on cognitive interference, mediated by negative emotions. According to the stress and emotions literature, in addition to primary and secondary appraisal processes, individuals engage in reappraisal processes (Lazarus & Folkman, 1984). Reappraisal processes describe individuals changing their appraisal as a result of new information. The new information can arise from the environment or from the threatened individuals' actions and reactions. The appraisal processes are complex and can occur in a multitude of combinations as individuals interact with their environments. Lazarus and Folkman (1984) provide an example of an individual reappraising his/her feeling of anger (the original appraisal) in a situation and determining he/she feels guilty for feeling angry. The reappraisal process suggests that thoughts may be further consumed about the negative emotions experienced in response to identity threat. There are many examples of the reappraisal processes that could occur in response to identity threat but one example could be an individual who feels

frustrated with themselves for feeling negative emotions in response to threat and utilizes cognitive resources to tell themselves not to worry about the threat or to forget about it.

Within the stereotype threat literature, another process that is theorized to result from stereotype threat is thought and emotional suppression processes (Schmader et al., 2008). These are cognitive processes that threatened individuals engage in to suppress negative thoughts and feelings related to the threat. Studies have shown that stereotype threat leads to negative thoughts and feelings such as self-doubt, anxiety, feelings of dejection, and worrying (Aronson et al., 1999; Beilock et al., 2007; Cadinu, Maass, Rosabianca, & Kiesner, 2005; Keller & Dauenheimer, 2003; Steele & Aronson, 1995). Threatened individuals try to suppress these negative thoughts and feelings in an effort to deny the threat (von Hippel et al., 2005) or because they believe the negative feelings will interfere with their performance (Smith, Snyder, & Handelsman, 1982). This thought and emotional regulation takes up additional cognitive resources (e.g., Muraven & Baumeister, 2000; Schmeichel, 2007). Specific to identity threat, if an individual experiences a devaluation of an identity at work, they may try to suppress the negative emotions that result to try to keep the experience from bothering them so they can focus on their work.

Therefore, perceived identity threat may result in increased levels of intrusive thoughts, or cognitive interference, as threatened individuals reappraise their situations and reactions and attempt to suppress negative thoughts and emotions.

Hypothesis 5: Negative emotions [anger] will mediate the positive effect of perceived identity threat on cognitive interference.

Increased likelihood of negative emotional and cognitive effects. I also propose that the negative emotional and cognitive effects that result from perceived identity threat are more likely if the harm is related to a psychologically central identity. As discussed earlier, negative emotions result when situations are different from what the individual wants and have a negative effect on personal well-being (Lazarus, 1991b). When individuals experience harm to the value, meanings, or enactment of an identity, the situation is further from what the individual wants to the extent that it is relevant to a psychologically central identity. The value or meanings held in relation to one's psychologically central identities are more central to how the individual defines themselves and congruent with their authentic self. Similarly, being able to enact one's psychologically central identity is more critical to one's well-being than enacting a less important identity. Therefore, harm to a psychologically central identity and the resulting perceived identity threat are more likely to result in negative emotions because the individuals' personal well-being is thwarted to a greater degree.

Beyond negative emotions, I would also expect a greater effect on anger if the harm is related to a more psychologically central identity. Anger is the specific emotion that results if the situation harms individuals' self-esteem and has a source of blame (Lazarus 1991b). Each identity is thought to represent individuals' self-values which individuals use to judge their self-worth (Rosenberg, 1979). Identities that are more psychologically central to individuals would have a greater impact on their self-esteem. Therefore, a situation that poses potential harm to the values, meanings, or enactment of a psychologically central identity will have a greater negative impact on self-esteem which increases the likelihood of feeling anger. This suggests that the likelihood of feeling anger as a result of perceived identity threat is higher if related to a psychologically central identity.

Hypothesis 6: The positive effect of harm to identity on negative emotions [anger] will be mediated by perceived identity threat and strengthened by the psychological centrality of the identity.

In addition, increased cognitive interference or presence of intrusive thoughts is more likely to result if harm is related to a psychologically central identity. As discussed earlier, individuals engage in secondary appraisal processes after determining that a situation is a threat (Lazarus, 1991b). Included within this secondary appraisal process is evaluating what action can be taken to change the situation or protect oneself (coping potential) and considering the likelihood of being able to make the situation better or worse (future expectancy). If a situation is relevant to a psychologically central identity, threatened individuals are more likely to engage in secondary appraisal processes because these identities are highly central to their self-definition. Individuals want to be able to enact their psychologically central identities (Stryker & Serpe, 1982) and behave authentically (e.g., Kernis & Goldman, 2006) so they are more likely to spend cognitive resources considering the possibilities for how to change the situation in a way that would minimize harm and allow the individual to maintain the identity. As discussed in relation to stereotype threat, individuals become more cognizant of further cues and situations related to the target of the threat. So if an identity is harmed, and the identity is psychologically centrally, individuals have an even higher likelihood of utilizing cognitive resources to keep vigilant of any situation that may support or deny the harm related to the threatened identity. The identities are so central to individuals, they want to maintain the value associated with the identity and be able to enact the identity, so they are more likely to continue to monitoring their performance related

to these identities. Staying vigilant of cues and monitoring performance related to psychologically central identities would result in increased interference of the threatened individuals' cognition.

Hypothesis 7: The positive effect of harm to identity on cognitive interference will be mediated by perceived identity threat and strengthened by the psychological centrality of the identity.

IV. ULTIMATE EFFECTS ON PERFORMANCE AND JOB ATTITUDES

Despite the criticality of the outcome of employee performance in organizations, it has not been extensively studied as an outcome of identity threat within the organizational literature. Employee performance consists of multiple behaviors (Borman & Motowidlo, 1997) and can be categorized into *in-role behaviors* and *extra-role behaviors* (e.g., Williams & Anderson, 1991). In-role behaviors, also called task performance, represent employees' fulfillment of expectations and responsibilities that are formally a part of their jobs. Extra-role behaviors describe the discretionary behaviors employees may engage in that are not a part of their formal reward system. I first focus on how cognitive interference affects in-role performance. Then I develop arguments for how negative emotions affect other aspects of performance as well as job attitudes.

In-role performance. Although performance as an outcome of identity threat has not been frequently investigated in the organizational literature, studies within the stereotype threat literature predominantly focus on how stereotype threat leads to lower levels of performance (e.g., Aronson et al., 1999; Schmader et al., 2008). The phenomenon studied in relation to stereotype threat is the poorer performance by individuals when a stereotype with negative

attributions about the individual is brought to mind in a task performance situation (Steele, 1997; Steele & Aronson, 1995; Steele et al., 2002). The explanation for this poorer performance is situational and based on the idea that when negative stereotypes in relation to a social identity possessed by an individual are made salient within a performance situation, individuals experience increased concern that they will perform poorly in accordance with the stereotype. As a result of this increased concern, individuals do indeed perform poorly resulting in a type of self-fulfilling prophecy (Snyder, Tanke, & Berscheid, 1977). Stereotype threat and its negative effect on performance has been demonstrated by African-Americans performing worse than White peers on a test when it is described as being diagnostic (Brown & Day, 2006; Steele, 1997; Steele & Aronson, 1995), women performing worse than men on a math test when they are told the test has shown differences in the past based on gender (Spencer, Steele, & Quinn, 1999), and White men performing worse than Asian men on a math test when they are told that Asians have been found to outperform Whites in math (Aronson et al., 1999).

An important distinction made in the stereotype threat literature regarding performance is the difference between tasks that require controlled versus automatic processing (Schmader et al., 2008). The cognitive mechanisms that are implicated by threat apply to difficult tasks that require controlled processing and therefore the executive resource of working memory. Studies have found that stereotype threat only leads to decrements in performance on difficult tasks (Quinn & Spencer, 2001; Spencer et al., 1999). For simple tasks that require automatic processing, studies have found that stereotype threat leads to a desire to disprove the negative stereotype, resulting in improved performance (O'Brien & Crandall, 2003). This suggests that on controlled processing tasks such as the in-role performance required in organizations, employees who experience cognitive interference will perform their jobs at lower levels.

Further evidence for the effect of cognitive interference on performance can be found from empirical studies on test anxiety, cognitive interference, and performance (Mikulincer, 1989; Sarason, 1984; Sarason et al., 1986). This research is focused on explaining how anxiety results in higher levels of cognitive interference which in turn relates to lower levels of performance. The theoretical rationale is that high levels of anxiety results in off-task cognitions including self-concerned thoughts and worrying about the consequences of failure (Mikulincer, 1989; Sarason, 1984). This high level of off-task cognitions (i.e., cognitive interference) undermines individuals' ability to focus on task-relevant information, resulting in lower levels of task performance (Mikulincer, 1989; Sarason, 1984; Sarason et al., 1986). Studies conducted by Mikulincer (1989) also showed that tasks that were more difficult and therefore required higher levels of cognitive resources were negatively affected by cognitive interference but not easier tasks. The reasoning is that although cognitive interference utilizes cognitive resources, there may be enough cognitive resources remaining to perform easier tasks. This research on test anxiety along with the stereotype threat literature provides support for the negative effect of cognitive interference on performance.

Hypothesis 8: Cognitive interference will be negatively related to in-role performance.

The stereotype threat literature has also found support for working memory capacity mediating the relationship between stereotype threat and performance (Johns et al., 2008; Schmader & Johns, 2003). Working memory capacity refers to executive attention (also described as executive function or executive control) or the ability to attend to task-related information and goals even when task-irrelevant information is competing for one's attention

(Schmader et al., 2008). Relating working memory capacity to cognitive interference, higher levels of cognitive interference would reduce one's working memory capacity because higher levels of task-irrelevant information would interfere with one's ability to attend to task-related information. Stereotype threat is thought to reduce working memory efficiency because of the physiological stress response and increased suppression and monitoring processes threatened individuals undergo. This reduction in working memory efficiency then results in lower levels of performance (Johns et al., 2008; Schmader & Johns, 2003). The studies on test anxiety resulting in higher levels of cognitive interference and lower levels of performance (Mikulincer, 1989; Sarason, 1984; Sarason et al., 1986) also provide support for the mediating role of cognitive interference. As discussed earlier, test anxiety is an individual difference that represents the salience of the threat of an evaluative situation (Sarason, 1984). Anxious individuals perceive test-taking situations as threatening because they sense the potential for harm that would result from their failure on the test. These individuals respond to the threat with increased levels of task-irrelevant cognitions as they become preoccupied with failure. This increase in task-irrelevant cognitions, or cognitive interference, interferes with the anxious individuals' ability to perform. Similarly, individuals who are under identity threat experience an increased presence of intrusive thoughts due to engaging in secondary appraisal processes, monitoring their behavior, being vigilant of situations related to the threatened identity, and suppressing negative thoughts and emotions. This increased cognitive interference that derives from perceiving identity threat then interferes with individuals' ability to perform their jobs.

Hypothesis 9: Cognitive interference will mediate the negative effect of perceived identity threat on in-role performance.

Other performance and job attitudes. Separate from the effect of cognitive interference on in-role performance, I propose that the negative emotions that result from identity threat will have a negative effect on other performance behaviors and job attitudes. Other performance behaviors include organizational citizenship behaviors (OCBs), antisocial behaviors, and withdrawal behaviors. The specific job attitudes I investigate are job satisfaction and organizational commitment.

OCBs refer to discretionary behaviors employees engage in that benefit the organization and are not a part of the formal reward system (Organ, 1988; Williams & Anderson, 1991). These are behaviors that support the effective functioning of the organization either by supporting the organization in general (e.g., adhering to rules and protecting organizational property) or specific individuals at work (e.g., helping others with their work and listening to employee's problems). Some of the theoretical support for predictors of OCBs derives from early research on helping behaviors (Smith, Organ, & Near, 1983). This early work demonstrated that "feeling good" or a positive affective state resulted in more helping behaviors (Isen & Levin, 1972; Levin & Isen, 1975). Drawing from these findings, OCB scholars theoretically connected positive affective state to job satisfaction within the workplace, proposing a positive relationship between job satisfaction and OCBs which was supported by numerous empirical studies (Organ & Ryan, 1995; Smith et al., 1983). Early work contrasted positive affective state with negative affective state, finding that those in a negative affective state were less likely to engage in helping behaviors (Isen, 1970). Applying this to my model, I suggest that the negative emotions that individuals experience in response to perceived identity threat results in lower levels of OCBs.

In addition to lower levels of OCBs, I expect negative emotions to lead to higher levels of antisocial behaviors. Antisocial behaviors refer to negative behaviors employees engage in that have the potential to harm an organization or employees within the organization (Aquino & Douglas, 2003; Robinson & O'Leary-Kelly, 1998). When individuals experience negative emotions such as frustration, they may engage in displaced aggression in which they redirect negative behaviors towards people other than the source of the negative emotions (Marcus-Newhall, Pedersen, Carlson, & Miller, 2000). This indicates that negative emotions that derive from identity threat at work may result in harmful, antisocial behaviors targeted towards the organization in general or other employees. Different from the harmful actions described by antisocial behaviors, withdrawal behaviors are passive behaviors that “dissatisfied individuals enact to avoid the work situation” (476: Hulin, 1991). These behaviors are attempts by employees to distance themselves physically and psychologically from the work environment. Empirical studies have found that positive states at work (e.g., psychological collectivism; Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006) are related to lower levels of withdrawal behaviors, and negative attitudes (e.g., work-family conflict; Bhagat, McQuaid, Lindholm, & Segovis, 1985) are related to higher levels. A study also lends direct support for my hypothesis finding that negative emotions led to higher levels of withdrawal behaviors (Kiefer, 2005). Overall, I expect the negative emotions that result from identity threat to be positively related to antisocial and withdrawal behaviors.

Finally, I propose that lower levels of performance and behaviors would also be accompanied by lower levels of job attitudes such as job satisfaction and organizational commitment. Job satisfaction can be defined as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values” (316:

Locke, 1969). This definition exhibits the tight link between emotions and job satisfaction. Individuals experiencing negative affect view their environment through a negative lens resulting in negative evaluations. Indeed, empirical studies have found evidence for the relationship between negative affect and lower levels of job satisfaction (e.g., Brief, Butcher, & Roberson, 1995; Kafetsios & Zampetakis, 2008; Levin & Stokes, 1989).

Organizational commitment is comprised of three components including affective, continuance, and normative commitment (Allen & Meyer, 1990). Affective commitment refers to employees' emotional attachment to the organization. Continuance commitment describes the tendency of employees to stay with an organization because of the perceived costs of leaving or changing course. Normative commitment represents employees' felt obligation to stay with an organization. My model is focused on the aspect of organizational commitment that is affected by negative emotions so I focus on the affective commitment component. The antecedents to affective organizational commitment include positive work experiences with evidence that more positive work experiences relate to higher levels of organizational commitment (Meyer & Allen, 1988). This suggests that the positive emotions within the workplace would lead to higher levels of organizational commitment and negative emotions would result in lower levels. There is no direct evidence for the negative relationship between negative emotions and organizational commitment. However, a meta-analysis found that stress was negatively related to organizational commitment (Mathieu & Zajac, 1990). The various operationalizations of stress include *felt stress* which is defined as "the psychological response state of disturbed affect experienced by an individual in relation to various job demands or constraints encountered in the work environment" (332: Parasuraman & Alutto, 1984). Felt stress may be captured within the scale of ten negative emotions that were created to be broad and representative of negative affect

(Watson, Clark, & Tellegen, 1988) including *distressed* and *upset*. In addition, organizational commitment was found to be strongly correlated with job satisfaction in a meta-analysis (Mathieu & Zajac, 1990). This strong correlation along with existing support for the negative effect of negative emotions on job satisfaction (Brief et al., 1995; Kafetsios & Zampetakis, 2008; Levin & Stokes, 1989) provide support for my hypothesis that negative emotions will be negatively related to organizational commitment.

Hypothesis 10a-e: Negative emotions [anger] will have a negative effect on other performance behaviors (negatively related to OCBs (10a); positively related to antisocial (10b)/withdrawal (10c) behaviors) and job attitudes (negatively related to job satisfaction (10d)/organizational commitment (10e)).

My theoretical arguments thus far illustrate the negative impact that identity threat can have for organizations since the presence of identity threat may lead to negative emotions and cognitive interference, and lower levels of employee performance and job attitudes. I propose that groups within organizations that embody specific characteristics within their work group identity can minimize identity threat.

V. ORGANIZATIONS' MANAGEMENT OF IDENTITY THREAT

Given the detrimental effects that can result from identity threat, I investigate the types of contextual factors that may minimize the occurrence of identity threat. In chapter 2, I discussed the interventions that have been explored within the stereotype threat literature. While there have been some studies investigating interventions that can reduce stereotype threat, there are virtually no empirical studies within the organizational literature identifying how identity threat can be

reduced. The discussion within the organizational literature on how to reduce identity threat has primarily been focused on how individuals cognitively respond to the source of the threat as discussed in previous sections with the identity protection responses of derogation, concealment, and positive-distinctiveness (Petriglieri, 2011). My review indicates that there has not been an investigation into interventions or how the context surrounding the identity threat can be changed in order to minimize identity threat within organizations with the exception of one study. In a study of gay men and lesbian employees, it was found that employer policies that support gay/lesbian employees such as written nondiscrimination policies, active displays of support of gay/lesbian activities, and diversity training were positively related to the likelihood of a gay/lesbian employee to be “out” (Griffith & Hebl, 2002). This study is one example of investigating how context minimizes identity threat. I seek to demonstrate another specific contextual factor that can minimize identity threat: openness to experience work group identity.

My dissertation has so far focused on identity at the individual level, or the meanings by which individuals define themselves (Gecas, 1982). The focus of this section is on identity at a collective level - *organizational identity*. As noted previously, organizational identity refers to the central, distinctive and enduring attributes of an organization that guide the practices and actions engaged in by its members (Albert & Whetten, 1985). Similar to identities that individuals develop for themselves that represent who they are, organizations develop collective identities that encompass what they stand for. A work group can also have an identity representing its central, distinctive and enduring attributes. As discussed in several previous sections, individuals may possess identities at multiple levels of self-representation including the collective level (Brewer & Gardner, 1996). Therefore employees may incorporate their organizations’ or work groups’ identities as part of their self-concepts. Identification has been

discussed extensively throughout my dissertation but in this section, the key focus is on work group identification, or the extent to which members make the work group's identity a part of their self-concept (Ashforth et al., 2008). As work group members become identified with the work group, they begin integrating the attributes of the work group into their own self-concepts, and then behaving in support of the work group identity (Ashforth et al., 2008). First, individuals must be aware of their group membership, value being a member, and then potentially develop strong emotional connections with the work group. After establishing identification with the work group, consistent with social identity theory (Tajfel & Turner, 1986), individuals begin to embody the attributes of a prototypical work group member. This prototype is defined based on the important and defining attributes of the work group, and individuals highly identified with the organization begin to accept these attributes of the work group as part of themselves or their self-concepts. Finally, as individuals absorb these work group attributes as part of themselves, they begin to act in accordance with the work group identity. The central, distinctive, and enduring attributes of the work group have an important influence on employees if work group members are identified with the work group and therefore behave in accordance with its prototypical characteristics.

One particular attribute that I propose can minimize identity threat if included with the work group identity is openness to experience. Openness to experience is one of the big five personality characteristics and describes individuals who are tolerant, creative, nonconforming and autonomous (Costa & McCrae, 1992). These individuals are more likely to be open to hearing divergent ideas and stand up to others to accommodate unique perspectives. Past studies have shown that individuals' level of openness to experience is negatively related to racial prejudice (Ekehammar & Akrami, 2003; Flynn, 2005) and positively related to performance

(Homan et al., 2008) and creativity (Baer, 2010) in diverse groups. This personality trait of openness to experience at the individual level has been conceptualized at the collective level to describe organizations (Hofmann & Jones, 2005). At the collective level, openness to experience describes work groups that support the ideals of innovation and creativity. These work groups would encourage their members to support and accept their fellow colleagues. The values of tolerance and acceptance of differing backgrounds instilled within work group members would reduce the occurrence of harm to identities at work.

An openness to experience work group identity may be driven by the organization in a top-down manner (Ashforth et al., 2008) through mission statements and policies for example, or in a bottom-up fashion with individual members influencing how the group operates. Through either process, work groups may acquire the central, distinctive, and enduring attributes (Albert & Whetten, 1985) of openness to experience. As work group members become identified with the work group, they begin to embody the openness to experience attributes of the work group and behave in accordance with them. Individual work group members may have different levels of identification with the work group and therefore may differ in whether they behave consistent with the work group identity. I expect the mean level of evaluations on whether the work group identity exhibits openness to experience attributes to be representative of the work group identity.

Hypotheses 11: Openness to experience work group identity will be negatively related to harm to identity.

VI. SUMMARY OF CHAPTER 3

My theoretical model demonstrates a particular context, identity threat, where psychologically central identities play an important role in influencing employee behavior among the many identities they possess. Missing from the identity threat literature within organizations is how identity threat is perceived and the emotional and cognitive effect it has on employees. Utilizing identity, authenticity, and stereotype threat literatures, I propose that perceived identity threat is more likely to occur when the identity being harmed is a psychologically central identity. This is because a psychologically central identity is one that is congruent with the authentic self and therefore critical to individuals' well-being. Individuals want to behave authentically and therefore enact their psychologically central identities, so these identities are highly salient across situations, making them susceptible to identity threat.

Drawing from the stress and intrusive thoughts, stress and emotions, and stereotype threat literatures, I describe the negative emotions and cognitive interference that threatened individuals undergo. Perceived identity threat thwarts individuals' goals and harms their self-esteem, resulting in negative emotions and specifically anger. Individuals also engage in secondary appraisal processes and increased levels of self-monitoring, all of which introduce task-irrelevant information into individuals' cognition. When individuals' cognition is consumed with intrusive thoughts, performance degrades. Finally, some situational interventions have been explored within the stereotype literature for how stereotype threat can be reduced but within the organizational literature, there is minimal investigation into contextual characteristics that can reduce the perception or impact of threat on individuals. Therefore, I propose a contextual factor of openness to experience work group identity that can minimize harm to identities. If work groups embody the characteristics of openness to experience including being accepting and

supportive of diverse colleagues, identified work group members will adopt these attributes in their behavior, thereby reducing harm to identities at work.

CHAPTER 4

METHODS

To test my hypotheses, I conducted four studies. The first two studies (Studies 1a and 1b) were online surveys that sought to provide evidence for the construct validity of my proposed advancement of psychological centrality. The third study (Study 2) was an online experiment that was designed to try to provide initial support for hypotheses 1-9. An experiment is important for testing my hypothesized relationships because it allows me to make assumptions about causality because I manipulate *harm to identity* and *psychological centrality*. Finally, my fourth study (Study 3) was a multi-source field study that tested all of the hypothesized relationships in my theoretical model. Conducting a field study following my experiment demonstrates that my hypothesized relationships are generalizable to the workplace.

I. STUDY 1a

To support the construct validity of psychological centrality, I collected an exhaustive list of items from existing literature on centrality, importance, identification, and authenticity, and fielded these items in an online survey. My objective was to reduce the number of items, identify the underlying dimensionality, and provide support for the discriminant validity of the psychological centrality construct.

Participants and study design. Study 1a included participants who were recruited through Amazon's M-Turk, an online survey administrator. Studies have found that M-Turk provides a pool of participants more diverse than college samples and of similar quality

(Behrend, Sharek, Meade, & Wiebe, 2011; Buhrmester, Kwang, & Gosling, 2011; Gosling, Vazire, Srivastava, & John, 2004; Paolacci & Chandler, 2014). Although internet samples are not representative of the general population (neither are other traditional samples), they are more diverse including more years of full-time employment and representation across occupations and organizations (Behrend, et al., 2011). From a data quality standpoint, Behrend et al. (2011) specifically compared an M-Turk sample to one collected from a university subject pool and found that the M-Turk sample had slightly better reliability of data but also slightly higher levels of social desirability. Gosling et al. (2004) found that data from an internet sample was consistent across presentation formats (i.e., how the questions are presented on the screen) and also found consistent reliabilities with paper-and-pencil results. Finally, the motivation of internet participants appears to be equal to or better than samples from traditional samples (Behrend, et al., 2011; Buhrmester et al., 2011). This collection of studies suggests that M-Turk is a viable method for collecting organizational psychology data.

I recruited 305 participants to participate in one of three conditions: low, medium, or high psychological centrality. Participants were paid \$1. Participants on M-Turk are traditionally paid \$6 per hour so my 10-minute study appropriately compensated \$1. Twenty-eight participants had never been employed or did not have any college education so they were excluded from the sample. Fourteen participants were asked about an identity that was not conducive to evaluating psychological centrality so they were also excluded. The only identities that were deemed unacceptable were those that referred to being “human” or a “person” and/or the participant’s name such as “I am Brianna”. Finally, 22 participants were excluded for incorrectly responding to the two attention checks that were embedded within the survey. Therefore, my sample was 241 participants (54% male; average age of 35 years old; 71% employed full-time).

Participants were first asked to provide twelve open-ended answers to the question “Who am I?” to generate a list of their identities. This exercise was developed by Kuhn and McPartland (1954) and more recently used by Vignoles and colleagues (2006). Participants read the following instructions:

There are 12 numbered blanks below. Please write 12 answers to the simple question 'Who am I?' in the blanks. Just give 12 different answers to this question. Answer as if you were giving the answers to yourself, not to somebody else. Write the answers in the order that they occur to you. Don't worry about logic or 'importance'. Go along fairly fast, for time is limited.

They were then asked to rank their identities from most to least psychologically central (Thoits, 1992). Participants read the following instructions:

You provided 12 descriptions of who you are. These descriptions can be considered different types of identities that you possess. Please rank your 12 identities from first most important to you to twelfth most important to you.

One-third of the participants were randomly assigned to evaluate their most psychologically central identity (high condition), another one-third their 6th most psychologically central identity (medium condition), and the remaining one-third their 12th most psychologically central identity (low condition). Participants then evaluated their identity with fifty-three psychological centrality, authenticity, and identification items.

Measures. The survey questions included established scales which are summarized below. See appendix A for a complete list of items used across all of the studies. See appendix B for reliabilities and validities of the scales from published sources that support the use of these established scales.

Psychological centrality. To capture the psychological centrality construct, I collected an exhaustive list of fifty-three published items measuring the constructs of centrality, role authenticity, authentic self-expression, personal expressiveness, and identification. I sought to

capture any items measuring centrality and to also include all identification scales so I could demonstrate the discriminant validity of psychological centrality from other identification dimensions. To capture authenticity, I gathered all of the scales I could find that captured the idea of being able to behave authentically.

Thirteen items measured centrality including Vignoles' (2006) two-item measure of perceived centrality such as "How central or marginal is being (a) ____ to your identity?" and Sedikides' (1993) three-item measure of trait centrality such as "How often do you behave in accordance with your ____ identity?". The remaining eight centrality items were from Sellers, Rowley, Chavous, Shelton, and Smith's (1997) centrality scale which is a sub-dimension of the multi-dimensional inventory of Black identity. A sample item is "In general, being (a) ____ is an important part of my self-image".

I captured authenticity with three scales. First, I included Sheldon and coauthors' (1997) five-item measure of role authenticity such as "I experience this aspect of myself as an authentic part of who I am" and "This aspect of myself is meaningful and valuable to me". Second, I adapted Cable and coauthors' (2013) three-item measure of authentic self-expression to target an identity instead of a job. For example, the original item of "In this job, I feel authentic" was adapted to "As (a) ____, I feel authentic". Third, I adapted Waterman's (1993) six-item measure of personal expressiveness to target an identity instead of an activity. For example, the original item of "This activity gives me the strongest feeling that this is who I really am" was adapted to "Being (a) ____ gives me the strongest feeling that this is who I really am".

All of the identification items measuring the solidarity, satisfaction, centrality, individual self-stereotyping, and in-group homogeneity dimensions from Leach and coauthors (2008) were included. Leach and coauthors (2008) adapted items from Cameron (2004), Doojse, Ellemers,

and Spears (1995), Ellemers, Kortekaas, and Ouwerkerk (1999), Jackson (2002), Luhtanen and Crocker (1992), and Spears, Doosje, and Ellemers (1997). An example of a centrality item is “Being (a) ____ is an important part of how I see myself”. Finally, Mael and Ashforth’s (1992) six-item measure of organizational identification was included and adapted from being about an organization to targeting an identity. For example, the original item of “When someone criticizes my organization, it feels like a personal insult” was adapted to “When someone criticizes ____, it feels like a personal insult”. All psychological centrality items were measured with anchors in accordance with how the items were measured in previous studies. Appendix B provides the anchors used for each scale.

Results. First, I conducted an Exploratory Factor Analysis (EFA) of the centrality, role authenticity, authentic self-expression, personal expressiveness, and identification items to reduce the number of items and determine how the items load onto factors. I used principal component analysis with a promax oblique rotation. An oblique rotation was used because I expected psychological centrality and authenticity to be correlated and I used the default correlation of zero between the two components (Field, 2009). I selected items based on eigenvalues being greater than one and determined the number of factors by inspecting the scree plot. The scree plot, extracted eigenvalues against, and variance explained by the components suggested a five-component model. The total variance in the items explained by the five components was 69.38%. To reduce the number of items, I set the factor loading cut-off to .40 (Field, 2009). I eliminated five items that cross-loaded on two components. I also removed one psychological centrality item, “My destiny is tied to the destiny of other ____ people” because it specifically refers to a group-level identity. This study allowed participants to share and evaluate identities at all levels of self-representation so an item referring specifically to a group identity is

problematic. After removing these six items, I conducted another principal component analyses with promax oblique rotation. I removed an additional two double-loading items and ran the analysis a third and final time.

The factor loadings for the five-component solution are shown in Table 1.

Table 1

Study 1a: Factor Loadings from Principal Component Analysis

	Item	Auth $\alpha=.95$	PC $\alpha=.95$	OI $\alpha=.88$	ISS/IGH $\alpha=.92$	Sol $\alpha=.92$
1	This aspect of myself is meaningful and valuable to me.	.66	.22	.01	-.08	.12
2	I feel tense and pressured in this part of my life.	.82	-.25	-.37	-.10	.29
3	As (a) _____ (person) I can be who I really am.	.83	-.08	.04	.01	.06
4	As (a) _____ (person), I feel authentic.	.86	-.03	.05	-.08	.11
5	As (a) _____ (person), I don't feel I need to hide who I really am.	.93	-.24	-.06	.01	-.02
6	Being (a) _____ gives me my greatest feeling of really being alive.	.74	.18	.12	-.03	-.09
7	Being (a) _____ gives me my strongest feelings that this is who I really am.	.55	.36	.13	-.01	-.04
8	When I am engaging in activities related to being (a) _____, I feel more intensely involved than I do in most other activities.	.67	.23	.08	.01	-.20
9	When I am engaging in activities related to being (a) _____, I feel that this is what I was meant to do.	.64	.28	.11	-.00	-.04
10	I feel more complete and fulfilled when I am engaging in activities related to being (a) _____ than I do when engaged in most other activities.	.75	.17	.11	.01	-.09
11	I feel a special fit or meshing when I am engaging in activities related to being (a) _____.	.67	.24	.08	-.03	-.03
12	I am glad to be (a) _____.	.93	-.09	-.11	.01	.10
13	I think that being (a) _____ has a lot to be proud of.	.78	.08	.03	-.06	.05
14	It is pleasant to be (a) _____.	.97	-.11	-.09	.07	.04
15	Being (a) _____ gives me a good feeling.	.96	-.04	-.09	-.01	.06
16	How central or marginal is being (a) _____ to your identity?	.08	.80	.05	-.18	.06
17	How important is being (a) _____ in defining who you are?	.04	.94	-.02	-.02	-.13
18	How central is being (a) _____ to your self-concept?	.05	.90	.03	-.04	-.05
19	How often do you behave in accordance with your _____ identity?	-.25	.78	-.03	-.09	.35
20	Overall, being (a) _____ has very little to do with how I feel about myself.	-.18	.95	-.07	-.04	.15
21	In general, being (a) _____ is an important part of my self-image.	.19	.78	-.02	.05	-.06
22	Being (a) _____ is unimportant to my sense of what kind of person I am.	-.13	.83	-.17	.00	.10
23	Being (a) _____ is an important reflection of who I am.	.18	.72	-.03	.04	.08
24	The fact that I am (a) _____ is an important part of my identity.	.14	.67	-.09	.25	.02
25	Being (a) _____ is an important part of how I see myself.	.26	.62	-.09	.24	-.05
26	When someone criticizes _____ (s) (people), it feels like a personal insult.	-.20	.05	.83	-.08	.11
27	I am very interested in what others think about being (a) _____.	.03	-.08	.53	.06	.25
28	When I talk about being (a) _____, I usually say 'we' rather than 'they'.	.07	-.14	.70	.03	.18
29	_____ (s) (people's) successes are my successes.	.10	-.04	.75	.06	.02
30	When someone praises _____ (s) (people), it feels like a personal compliment.	.09	-.15	.82	.18	-.07
31	If a story in the media criticized _____ (s) (people), I would feel embarrassed.	-.18	-.03	.95	-.16	.06
32	I have a lot in common with the average _____ (person).	-.05	.04	-.09	.85	.21
33	I am similar to the average _____.	-.11	.07	-.10	.88	.17
34	_____ (s) (people) have a lot in common.	.04	-.10	.05	.92	-.02

35	(s) (people) are very similar to each other.	-.03	-.08	.15	.90	-.15
36	I have a strong sense of belonging to (s) (people).	.14	.31	.08	-.00	.53
37	I have a strong sense of attachment to (s) (people).	.13	.23	.14	-.01	.61
38	I feel a bond with (s) (people).	.13	-.01	.19	.17	.65
39	I feel solidarity with (s) (people).	.04	.14	.21	.09	.62

Note. Auth = authenticity; PC = psychological centrality; OI = organizational identification; ISS/IGH = individual self-stereotyping/in-group homogeneity; Sol = solidarity. Items in italics represent items from the *Satisfaction* sub-scale of identification (Leach et al., 2008). My confirmatory factor analysis demonstrates a better-fitting model when satisfaction items load onto its own factor. Loadings less than .40 are omitted. $N=241$.

Authenticity and psychological centrality loaded onto separate components with component 1 (15 items) representing authenticity (e.g., “As a ____, I can be who I really am”) and component 2 (10 items) representing psychological centrality (e.g., “Being a ____ is an important part of my identity”). The authenticity component correlated with the psychological centrality component at .72. The remaining three components are identification constructs with component 3 (6 items) representing Mael and Ashforth’s (1992) organizational identification construct (e.g., “When someone criticizes ____, it feels like a personal insult”), component 4 (4 items) representing self-definition (e.g., “I have a lot in common with the average ____”), and component 5 (4 items) representing solidarity (e.g., “I have strong sense of belonging to ____”). The self-definition and solidarity dimensions of identification were identified by Leach et al. (2008). The correlations among the components with the exception of authenticity and psychological centrality ranged from .36 to .55. I then calculated the coefficient alpha for each component and ensured that they were at least 0.7, suggesting that the items reliably indicated the construct (Nunnally, 1978).

The EFA reduced the number of items and revealed the factor structure underlying psychological centrality. My theoretical argument in chapter 2 is that the psychological centrality construct captures more than just the importance of identities to individuals’ self-concepts. I proposed that psychological centrality represents how congruent identities are to individuals’ authentic selves and therefore the extent to which identities allow them to behave authentically. I did not find that the psychological centrality and authenticity items loaded onto one component

so I do not have evidence for a one-dimensional psychological centrality construct that supports my advancement of the construct. Instead, I found that psychological centrality and authenticity load onto two separate components suggesting that psychological centrality does not represent the congruence of identities to one's authentic self. However, the five-component structure is consistent with existing literature and lends support for the discriminant validity of psychological centrality. Psychological centrality is distinct from authenticity, organizational identification, individual self-stereotyping/in-group homogeneity, and solidarity as the items loaded onto five separate components. The psychological centrality component with a reduced number of items (10 items) is used in the subsequent studies.

Across Studies 1a and 1b, I demonstrated discriminant validity in three ways. First, in Study 1a, I utilized a CFA to demonstrate the best-fitting model is one in which psychological centrality is a factor separate from the other four dimensions of identification as identified by Leach and colleagues (2008). Second, in Study 1b, I sought to support concurrent validity by showing that a psychological centrality factor indicated by authenticity and psychological centrality items explained more variance in perceived identity threat than a factor indicated only by psychological centrality items. Third, in Study 1b, I sought to support discriminant validity by demonstrating that a structural model with a psychological centrality factor predicting perceived identity threat and a solidarity factor predicting the membership dimension of collective self-esteem was a good-fitting model.

In Study 1a, I conducted confirmatory factor analysis (CFA) of the factor structure using LISREL 8.8 to demonstrate content validity (Nunnally, 1978). I also sought to replicate Leach et al.'s (2008) finding that the centrality dimension is distinct from the other four identification dimensions (solidarity, satisfaction, in-group homogeneity, individual self-stereotyping),

providing support for discriminant validity. I evaluated model fit using chi-square (X^2), the comparative fit index (CFI; Bentler, 1990), the normed fit index (NFI; Bentler, 1990), and the root mean square error of approximation (RMSEA; Steiger, 1990). To indicate a good fit, I looked for values of CFI and NFI greater than 0.90 (Medsker, Williams, & Holahan, 1994) and RMSEA less than or equal to 0.10 (Kenny, Kaniskan, & McCoach, 2014). The following CFAs are not purely confirmatory as I tested several factor structures. However, I also confirm the factor structure with CFAs of separate samples in studies 2 and 3.

First, the fit statistics for the five-component model (Model 1) that resulted from the EFA suggest there could be a better-fitting model ($\chi^2[692] = 2,502.23$; RMSEA = .12; NFI = .94; CFI = .96). The five-component model tested in the CFA included only the items in the final structure shown in Table 1 (the deleted and dropped items from the EFA were not included). The EFA resulted in the four satisfaction items loading onto the authenticity component. However, theoretically, the satisfaction dimension of identification is different from the other identification dimensions as well as psychological centrality and authenticity (Leach et al., 2008). Therefore, I conducted a six-factor CFA (Model 2) in which the four satisfaction items loaded onto a separate satisfaction factor, resulting in improved fit ($\chi^2[687] = 2,139.27$; RMSEA = .10; NFI = .95; CFI = .97; Δ chi-square -362.95; $p < .01$). Theory and past construct validity studies also suggest that individual self-stereotyping (ISS) and in-group homogeneity (IGH) are two separate factors (Leach et al., 2008). To test whether ISS and IGH should be two separate dimensions, I conducted a seven-factor CFA (Model 3) with the ISS and IGH items loading on separate factors, resulting in an even better fit ($\chi^2[681] = 1,969.18$; RMSEA = .09; NFI = .96; CFI = .97; Δ chi-square -170.09; $p < .01$). Next, given the high correlation between the authenticity and psychological centrality factors (.77), I conducted a six-factor model with the authenticity and

psychological centrality items loading onto one factor (Model 4). However, this model showed an inferior fit ($\chi^2[687] = 2,593.93$; RMSEA = .13; NFI = .94; CFI = .95; Δ chi-square +624.75; $p < .01$) suggesting that authenticity and psychological centrality are separate factors. I therefore concluded that the seven-factor model was the best fitting model.

Finally, I considered whether any of the errors for the items should be correlated. I reviewed the items for my construct of interest, psychological centrality. It is possible that the errors for the two reverse-coded items would be correlated so I ran a seven-factor model with these two errors correlated, resulting in a better-fitting model compared to the seven-factor model without correlated errors ($\chi^2[680] = 1,939.49$; RMSEA = .09; NFI = .96; CFI = .97; Δ chi-square -29.69; $p < .01$). I did not have further theoretical rationale for correlating errors so this was my final model. See Table 2 for a summary of the results for the series of confirmatory factor analyses.

Table 2
Study 1a: Confirmatory Factor Analyses Results

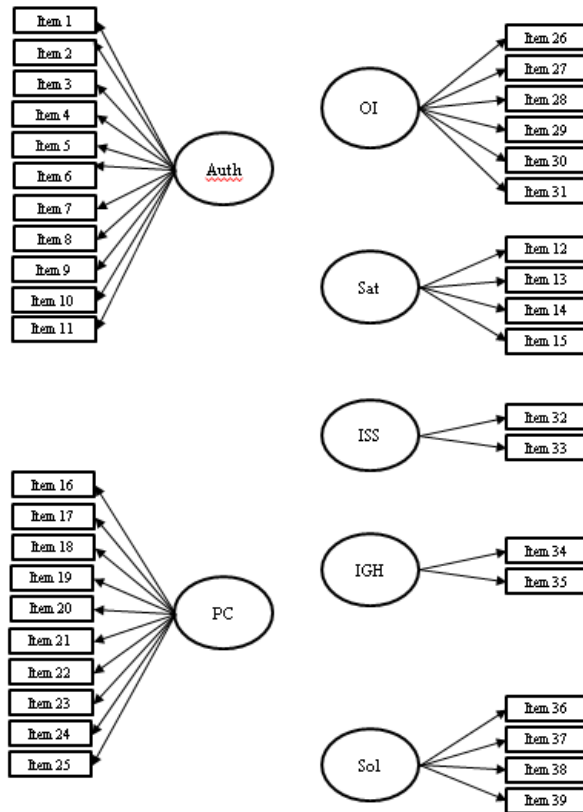
	χ^2 (N=241)	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	NFI	RMSEA
Model indicated by EFA							
Model 1 (5-factor)	2,502.23**	692	--	--	.96	.94	.12
Improved model with theory							
Model 2 (6-factor)	2,139.27**	687	-362.95**	5	.97	.95	.10
Model 3 (7-factor)	1,969.18**	681	-170.09**	6	.97	.96	.09
Support discriminant validity							
Model 4 (6-factor)	2,593.93**	687	+624.75**	-6	.96	.94	.13
Correlating errors							
Model 5 (7-factor)	1,949.49**	680	-29.69**	-1	.97	.96	.09

Note. Model 1 = model as indicated by EFA; Model 2 = satisfaction items on separate factor; Model 3 = ISS and IGH items on separate factors; Model 4 = authenticity and psychological centrality items on one factor; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root-mean-square error of the approximation. Each model is compared to the previous model (i.e., Model 2 vs Model 1; Model 3 vs. Model 2; Model 4 vs. Model 3) except Model 5 was compared to Model 3.

** $p < .01$.

See Figure 2 for the resulting seven-factor model.

Figure 2. Final 7-factor measurement model



Note. Auth = authenticity, PC = psychological centrality, OI = organizational identification, Sat = satisfaction; ISS = individual self-stereotyping; IGH = in-group homogeneity; Sol = solidarity. Item numbers correspond with item numbers and descriptions in Table 1.

The seven-factor model replicated Leach et al.'s (2008) five identification dimensions of solidarity, satisfaction, centrality, individual self-stereotyping, in-group homogeneity as well as demonstrated that organizational identification and authenticity load onto separate factors. I originally hypothesized that a six-factor model in which the centrality and authenticity items load onto the same factor would have an equal or better fitting structure than a seven-factor model where the authenticity items are indicated by a factor separate from centrality. However, I found

that the seven-factor model with the centrality and authenticity items loading onto separate factors was the better-fitting model. Therefore, I do not have evidence that the psychological centrality construct indicates both the centrality and authenticity of identities to participants' self-concepts.

To further replicate Leach et al.'s (2008) five dimensions of identification and demonstrate that psychological centrality is distinct from other dimensions of identification, I compared a five-factor model to a two-factor model. The two-factor model represented the two higher-order dimensions that Leach et al. (2008) identified of self-investment and self-definition. The five-factor model showed adequate fit ($\chi^2[179] = 690.89$; RMSEA = .11; NFI = .96; CFI = .97). For the two-factor model, in line with Leach et al.'s (2008) findings, I had the solidarity, satisfaction, and psychological centrality items indicated by a self-investment factor and the individual self-stereotyping and in-group homogeneity items indicated by a self-definition factor. The five-factor model was a better-fitting structure than the two-factor model ($\chi^2[188] = 1,747.33$; RMSEA = .21; NFI = .89; CFI = .90; Δ chi-square +1,056.44; $p < .01$). Finally, I compared the five-factor model to a one-factor model in which all of the items were indicated by one identification factor. Again, the five-factor model was a better-fitting structure than the one-factor model ($\chi^2[189] = 2,343.94$; RMSEA = .24; NFI = .85; CFI = .86; Δ chi-square +1,653.05; $p < .01$), demonstrating that psychological centrality is distinct from the other four identification dimensions, and supporting the findings by Leach and colleagues (2008).

Study 1a summary. I sought to support the discriminant validity of the psychological centrality construct by providing evidence of a good fit for a five-factor measurement model in line with the five identification dimensions found by Leach and colleagues (2008). Study 1a provided this evidence and helped to create a shortened scale that can be used in future studies. I

did not find support for my advancement of the psychological centrality construct to include authenticity items, suggesting that the extent to which identities allow individuals to behave authentically is distinct from how central identities are to one's self-definition. However, I did find support for the distinctiveness of psychological centrality from other identification dimensions including solidarity, satisfaction, in-group homogeneity, and individual self-stereotyping. In addition, I demonstrated that psychological centrality is distinct from the commonly-used organizational identification construct and authenticity. Study 1a also reduced an exhaustive list of centrality, authenticity and identification items to a shortened, reliable, 10-item psychological centrality scale.

II. STUDY 1b

To further support the discriminant validity and to also support the concurrent validity of the psychological centrality construct, I conducted two additional analyses with Study 1b. First, I sought to demonstrate that the psychological centrality construct with authenticity items predicted incremental variance in perceived identity threat above the psychological centrality construct without the authenticity items. Second, I tried to demonstrate that the psychological centrality construct predicted a criterion different from the solidarity dimension, which is the dimension of identification most commonly studied empirically in the stereotype threat literature (Branscombe et al., 1999b; Wong et al., 2003). Leach et al. (2008) found that centrality best predicted perceived identity threat and solidarity best predicted the *membership* subscale of collective self-esteem. Collective self-esteem represents the value individuals derive from their membership in social groups (Luhtanen & Crocker, 1992).

Participants and study design. The sample consisted of 62 undergraduate business school students enrolled in business classes within a northwestern business school. Students

participated in an online survey within a laboratory in exchange for class credit. Ten students did not accurately respond to the two attention checks that were embedded in the survey so they were excluded from the sample. The remaining sample was 52 students (39% male; average age of 21.5 years old).

The survey asked participants to evaluate their business school identity with a series of psychological centrality, authenticity, and solidarity items. They also evaluated their collective-self-esteem associated with belonging to the social group of business school students. They were then told they were going to participate in a standardized test. The business school identity for all participants was threatened by reading the following description of the task which was adapted from a stereotype threat manipulation in which White men were told that Asians have been found to perform better than Whites on standardized math tests (Aronson et al., 1999):

The third part of the study includes a standardized test. The skills measured in this standardized test are crucial to performance in many important jobs. This research is aimed at better understanding what makes some people better at these skills than others.

At some top technical companies, exact science graduates outnumber the business school graduates, and there has been a growing gap in the performance ability between these two groups.

A good deal of research indicates that students of exact sciences consistently score higher than business school students on the skills measured in this standardized test. The research you are participating in is aimed at better understanding these differences. Your performance on the exam will be compared to other students across the nation. One specific question is whether students of exact sciences are superior at all types of skills measured in the test or only certain types.

Participants then evaluated their perceived identity threat.

Measures.

Psychological centrality. Participants evaluated psychological centrality with the reduced scale of ten items obtained in Study 1a. See items starred in appendix A for the ten items used to represent the psychological centrality construct. For Study 1b, these items were specific to the

business school identity; for example “Being a business school student is important in how I define myself” and “Being a business school student is central to my identity”. For Study 1b, all items were measured on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*) with the first three items re-worded into statements. For example, instead of “How important is being (a) _____ in defining who you are?”, the item read “Being a business school student is important in how I define myself.” The coefficient alpha for the ten items was .96.

Authenticity. Participants also evaluated the extent to which their business school identity was representative of their authentic self. The six personal expressiveness items from Waterman (1993) that were used in Study 1a were included in this survey except the items specifically targeted the business school identity. For example “Being a business school student gives me my strongest feelings that this is who I really am” and “When I am engaging in activities related to being a business school student, I feel that this is what I was meant to do”. The coefficient alpha was .91.

Solidarity. The three solidarity items from Leach and coauthors (2008) used in Study 1a were included in this study except that they were specific to the business school identity. Examples include “I feel committed to being a business school student” and “I feel solidarity with business school students”. The coefficient alpha was .90.

Collective self-esteem. I measured collective self-esteem (CSE) with Luhtanen and Crocker’s (1992) sixteen-item collective self-esteem scale. Participants indicated the extent to which they agreed on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) with statements about their social group of business school students. Four items made up the membership dimension of collective self-esteem such as “I am a worthy member of the social groups I belong to” and “I am a cooperative participant in the social groups I belong to”. The

coefficient alpha for the four membership items was .81. I also utilized the *identity* dimension of collective self-esteem because theoretically, it is more strongly related to centrality than solidarity (Leach et al., 2008). The identity dimension included four items such as “This social group is an important reflection of who I am” and “In general, belonging to this social group is an important part of my self-image”. The coefficient alpha for the four identity dimension items was .83.

Perceived identity threat. Three items measured perceived identity threat. Two items were borrowed from Leach and coauthors’ (2008) measure of perceived threat. Participants indicated their agreement on a 5-point Likert scale (1 = *strongly disagree* and 5 = *strongly agree*) with items such as “I worry that my business school identity is receiving less respect” and “My sense of being a business school student is threatened” (Leach et al., 2008). The third item was from Mikulincer’s (1989) measure of perceived threat. Participants responded to the item “How much did you feel threatened?” on a 7-point Likert scale (1 = *not at all* to 7 = *very much*). The three items were standardized before calculating the mean because the items were measured with different anchors. The coefficient alpha was .77.

Results. See Table 3 for the means, standard deviations, and inter-correlations.

Table 3
Means, Standard Deviations, Inter-correlations for Study 1b

Variable	Mean	s.d.	1	2	3	4	5	6
1. Psychological centrality	4.80	1.21	--					
2. Authenticity	4.36	1.03	.74***	--				
3. Solidarity	4.55	1.52	.72***	.88***	--			
4. Membership dimension of CSE	3.91	.69	.40**	.69***	.61***	--		
5. Identity dimension of CSE	3.22	.85	.74***	.53***	.53***	.29*	--	
6. Perceived identity threat	.00	.83	-.11	-.31*	-.31*	-.29*	-.11	--

Note. $N = 52$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

To demonstrate concurrent validity (Nunnally, 1978), I conducted a path analysis in Mplus version 7.3 (Muthen & Muthen, 2004) to demonstrate that a psychological centrality factor with the authenticity items explains more variance in perceived identity threat than the centrality factor without the authenticity items. Perceived identity threat is the outcome I theoretically argue in chapter 2 should be better predicted by the congruence of identities to individuals' authentic self. In addition, Leach et al. (2008) demonstrated that the centrality dimension of identification explained perceived identity threat better than the other dimensions of identification. I assessed this by determining whether the standardized coefficient for the path from the psychological centrality factor to perceived identity threat was larger and more significant (i.e., p -value) when the authenticity items were included compared to when they were not included. I did not find support for the psychological centrality factor predicting threat better with the authenticity items than without. The psychological centrality factor indicated by the ten psychological centrality items did not predict threat ($\gamma = -.15, p = .34$) nor did the factor indicated by ten psychological centrality items and six authenticity items ($\gamma = -.11, p = .36$).

I also evaluated the change in chi-square between structural models in which the psychological centrality latent factor was indicating the centrality items and predicting perceived identity threat compared to one in which the psychological centrality latent factor was indicating the authenticity items in addition to the centrality items. A significant reduction in chi-square from the former to the latter model would provide support for my advancement of the psychological centrality construct. I did not find support for my advancement of the psychological centrality construct; the structural model with the psychological centrality factor indicated by just the psychological centrality items had a lower chi-square ($\chi^2[64] = 110.90$) than the structural model with the psychological centrality factor indicated by psychological

centrality and authenticity items ($\chi^2[119] = 311.21$); Δ chi-square +200.31; $p < .01$), further suggesting that psychological centrality and authenticity are different constructs.

I then demonstrated that psychological centrality is different from solidarity, the dimension of identification that has been most commonly measured within the stereotype threat literature other than centrality (Branscombe et al., 1999b; Wong et al., 2003). First, I conducted a CFA to confirm that the psychological centrality and solidarity items load onto separate factors. Then, I tested a structural model where psychological centrality predicted perceived identity threat and solidarity predicted the membership subscale of collective self-esteem. Leach et al. (2008) found that the solidarity dimension of identification predicted the membership subscale of collective self-esteem better than the centrality dimension. I looked for good fit statistics for this structural model and significant standardized coefficients leading from psychological centrality to perceived identity threat, and solidarity to collective self-esteem.

The CFA with the psychological centrality and solidarity items loading onto two separate factors ($\chi^2[64] = 117.17$; TLI = .91; CFI = .92) was a better-fitting model than one in which all of the items loaded onto one factor ($\chi^2[65] = 167.66$; TLI = .82; CFI = .85; Δ chi-square = +50.49, $p < .01$). I do not report RMSEA in this analysis because of the low sample size. RMSEA is not recommended for small sample sizes (Kenny et al., 2014). However, I did not find support for discriminant validity with my test of whether psychological centrality predicted perceived identity threat and solidarity predicted the membership dimension of collective self-esteem. One reason for not finding support is because of the lack of a relationship between psychological centrality and perceived identity threat likely due to the threat in the experiment being unsuccessful (discussed below). The structural model with psychological centrality predicting perceived identity threat and solidarity predicting the membership dimension of

collective self-esteem had poor fit statistics ($\chi^2[2] = 6.18$; RMSEA = .20; TLI = .62; CFI = .85) with a significant positive relationship between solidarity and the membership dimension of collective self-esteem as expected ($\gamma = .27, p < .001$) but a lack of a relationship between psychological centrality and perceived identity threat ($\gamma = -.08, p = .42$).

One potential reason for the lack of an effect of psychological centrality on perceived identity threat is that there appeared to be a lack of perceived identity threat from telling business school students that students of exact sciences have been shown to be superior on some standardized tests than business school students (mean for the two perceived identity threat items measured on a 5-point Likert scale = 2.3 between “disagree” and “neither agree nor disagree”; mean for the one perceived identity threat item measured on a 7-point Likert scale = 1.71 with 1 = “not at all”). Therefore, I tested an additional model in which the latent psychological centrality factor predicted the identity dimension of collective self-esteem and the latent solidarity factor predicted the member dimension of collective self-esteem, consistent with past findings (Leach et al., 2008). The past findings demonstrated that the centrality dimension best predicted the identity dimension of collective self-esteem and the solidarity dimension best predicted the membership dimension of collective self-esteem. The structural model with psychological centrality predicting the identity dimension ($\gamma = .63, p < .001$) and solidarity predicting the membership dimension ($\gamma = .40, p < .001$) ($\chi^2[88] = 153.00$; TLI = .90; CFI = .91) had sufficient fit statistics that were superior to the fit statistics of a model with psychological centrality predicting the member dimension ($\gamma = .33, p = .002$) and solidarity predicting the identity dimension ($\gamma = .36, p < .001$) ($\chi^2[88] = 180.32$; TLI = .86; CFI = .88). In addition, in a model with psychological centrality and solidarity both predicting the identity dimension, psychological centrality was a significant predictor ($\gamma = .82, p < .001$) while solidarity was not (γ

= -.11, $p=.31$). Similarly, in a model with psychological centrality and solidarity both predicting the membership dimension, solidarity was a significant predictor ($\gamma = .39, p<.001$) while psychological centrality was not ($\gamma = -.23, p=.16$).

Study 1b summary. I sought to support my advancement of the psychological centrality construct to represent the congruence of identities with individuals' authentic self by demonstrating that the psychological centrality factor with the authenticity items explained more variance in perceived identity threat than the centrality factor without the authenticity items. In addition I tried to provide further support of the discriminant validity of psychological centrality from solidarity by showing that these constructs predicted different outcomes. A key limitation of this study was the lack of perceived identity threat as described above. In a future study, I will identify a harm event that results in higher levels of perceived identity threat. The low levels of perceived identity threat may have contributed to the lack of effect between psychological centrality and perceived identity threat which limits the interpretability of my findings.

Consistent with Study 1a, authenticity appears to be distinct from psychological centrality and therefore did not improve the predictive value of psychological centrality. However, I did find further evidence of the discriminant validity between psychological centrality and solidarity. Although I was unable to support my proposal that psychological centrality would predict perceived identity threat, and solidarity would predict the membership dimension of collective self-esteem, I was able to demonstrate discriminant validity with an alternate analysis. Consistent with a past construct validity study (Leach et al., 2008), I found that psychological centrality was a better predictor of the identity dimension of collective self-esteem and solidarity was a better predictor of the membership dimension.

STUDY 2

I conducted this study to try to provide initial support for my hypothesized relationships. In Study 2, I manipulated psychological centrality and harm to identity in an online experiment, asked a series of questions, and then had participants engage in a performance task. I used path analysis to test my hypotheses. I tested all of my hypotheses with this study except for hypotheses 10 and 11. Hypothesis 10 included other work behaviors and job attitudes that I only tested with a field study (Study 3) in which supervisors evaluated other work behaviors and employees rated their job attitudes. Hypothesis 11 predicted that openness to experience work group identity would be negatively related to harm to identity. I was unable to test this hypothesis with the online experiment because harm to identity was manipulated. It was important that I manipulated harm to identity in Study 2 to provide support for causality within my theoretical model.

Participants and study design. Study 2 included participants recruited through Amazon's M-Turk. I recruited 213 participants who had some employment and some college education to participate in an experiment with a 3 (psychological centrality: high vs. medium vs. low) x 2 (harm to identity: present vs. control) between-subjects design. Participants were paid \$3.50. Consistent with the Study 1a sample, I excluded participants who provided an identity that was not conducive to evaluating psychological centrality. For Study 2, three independent coders reviewed each identity and evaluated if the identity listed could be harmed. If the identity could not be harmed, then the identity would not be appropriate in the current study because harm to the identity was manipulated in this study. The coders recommended removing 14 participants. An additional 8 participants did not correctly respond to the two attention checks so they were also excluded from the sample. This resulted in a final sample of 191 participants (62% male; average age of 32 years old; 93% employed full-time).

Using the same procedures described for Study 1a, participants provided twelve open-ended answers to the question “Who am I?” to generate a list of their identities (Kuhn & McPartland, 1954; Vignoles et al., 2006) and then ranked their identities from most to least psychologically central (Thoits, 1992). One-third of the participants were randomly assigned to evaluate their most psychologically central identity (high condition), another one-third their 6th most psychologically central identity (medium condition), and the remaining one-third their 12th most psychologically central identity (low condition). Participants then evaluated their identity on a shortened psychological centrality scale of thirty-three items.

Next, participants engaged in a writing task which primed the experience of harm to identity for those randomly assigned to the harm condition. The writing task was adapted from writing tasks that were created as vivid simulations and reenactments of previous experiences for the purpose of producing the same feelings and psychological processes that occurred with the original experiences (Inzlicht & Kang, 2010; Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012). These types of writing tasks have been validated such that the experimental condition in which participants recalled and wrote about the experience under study (e.g., identity threat; Inzlicht & Kang, 2010) produced the feelings and psychological processes that were expected to be associated with the experience compared to those participants in a control condition. Other studies on priming self-control have found that experimental manipulations which simulate a self-control depleting event have similar psychological effects as the actual event (Ackerman, Goldstein, Shapiro, & Bargh, 2009). The harm to identity condition was crossed with the psychological centrality condition such that within the harm to identity and control conditions, participants either wrote about their first most, 6th most, or 12th most psychologically central identity. The instructions for the harm to identity condition were:

Please think about your ____ identity. Please think about an event **in the last 6 months** in which another person or group made a negative comment about the identity or criticized your abilities or judgments related to the identity. Bring this experience to mind. Immerse yourself in this experience. Please spend 5 minutes describing the thoughts, feelings and sensations you had at the time of the experience in the space below.

The instructions for the control condition were:

Please think of an ordinary event that occurred in your life **in the last 6 months**. Specifically, think about an event at work that was ordinary. Bring this ordinary experience to mind. Immerse yourself in the ordinary experience. Please spend 5 minutes describing the thoughts, feelings and sensations you had at the time of the experience in the space below.

The writing task asked participants to reflect on the past 6 months consistent with the time period Aquino and Douglas (2003) used when they measured identity threat. Participants then rated harm to their identity, perceived identity threat, negative emotions, and cognitive interference. Participants also engaged in two filler tasks that were dispersed throughout the survey to help minimize common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Next, to measure performance, participants engaged in a task in which they were given information about how to evaluate six different real estate locations for a restaurant expansion and asked to rank the sites from best to worst location (Mennecke & Wheeler, 2012). They were given 1) seven factors that are important in evaluating where the restaurant should be built, 2) scores by a consulting company on a 100 point basis for the seven factors for each of the six real estate locations, and 3) the order of importance for the seven factors according to management and their minimum required score for each of the seven factors. See appendix C for the details of the task. Participants are asked to review the information and rank the real estate locations from best to worst site.

Measures.

Psychological centrality manipulation check. Ten psychological centrality items developed in Study 1 were used to assess the effectiveness of the psychological centrality manipulation. The items were standardized before calculating the mean because the items were measured with different anchors. The coefficient alpha for the ten items was .96.

Harm to identity manipulation check. Eight items were used to assess the effectiveness of the harm to identity manipulation. The items were adapted from Aquino and Douglas' (2003) measure of identity threat from being about coworker behavior in general to asking about a specific identity. Aquino and Douglas (2003) asked participants to report the number of times one or more coworkers displayed the target behavior towards them within the past 6 months on a 5-point scale (1: *Never*, 2: *1–3 times*, 3: *4–6 times*, 4: *7–9 times*, and 5: *10 or more times*). An example item is: “Made an insulting comment about your private life”. This item was adapted by asking participants to think about the experience they just wrote about and indicate their agreement on a 7-point Likert scale (1 = *strongly disagree* and 7 = *strongly agree*) with the item “Someone or some group made insulting comments about my identity”. The coefficient alpha was .95.

Other construct validity items. To provide further support for the construct validity of psychological centrality, I included the 14 authenticity (Cable et al., 2013; Sheldon et al., 1997; Waterman, 1993), three solidarity (Leach et al., 2008), and four satisfaction (Leach et al., 2008) items used in Study 1a. The coefficient alphas for the authenticity, solidarity, and satisfaction items were .92, .85, .94, respectively.

Perceived identity threat. Three items measured perceived identity threat. Two items of perceived threat were taken from Leach and coauthors' (2008) measure of identity threat: “The experience made me worry that my identity as _____ received less respect” and “The

experience threatened my sense of being _____” (Leach et al., 2008). Consistent with this previous measure, I used a 5-point Likert scale (1 = *strongly disagree* and 5 = *strongly agree*). The third item was an item from Mikulincer (1989) that measured perceived threat in general: “How much did you feel threatened by the experience?” (Mikulincer, 1989) and was measured on a 7-point Likert scale (1 = *not at all* to 7 = *very much*). Because the items used different anchors, the items were standardized. The coefficient alpha was .90.

Negative emotions/Anger. To capture negative emotions, participants were asked to indicate how they felt about what they wrote about (either the harm to identity or ordinary experience) on a 7-point Likert scale (1 = *not at all* to 7 = *very much*). I used the ten negative affect items from the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988). Negative affect items included “irritable”, “upset” and “hostile”. The coefficient alpha was .94. Nine emotions were included from Spencer and Rupp’s (2009) “anger” scale including “mad”, “angry”, and “displeased” (“irritable” is a part of both the PANAS and Spencer and Rupp’s (2009) anger scale). The coefficient alpha for these items was .88.

Cognitive interference. Cognitive interference was measured with Sarason and coauthors’ (Sarason et al., 1986) cognitive interference scale. The items assessed how frequently different intrusive thoughts were present over the last 6 months when trying to concentrate on a task such as working, reading directions, or reading a book. A 6-month timeframe was used consistent with the timeframe used in the harm writing task. Participants used a 5-point scale (1=*Never*, 2=*once*, 3= *a few times*, 4 = *often*, 5 = *very often*). Sample items include: “I was thinking about personal worries” and “I was thinking about something that made me feel tense”. The coefficient alpha was .85.

Performance. Performance was operationalized from the real estate ranking task by calculating the difference between the ranking the participant assigned and the correct ranking. For example, location 5 was supposed to be the best site (i.e., ranked first). If a participant ranked location 5 as third in the ranking, they were assigned a value of “2” because they ranked location 5 two places away from where it should have been ranked. Participants who ranked location 5 first were assigned a value of “0” because they ranked the location in the correct place. Each participant received a value for each of the five locations and a sum of the values was calculated. The performance score was reverse-scored so that higher values represented higher performance. Performance scores ranged from 1 to 17 with an average score of 9.54.

Control variables. I considered controlling for self-esteem, social desirability, demographic variables, work group tenure, and work group size to demonstrate the robustness of my findings. Because I proposed that psychological centrality is more than an identity’s impact on self-esteem, I controlled for self-esteem. I measured self-esteem derived from one’s identity by adapting Rosenberg’s (1965) self-esteem scale. For example, the original item “I feel that I am a person of worth, at least on an equal basis with others” was adapted to “This identity makes me feel that I am a person of worth, at least on an equal basis with others”. Participants indicated their agreement with these ten items regarding the identity they evaluated throughout the survey on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The coefficient alpha was .91.

Given the sensitive nature of evaluating identity threat, I also controlled for social desirability with Paulhus’ (1991) eighteen-item social desirability scale. Participants indicated their agreement on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) with items

such as “I sometimes lie if I have to” and “I have done things that I don’t tell other people about”. The coefficient alpha was .87.

Finally, I included demographic variables to control for the potential sensitivity of psychologically central identities to gender, age, ethnicity, or employment. In addition, work group tenure size may be thought to be related to potential for identity threat so I also considered controlling for these variables (Thatcher & Greer, 2008). To test my hypothesized relationships, I included demographics, work group tenure, and work group size as control variables if they were significantly related to one of the variables of interest in my model. Ethnicity was significantly related to perceived identity threat so it was included in my hypotheses testing. Work group tenure, work group size, and the rest of the other demographic variables were not included in the model. The final results were the same whether control variables were included or not.

Results. See Table 4 for the means, standard deviations, inter-correlations, and reliabilities. Consistent with expectations, harm to identity was positively related to perceived identity threat. Harm to identity and perceived identity threat were also positively related to negative emotions and anger which were in turn positively related to cognitive interference. Different from expectations, perceived identity threat was only marginally related to cognitive interference, and cognitive interference was not related to performance. I analyzed homoscedasticity for each variable by plotting the residuals. If the residuals were not approximately constant across predictors, I concluded there was a violation of the assumption of homoscedasticity (Rosopa, Schaffer, & Schroeder, 2013). In study 2, the residuals were approximately constant across predictors so I concluded that homoscedasticity was present.

Table 4
Means, Standard Deviations, Inter-correlations for Study 2

Variable	Mea	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. PC condition Dummy 1	.68	.47	--															
2. PC condition Dummy 2	.34	.47	.49***	--														
3. Harm condition	.49	.50	-.01	-.01	--													
4. Perceived identity threat	.00	.92	-.03	.01	.56***	[.90]												
5. Negative emotions	2.05	1.27	-.10	.04	.36***	.58***	[.94]											
6. Anger	2.42	1.56	-.06	.08	.45***	.57***	.82***	[.88]										
7. Cognitive interference	2.96	.80	-.02	.00	.04	.14†	.24**	.23**	[.85]									
8. Performance	9.54	3.23	.04	.16*	.05	-.09	-.01	.10	-.03	--								
9. Self-esteem	4.05	.76	.03	.11	.02	-.10	-.20**	-.09	-.36***	.12	[.91]							
10. Social desirability	3.01	.66	-.04	.01	.11	.23**	-.19*	.18*	.30***	-.03	-.31***	[.87]						
11. Gender	.62	.49	.08	-.15*	-.00	-.01	-.06	-.09	-.08	.07	-.09	.07	--					
12. Age	31.68	9.21	-.12	-.02	-.04	.05	-.04	.03	-.03	.06	.18*	-.07	-.21**	--				
13. Ethnicity	.76	.43	.04	.03	.00	-.17*	-.09	-.04	.07	.03	.06	.08	.33	-.02	--			
14. Employment	.93	.25	-.01	.02	.02	.12	.07	.11	-.04	.01	.00	.14†	.00	.05	-.05	--		
15. Work group tenure	4.44	4.12	-.05	-.09	-.10	-.06	-.03	-.01	.01	-.03	.09	-.09	-.06	.45***	.05	.05	--	
16. Work group size	10.64	13.17	-.01	.02	-.04	.05	.07	.03	-.00	.07	.16*	-.14	.01	-.03	-.12	-.05	-.06	--

Note. $N = 191$. Coefficient alpha shown in brackets where applicable. “PC” – psychological centrality. *PC condition Dummy 1*: 0 = low PC, 1 = med or high PC; *PC condition Dummy 2*: 0 = low or med PC, 1 = high PC. *Harm condition*: 0 = control, 1 = harm. *Gender*: 0 = female, 1 = male. *Ethnicity*: 0 = not Caucasian, 1 = Caucasian. *Employment*: 0 = employed part-time or previously employed, 1 = employed full-time.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Discriminant validity. Before testing my hypotheses, I conducted confirmatory factor analyses with LISREL 8.80 to further support the construct validity of the psychological centrality construct. Consistent with the findings from Study 1a, I loaded the ten psychological centrality items onto a psychological centrality factor, 14 authenticity items onto an authenticity factor, four solidarity items onto a solidarity factor, and three satisfaction items onto a satisfaction factor resulting in a model that fit better ($\chi^2[427] = 1,485.31$; NFI = .94; CFI = .96; RMSEA = .12) than one in which all items were loaded onto one factor ($\chi^2[433] = 2,244.73$; NFI = .91; CFI = .93; RMSEA = .19; Δ chi-square = +759.42, $p < .01$). This further supports to the construct validity of psychological centrality.

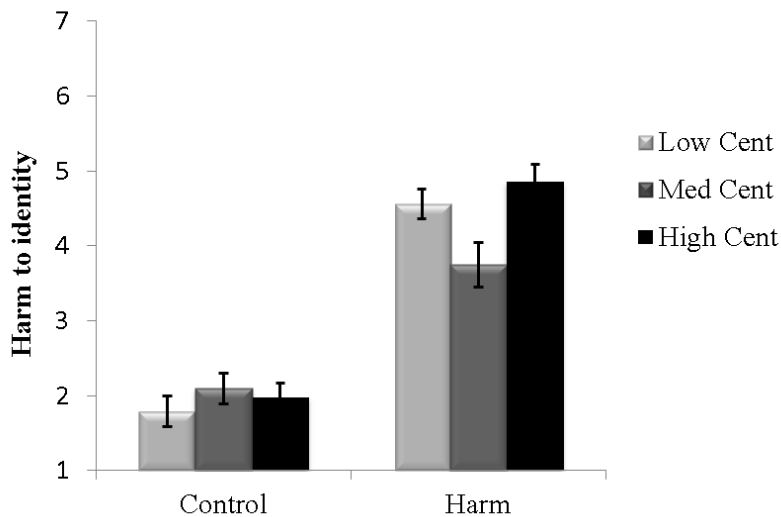
Manipulation checks. To confirm that my manipulations of psychological centrality and harm to identity were successful, I conducted a 2 x 3 between-subjects ANOVA. I sought to demonstrate that participants in the high psychological centrality condition rated their psychological centrality as measured by the reduced set of items (found in the EFA conducted in Study 1a) significantly higher than those in the medium condition, and those in the medium condition evaluated psychological centrality higher than those in the low condition. I conducted a 2 x 3 between-subjects ANOVA with the psychological centrality manipulation and harm to identity manipulation as predictor variables and psychological centrality as the dependent variable. Again, the psychological centrality variable was obtained by standardizing the ten psychological centrality items and then calculating the mean of the items. The analysis revealed a main effect of the psychological centrality manipulation $F(2,185) = 74.02$, $p < .001$, $\eta_p^2 = .45$). Those in the high condition rated their identity as more psychologically central ($M = 0.70$, $SD = 0.47$) than those in the medium condition ($M = -0.03$, $SD = 0.64$; mean difference = .73, $p < .001$). In addition, those in the medium condition rated their identity as more psychologically

central than those in the low condition ($M = -0.70$, $SD = 0.79$; mean difference = $.67$, $p < .001$).

Finally, those in the high condition rated their identity as more psychologically central than those in the low condition (mean difference = 1.40 , $p < .001$). No other effects were significant.

To test the harm to identity manipulation, I sought to demonstrate that participants in the harm to identity condition rated their harm to identity higher than those in the ordinary condition. I conducted a 2×3 between-subjects ANOVA with the psychological centrality manipulation and harm to identity manipulation as predictors and harm to identity as the dependent variable. The analysis revealed a main effect of the harm to identity manipulation such that those in the harm to identity condition rated their experience as more harmful ($M = 4.38$, $SD = 1.44$) than those in the control condition ($M = 1.96$, $SD = 1.14$; $F(1,184) = 176.27$, $p < .001$, $\eta_p^2 = .49$). However, there was also a significant interactive effect ($F(2,184) = 4.67$, $p = .01$, $\eta_p^2 = .05$). Within the harm to identity condition, those in the high centrality condition perceived more harm ($M = 4.86$, $SD = 1.21$) than those in the medium centrality condition ($M = 3.75$, $SD = 1.70$; mean difference = 1.11 , $p = .001$) whereas in the control condition, there was no difference in perceived harm in the three centrality conditions ($M_{high} = 1.97$; $M_{med} = 2.10$; $M_{low} = 1.79$). An unusual finding also occurred with respect to the medium and low centrality conditions within the harm to identity condition. Those in the medium condition perceived less harm ($M = 3.75$, $SD = 1.70$) than those in the low condition ($M = 4.56$, $SD = 1.12$; mean difference = $-.81$, $p = .01$). There was no significant difference in perceived harm in the control condition (medium centrality: $M = 2.10$, $SD = 1.17$ versus low centrality: $M = 1.79$, $SD = 1.13$, mean difference = $-.30$, $p = .34$). See Figure 3 for a graph of the interaction. I address the unusual finding between the medium and low centrality conditions in the discussion section.

Figure 3. Interaction in harm to identity manipulation check

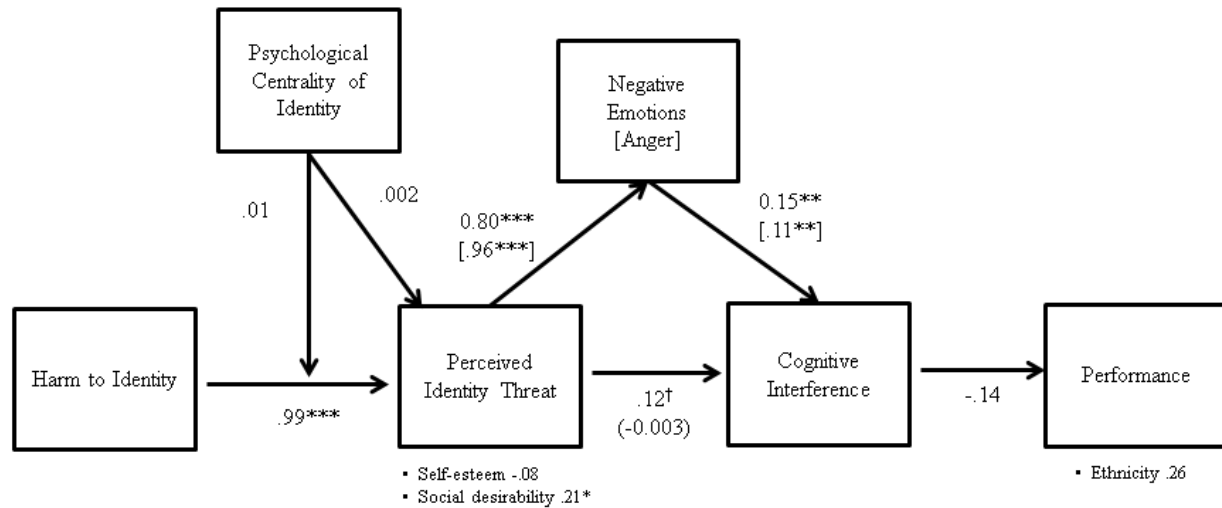


Test of hypothesized relationships. I used path analysis in Mplus 7.3 (Muthen & Muthen, 2004) to test the hypotheses. Because the three psychological centrality conditions are essentially continuous (i.e., “3” represents high psychological centrality, “2” represents medium psychological centrality, and “1” represents low psychological centrality), I treated psychological centrality as a continuous variable in the path analysis. See Figure 4 for the structural model and standardized path coefficients.

Hypothesis 1 states that harm to identity will be positively related to perceived identity threat and I tested this relationship while controlling for self-esteem and social desirability. I found support for this relationship such that higher levels of the presence of harm to one’s identity was related to higher levels of perceived identity threat ($\gamma = .99, p < .001$). I then tested the interaction in hypothesis 2 to determine whether there was a significant interactive effect of harm to identity and psychological centrality onto perceived identity threat. My hypothesis was that perceived identity threat would be more likely to occur in response to harm to the identity if

the identity was psychologically central. I did not find support for this relationship ($\gamma = .01, p = .93$).

Figure 4. Structural model for Study 2

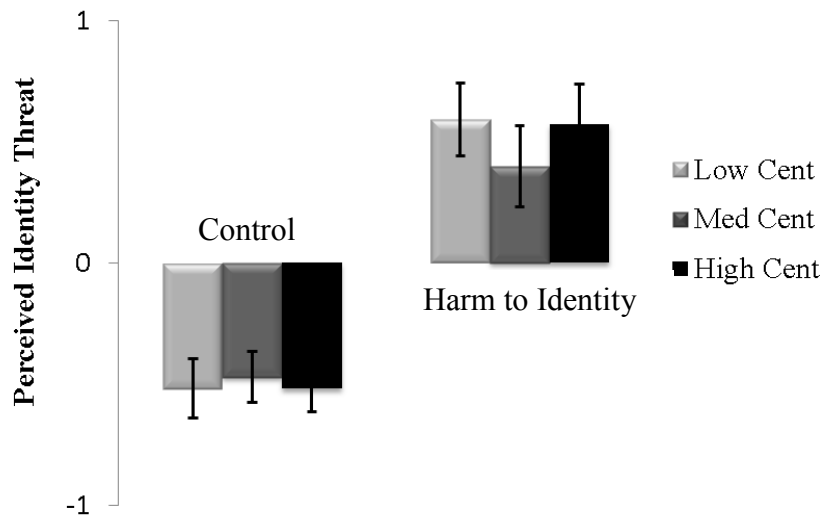


Note. Standardized path coefficients (γ) are reported. $N = 191$. The values in brackets are standardized coefficients for anger instead of negative emotions. The value in parentheses is the standardized path coefficient when negative emotions is included in the model. The bullet points show the control variables. † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

I also tested the interaction in a 2 x 3 between-subjects ANOVA in order to obtain a graphical depiction of the interaction. I input the psychological centrality manipulation and harm to identity manipulation as predictors and perceived identity threat as the dependent variable. There was the expected main effect of participants in the harm condition ($M = .52, SD = .90$) perceiving more identity threat than those in the control condition ($M = -.50, SD = .61; F(1,185) = 83.58, p < .001, \eta_p^2 = .31$). However, consistent with the finding in the path analysis, the interaction was not significant ($F(2,185) = .48, p = .62$). Within the harm to identity condition, those in the high centrality condition did not perceive more threat ($M = .57, SD = .93$) than those in the medium ($M = .40, SD = .95$; mean difference = $-.17, p = .37$). And those in the medium

condition did not perceive more threat than those in the low condition ($M = .59$, $SD = .84$; mean difference = $.19$, $p = .32$). See Figure 5 for a depiction of the interaction.

Figure 5. Interaction in Study 2



I then hypothesized that perceived identity threat would be positively related to negative emotions and anger. I found that perceived identity threat was positively related to negative emotions ($\gamma = .80$, $p < .001$) and anger ($\gamma = .96$, $p < .001$), providing support for hypothesis 3.

Hypothesis 4 states that perceived identity threat will be positively related to cognitive interference and hypothesis 5 states that negative emotions and anger will mediate the relationship between perceived identity threat and cognitive interference. I found marginal support for hypothesis 4 such that perceived identity threat was marginally positively related to cognitive interference when negative emotions nor anger were in the model ($\gamma = .12$, $p = .056$). However, there was a significant indirect effect of perceived identity threat on cognitive interference through negative emotions, as stated in hypothesis 5, suggesting that perceived identity threat positively affected cognitive interference because of the negative emotions it created. I used the Monte Carlo method (Selig & Preacher, 2008) to assess the mediation by

constructing bias-corrected 95% confidence intervals for the indirect effects with the generation of 20,000 random re-samples. I found support for the indirect effect of perceived identity threat on cognitive interference mediated by negative emotions (95% CI = .003 to .26) because the 95% confidence interval did not contain zero. However, I did not find support for the indirect effect through anger (95% CI = -.03 to .27). Thus, hypothesis 5 was partially supported.

Hypotheses 6 and 7 proposed moderated mediation such that the indirect effect of harm to identity on negative emotions (hypothesis 6) or cognitive interference (hypothesis 7) would be mediated by perceived identity threat and stronger if related to a psychologically central identity. I hypothesized first-stage moderated mediation because I proposed that the mediating relationship differed depending on the value of the moderator (psychological centrality) and that the moderator specifically affected the relationship between the independent variable (harm to identity) and the mediator (perceived identity threat) (Liu, Zhang, & Wang, 2012). The first step required to demonstrate moderated mediation is to show that the relationship between the independent variable and mediator differs based on the moderator (my hypothesis 2). I did not find support for this first step so I did not proceed with the analysis.

Although not hypothesized, I found support using the Monte Carlo method for the indirect effect of harm to identity on negative emotions (95% CI = .55 to 1.07) and anger (95% CI = .68 to 1.25) through perceived identity threat. However, I did not find support for the indirect effect of harm to identity on cognitive interference through identity threat (95% CI = -.14 to .13) likely due to lack of the direct effect of identity threat on cognitive interference (when negative emotions or anger are in the model).

Hypothesis 8 proposed that higher levels of cognitive interference would relate to lower levels of performance. I did not find support for this hypothesis ($\gamma = -.14, p = .64$) suggesting that

the cognitive interference experienced by participants did not affect their ability to perform the real estate task. Because I did not find support for the relationship between cognitive interference and performance, I did not test my mediation hypothesis 9 that cognitive interference would mediate the relationship between perceived identity threat and performance.

Study 2 summary. Study 2 sought to provide support for hypotheses 1-9 with an experimental design. I provided support for the negative emotional (hypothesis 3) and cognitive ramifications (hypothesis 4) of identity threat such that harm to one's identity resulted in perceived identity threat (hypothesis 1) and higher levels of negative emotions, anger, and cognitive interference. I further showed that individuals experienced cognitive interference as a result of identity threat primarily because of the negative emotions and anger they felt (hypothesis 5). The suppression of these negative emotions and the secondary appraisal processes trying to determine how to react to the negative emotions appear to utilize cognitive resources.

I did not find support for my interaction hypothesis (hypothesis 2) that individuals would be more sensitive to perceiving identity threat if the harm experienced is related to a more psychologically central identity. There are several explanations for not finding a significant interactive effect of psychological centrality and harm to identity on perceived identity threat. I investigate these explanations in the general discussion section.

I also uncovered an unusual finding with regard to the medium and low psychological centrality conditions. Although there was not a significant difference in these two conditions in perceptions of identity threat, the manipulation check showed that those who experienced harm related to their 6th most central identity (medium condition) experienced lower levels of harm compared to those evaluating their 12th most central identity (low condition). My suspicion is

that it is difficult to think of 12 identities, rank them from most to least central, and then write a story about when one's 12th most central identity was harmed. I have support that the 12-identity exercise is difficult from a pilot study with undergraduate students (n=99). Forty percent of participants stated that the 12-identity exercise was hard. In exploring verbatims about why the exercise was difficult, participants stated 12 identities is too many e.g., "I can categorize myself into a few words but 12 was a stretch" and "it was difficult to think of 12 different answers to that question". Other verbatims discussed the difficulty of describing oneself e.g., "I don't spend much time characterizing myself into simple traits" and "talking about yourself is difficult". In future research, I will reduce the number of identities asked of participants or focus on one particular identity like an organizational or professional identity. The field study (Study 3) does not have this challenge because participants are asked to select one identity and evaluate how central the identity is, and the frequency with which they have experienced harm to the identity.

Finally, I did not support my hypothesis that experiencing cognitive interference would result in lower levels of performance (hypothesis 8). The real estate task I used was created from examples of case studies (Mennecke & Wheeler, 2012) but as far as I am aware, has not been used in empirical studies. So it is possible that the real estate task was not accurately capturing performance. In my field study, I measure in-role work performance by supervisors which is a better test of performance.

III. STUDY 3

I then conducted a multi-source field study to provide support for all of my hypothesized relationships within the workplace.

Participants and study design. The sample consisted of 128 full-time employees representing a variety of industries and demographic backgrounds. I extended an invitation to

participate in this study to three different samples: 1) undergraduate students within a northwestern business school to participate in exchange for class credit and entry into a drawing to win one of four \$50 amazon.com gift cards, 2) technology MBA students and alumni and executive MBA students to participate in exchange for entry into a drawing to win one of four \$200 amazon.com gift cards, and 3) full-time employees on Craigslist in exchange for a \$5 amazon.com gift card. Participants in the undergraduate student sample were asked to identify a full-time employee as a focal employee to complete an online survey and also recruit his/her supervisor and a peer working for the same supervisor to each complete an online survey. Technology and executive MBA students/alumni and full-time employees from Craigslist were asked to participate in the focal employee online survey themselves and to then recruit their supervisor and one of their peers working for the same supervisor to each complete an online survey. For each sample, there was an incentive if all three employees (focal employee, peer employee, supervisor employee) completed their surveys. Undergraduate students and the technology and executive MBAs received an additional two entries into their drawings. Full-time employees on Craigslist received a \$5 amazon.com gift card bonus. In addition, the employees the undergraduate students recruited also participated in the drawing to win one of four \$200 amazon.com gift cards: employees received one entry for completing their survey and the focal employee received two additional entries if all three employees completed their surveys. The lottery compensation was used with the undergraduate and MBA students as an extra incentive above their primary incentive which was class credit for undergraduate students and intrinsic value from helping a fellow graduate student for MBAs. Consistent with other studies recruiting from Craigslist, participants were paid for their participation (Rentfrow, Goldberg, & Levitin, 2011; Rodell & Judge, 2009b; Wilson & Baumann, 2014). I used this snowball sampling

methodology (i.e., asking full-time employees to recruit their supervisor and a peer) consistent with other scholars (e.g., Grant & Mayer, 2009; Mayer, Thau, Workman, Van Dijke, & De Cremer, 2012; Mitchell & Ambrose, 2012) because of the sensitivity of the topic (i.e., identity threat). This methodology reduces perceived risk to employees completing the surveys because the request for completing the survey was not from their employers. Recruiting for participants on Craigslist is a methodology that has been used in several empirical studies within the organizational literature (DeVoe & Pfeffer, 2011; Hershfield, Cohen, & Thompson, 2012; Judge, Simon, Hurst, & Kelley, 2014; Rentfrow et al., 2011; Rodell & Judge, 2009a).

From the undergraduate sample, 107 full-time employees participated with 46 of these participants resulting in a complete triad of full-time employee, peer employee, and supervisor employee, yielding a 43% completion rate. From the technology and executive MBA students/alumni sample, 26 full-time employees participated with 23 resulting in complete triads, yielding an 88% completion rate. Finally, from the Craigslist sample, 79 full-time employees participated with 59 resulting in complete triads, yielding a 75% completion rate. I compared the full-time employees excluded from the sample with those included in the sample with t-tests. There were no significant differences between those participants excluded because they did not have complete triads and those included in the final sample with regard to gender, ethnicity, education, employment, psychological centrality, harm to identity, or perceived identity threat.

Ten participants did not correctly respond to the attention check so they were excluded from the sample. Five employees were excluded because emails responding to the Craigslist invitation appeared to be from the same participant (the emails contained the exact same text including typos). Consistent with the Study 1a and 2 sample, one participant was excluded who provided their name as the identity which is not conducive to evaluating psychological centrality.

Three participants were excluded because two of the three employees in the triad appeared to be related to each other (i.e., the last names were unusual and the same for two employees). Finally, one participant was excluded because he/she was not currently employed. This resulted in a final sample of 108 participants (39% male; average age of 37 years old; 97% employed full-time). There was no nesting of data; each supervisor in the dataset had only one full-time employee included in the dataset.

The focal employee completed a survey including psychological centrality, harm to identity, perceived identity threat, openness to experience work group identity, negative emotions, anger, cognitive interference, job satisfaction, organizational commitment and control variables (self-esteem, intrinsic motivation, social desirability, demographics, work group tenure, and work group size). The supervisor provided evaluations of the some of the dependent variables (in-role performance, organizational citizenship behaviors, antisocial behaviors, and withdrawal behaviors) and the peer employees provided evaluations of the contextual variable (i.e., openness to experience work group identity) and a control variable (i.e., work group identification).

Different from Studies 1a and 2, the survey for the focal employee began by asking the participant to think about an identity they possess. Focal employees were then asked to participate in a writing exercise to immerse themselves in their selected identities.

Please think about an identity you possess. An identity is an answer to the question “Who am I?” and represents meanings you use to define who you are. The identity may be work- or non-work related but it should be an identity that defines who you are whether you are at work or not. Please record your identity here: ____.”

I asked participants to record their identity and then advance to the next screen without the option of returning to the previous screen. I designed the study this way so participants could not change their identity to one more related to work once they saw that the writing exercise was

about work. This allowed me to ensure that I was not only capturing work-related identities.

After advancing to the next screen, they were asked:

Please think of the identity you just recorded. Imagine yourself at work and how this identity affects who you are at work. Please spend 2 minutes describing the identity including what it is and how it affects your behavior while you're at work.

Participants then answered a series of questions about psychological centrality, harm to identity, perceived identity threat, negative emotions, anger, cognitive interference, job satisfaction, organizational commitment and control variables.

Measures. The items used in Study 3 were a subset of those used in Study 2, and were evaluated by different sources as described above.

Psychological centrality. The reduced set of ten items derived from conducting the EFA in Study 1a were used to measure psychological centrality. The coefficient alpha was .89.

Other construct validity items. To provide further support for the construct validity of psychological centrality, I included the 14 authenticity (Cable et al., 2013; Sheldon et al., 1997; Waterman, 1993) and four satisfaction (Leach et al., 2008) items used in Study 1a. The coefficient alphas for the authenticity and satisfaction items were .90 and .90, respectively.

Harm to identity. The same eight Aquino and Douglas (2003) items from Study 2 were used to measure harm to identity except they were measured on a frequency scale to assess how often employees experience harm at work on a 5-point scale (1: *Never*, 2: *1–3 times*, 3: *4–6 times*, 4: *7–9 times*, and 5: *10 or more times*). Examples of items include “Someone or some group made insulting comments about my identity” and “Someone or some group looked at my identity in a negative way”. The coefficient alpha was .91.

Perceived identity threat. The same three items from Study 2 were used to measure perceived identity threat except they were asked about the specific identity. For example, “My

sense of being ____ is threatened” (Leach et al., 2008) and “I feel that my identity of ____ is threatened” (Mikulincer, 1989). The coefficient alpha was .88.

Negative emotions/Anger. The same ten Watson et al. (1988) items from Study 2 used to measure negative emotions were used in the field study. The coefficient alpha was .91. The same nine-item measure from Spencer and Rupp (2009) from Study 2 used to measure Anger were used in the field study. The coefficient alpha was .95.

Cognitive interference. The same six Sarason et al. (1986) items from Study 2 used to measure cognitive interference were used in the field study. The coefficient alpha was .81.

In-role performance. To capture in-role performance, supervisors evaluated the focal employees’ performance over the past one month with two different scales. One scale used by Ashford and Black (1996) asked the supervisor to rate the subordinate relative to others on a percentage basis (0%-100%) on five items such as “overall performance” and “completing tasks on time” (Ashford & Black, 1996; Black & Porter, 1991). The coefficient alpha was .96.

Supervisors then evaluated the focal employees’ in-role performance on Williams and Anderson’s (1991) seven items on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) with items such as “Adequately completes assigned duties” and “Performs tasks that are specified of him/her”. The coefficient alpha was .77. To capture the focal employees’ performance over the past month in addition to more generally, supervisors then evaluated employees’ performance *in general* using two different scales. Supervisors were asked to evaluate their employees’ performance in general using the items from the Williams and Anderson (1991) scale described above. The coefficient alpha was .82. And then supervisors evaluated employees on an additional four-item scale by Liden, Wayne, and Stillwell (1993) with items such as “Rate the overall level of performance that you observe for this subordinate”

(on a 5-point Likert scale: 1 = *unacceptable* to 5 = *outstanding*) and “Overall, to what extent do you feel your subordinate has been effectively fulfilling his or her roles and responsibilities” (on a 5-point Likert scale: 1 = *not effectively at all* to 5 = *very effectively*). The coefficient alpha was .83. The results did not differ based on the in-role performance measure I used in my analyses and the correlation between the four operationalizations of performance ranged from .60 to .86, providing evidence of convergent validity for performance. Therefore, I report results using the first performance operationalization of the five Ashford and Black (1996) items evaluated over the past month.

Other performance. I also measured other aspects of performance including organizational citizenship behaviors, antisocial behaviors, and withdrawal behaviors. Organizational citizenship behaviors were measured over the last month with Williams and Anderson’s (1991) fourteen items on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Example items include “Helps others who have been absent” and “Takes time to listen to co-workers’ problems and worries”. The coefficient alpha was .84.

Antisocial behaviors were measured over the last month with Aquino and Douglas’ (2003) six items on a 5-point scale (1: *Never*, 2: *1–3 times*, 3: *4–6 times*, 4: *7–9 times*, and 5: *more than 10 times*). Example items include “Saying or doing something to purposely hurt other co-workers while at work” and “Doing unkind things to purposely harm other co-workers while at work”. The coefficient alpha was .91.

Withdrawal behaviors were measured over the last month with Jackson and co-authors’ (2006) ten items on a 5-point scale (1 = *never* to 5 = *very often*). Example items include “Left work early without permission” and “Been absent from work activities”. The coefficient alpha was .88.

Job attitudes. I captured job attitudes with both job satisfaction and organizational commitment. Nine items evaluated participants' job satisfaction on a 5-point Likert scale (1 = *very dissatisfied* to 5 = *very satisfied*). Six items were from part 3 of Hackman and Oldham's (1975) job diagnostic survey such as "Generally speaking, I am very satisfied with my job" and "The work I do on this job is very meaningful to me". The coefficient alpha was .92. Three items were from Edwards and Rothbard (1999) including "In general, I am satisfied with my job" and "All in all, being an employee at this organization is great". The coefficient alpha was .86. In my analyses, I measured job satisfaction with each of the operationalizations and the results did not differ. In addition, the two operationalizations were correlated .83, providing support for the convergent validity of this variable. Therefore, I report results using the first job satisfaction operationalization of six Hackman and Oldham (1975) items.

I measured organizational commitment with Allen and Meyer's (1990) eight affective commitment items asking participants to indicate their agreement on a 7-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Example items include "I would be very happy to spend the rest of my career with this organization" and "This organization has a great deal of personal meaning for me". The coefficient alpha was .85.

Openness to experience work group identity. To measure openness to experience work group identity, I adapted the Hofmann and Jones' (2005) measure of openness collective personality from targeting the organization to focusing on the work group. I also measured this construct by adapting Brown and Leigh's (1996) five items that capture the psychological climate of self-expression. Hofmann and Jones (2005) measured openness collective personality of an organization by asking participants to rate the extent to which the different openness to experience personality traits (Costa & McCrae, 1992) described the atmosphere or character of

their organization. I asked focal employee and peer employees to think about the work group they are a part of and indicate the extent to which ten words such as “imaginative” and “complex” described the behavior of employees in their work group on a 5-point Likert scale (1 = *to a very small extent* to 5 = *to a great extent*). The checks for aggregating the focal and peer employees’ ratings were sufficient ($r_{wg} = .88$, ICC(1) = .35, ICC(2) = .52) and the coefficient alpha was .79.

Brown and Leigh’s (1996) five-item psychological climate of self-expression was measured on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). I adapted items from being about the job to being about the identity of the work group. For example, I adapted the item “In my work group, I can express my true feelings about my job” to “Team members can express their true feelings regarding the work group’s identity and what we stand for”. The checks for aggregating the focal and peer employees’ ratings were sufficient ($r_{wg} = .77$, ICC(1) = .37, ICC(2) = .54) and the coefficient alpha was .80. In my analyses, I measured openness to experience work group identity with each of the operationalizations and the results did not differ. In addition, the correlation between these two operationalizations was .57 providing support for the convergent validity of this variable. Therefore, I report results using the first openness to experience work group identity operationalization of ten Hofmann and Jones’ (2005) items.

Control variables. As in Study 2, I tested controls for self-esteem ($\alpha = .87$), social desirability ($\alpha = .82$), demographic variables, work group tenure, and work group size. To test my hypothesized relationships, I included the control variables that were significantly related to one of the variables of interest in my model. In addition to those used in Study 2, I also tested controls for work group identification, intrinsic motivation, and the sample. The control variables that were significantly related to at least one of my variables of interest and were therefore

included in my test of hypotheses include self-esteem, social desirability, ethnicity, age, gender, work group tenure, and work group size.

I also included a control for work group identification because I propose that identification with the work group is different from openness to experience work group identity. Therefore, I included a control for work group identification by having peer employees evaluate Mael and Ashforth's (1992) six organizational identification items used in Study 2 except the target was the work group. Examples of items that were evaluated on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) include "When someone criticizes my work group, it feels like a personal insult" and "I am very interested in what others think about my work group". The coefficient alpha was .61, below the .70 cutoff suggested by Nunnally (1978). One reason for the low reliability could be due to adapting the target of the items from an organization (in Study 1a) to a workgroup (in this study). My measurement of organizational identification in Study 1a had strong reliability. For the testing of my hypotheses in this study, the results did not change with or without the work group identification control variable.

I also considered controlling for intrinsic motivation to eliminate its effects on performance using Hackman's (1980) six items. Examples of items that were evaluated on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) include "I feel a great sense of personal satisfaction when I do this job well" and "I feel bad and unhappy when I discover that I have performed poorly on this job". The coefficient alpha was .71. Intrinsic motivation was not significantly related to performance so it was not included in my structural model.

I also controlled for whether the participants were recruited via the undergraduates, MBAs, or Craigslist with two dummy codes. The final results were the same whether all of the control variables were included or not.

Finally, I considered the challenge of recall bias which represents the potential difficulty participants have in accurately responding to questions that ask them about past experiences (Podsakoff et al., 2003). Studies have found that participants are able to accurately recall events that occurred in the past (Symons & Johnson, 1997; Wheeler, Stuss, & Tulving, 1997). Therefore, I did not include a control for recall bias.

Results. See Table 5 for the means, standard deviations, inter-correlations, and reliabilities. As expected, harm to identity was positively related to perceived identity threat, and both of these constructs were positively related to negative emotions, cognitive interference, and unfavorable work behaviors. In addition, harm to identity and perceived identity threat were negatively related to in-role performance and favorable work behaviors. Interestingly, although not hypothesized, psychological centrality was negatively related to harm to identity and perceived identity threat. I discuss these relationships in the discussion. I analyzed homoscedasticity for each of the variables by plotting the residuals. If the residuals were not approximately constant across predictors, I concluded there was a violation of the assumption of homoscedasticity (Rosopa et al., 2013). For antisocial behaviors, withdrawal behaviors, and performance the residuals were not constant across predictors so I concluded that the assumption of homoscedasticity was violated. I attempted to correct for this by transforming the variables (log, natural log, square root, or inverse transformations) to reduce skewness and kurtosis (Field, 2009). I then tested my predictions with these transformed variables. The results did not differ for performance or antisocial behaviors if I used the transformed versus non-transformed variables. The results did change for hypothesis 10c when using the reciprocal transformation of withdrawal behaviors such that the relationship was marginally significant.

Table 5
Means, Standard Deviations, Inter-correlations for Study 3

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Psychological centrality	.00	.70	[.89]												
2. Harm to identity	1.45	.59	-.29**	[.91]											
3. Perceived identity threat	.00	.89	-.40***	.67***	[.88]										
4. Negative emotions	2.44	1.16	-.15	.53***	.40***	[.91]									
5. Anger	2.42	1.27	-.10	.36***	.37***	.72***	[.95]								
6. Cognitive interference	2.82	.71	-.02	.37***	.23*	.66***	.43***	[.81]							
7. In-Role Performance	82.60	17.65	.16†	-.34***	-.43***	-.22*	-.11	-.17†	[.96]						
8. OCB	4.11	.50	.44***	-.35***	-.37***	-.22*	-.01	-.08	.44***	[.84]					
9. Antisocial Behaviors	1.23	.51	-.35***	.45***	.38***	.28**	.13	.22*	-.51***	-.34***	[.91]				
10. Withdrawal Behaviors	1.58	.59	-.34***	.43***	.40***	.22*	.09	.18†	-.66***	-.44***	.78***	[.88]			
11. Job Satisfaction	4.01	.77	.49***	-.38***	-.49***	-.26**	-.34***	-.02	.09	.32**	-.10	-.24*	[.92]		
12. Org Commitment	4.86	1.12	.47***	-.38***	-.47***	-.36***	-.28**	-.21*	.25**	.28**	-.18†	-.28**	.73***	[.85]	
13. Open Work Group ID	3.83	.49	.36***	-.43***	-.33***	-.29**	-.21*	.02	.28**	.52***	-.38***	-.40***	.52***	.34***	[.76]
14. Self-esteem	4.03	.72	.48***	-.60***	-.47***	-.47***	-.26**	-.23*	.24**	.49***	-.33***	-.33***	.54***	.50***	.52***
15. Social desirability	2.73	.59	-.32**	.32**	.33**	.42***	.40***	.47***	-.12	-.12	.20*	.21*	-.21*	-.28**	-.13
16. Gender	.39	.49	-.23*	.06	.07	.01	-.04	.05	-.02	-.06	.09	.15	-.10	-.19*	-.04
17. Age	36.89	10.25	.15	-.16	-.05	-.11	.01	.06	.04	.25**	-.05	-.02	.25*	.21*	.22*
18. Ethnicity	.68	.47	.15	-.01	-.13	-.01	-.07	.15	.10	.01	-.04	-.19*	.15	.18†	.19†
19. Work group tenure	5.31	5.36	.09	-.09	-.07	-.09	.06	.00	.18†	.23*	-.04	-.03	.15	.23*	.15
20. Work group size	19.79	23.15	.04	-.01	-.14	-.15	-.12	-.12	.22*	.10	.01	-.16†	.14	.21*	.01
21. Work group Ident	3.88	.59	.43***	-.23*	-.31**	-.07	-.21*	.13	.15	.17†	-.06	-.06	.54***	.49***	.43***
22. Intrinsic motivation	3.84	.58	.41***	-.17†	-.08	-.07	.01	.16	.02	.26**	-.14	-.14	.42***	.36***	.35***
23. Sample Dummy 1	.61	.49	-.21*	.19*	.06	-.05	-.27**	.02	-.07	-.25*	.29**	.19†	-.01	-.13	-.04
24. Sample Dummy 2	.42	.50		.37***	.13	.11	-.12	-.03	.04	-.28**	.27**	.20*	-.13	-.03	-.24*

Note. $N = 108$. Coefficient alpha shown in brackets where applicable. Gender: 0 = female, 1 = male. Ethnicity: 0 = not Caucasian, 1 = Caucasian. Sample Dummy 1: 0 = snowball, 1 = MBA/Craigslist. Sample Dummy 2: 0 = snowball/MBA, 1 = Craigslist.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5
Means, Standard Deviations, Inter-correlations for Study 3

Variable	14	15	16	17	18	19	20	21	22	23	24
1. Psychological centrality											
2. Harm to identity											
3. Perceived identity threat											
4. Negative emotions											
5. Anger											
6. Cognitive interference											
7. In-Role Performance											
8. OCB											
9. Antisocial Behaviors											
10. Withdrawal Behaviors											
11. Job Satisfaction											
12. Org Commitment											
13. Open Work Group ID											
14. Self-esteem	[.87]										
15. Social desirability	-.39***	[.82]									
16. Gender	-.20*	.08	--								
17. Age	.37***	-.01	.05	--							
18. Ethnicity	.07	-.08	-.06	.14	--						
19. Work group tenure	.20*	-.07	.01	.49***	.17†	--					
20. Work group size	.04	-.15	-.02	-.01	.17†	.24*	--				
21. Work group Ident	.41***	-.23*	-.07	.18†	.15	.08	-.03	[.61]			
22. Intrinsic motivation	.41***	.00	-.13	.15	.00	-.03	.04	.51***	[.71]		
23. Sample Dummy 1	-.21*	-.09	.05	-.12	-.03	-.08	.04	-.03	-.29**	--	
24. Sample Dummy 2	-.40***	-.09	.02	-.20*	.10	-.06	.19†	-.06	-.46***	.67***	--

Note. $N = 108$. Coefficient alpha shown in brackets where applicable. *Gender*: 0 = female, 1 = male. *Ethnicity*: 0 = not Caucasian, 1 = Caucasian. *Sample Dummy 1*: 0 = snowball, 1 = MBA/Craigslist. *Sample Dummy 2*: 0 = snowball/MBA, 1 = Craigslist.

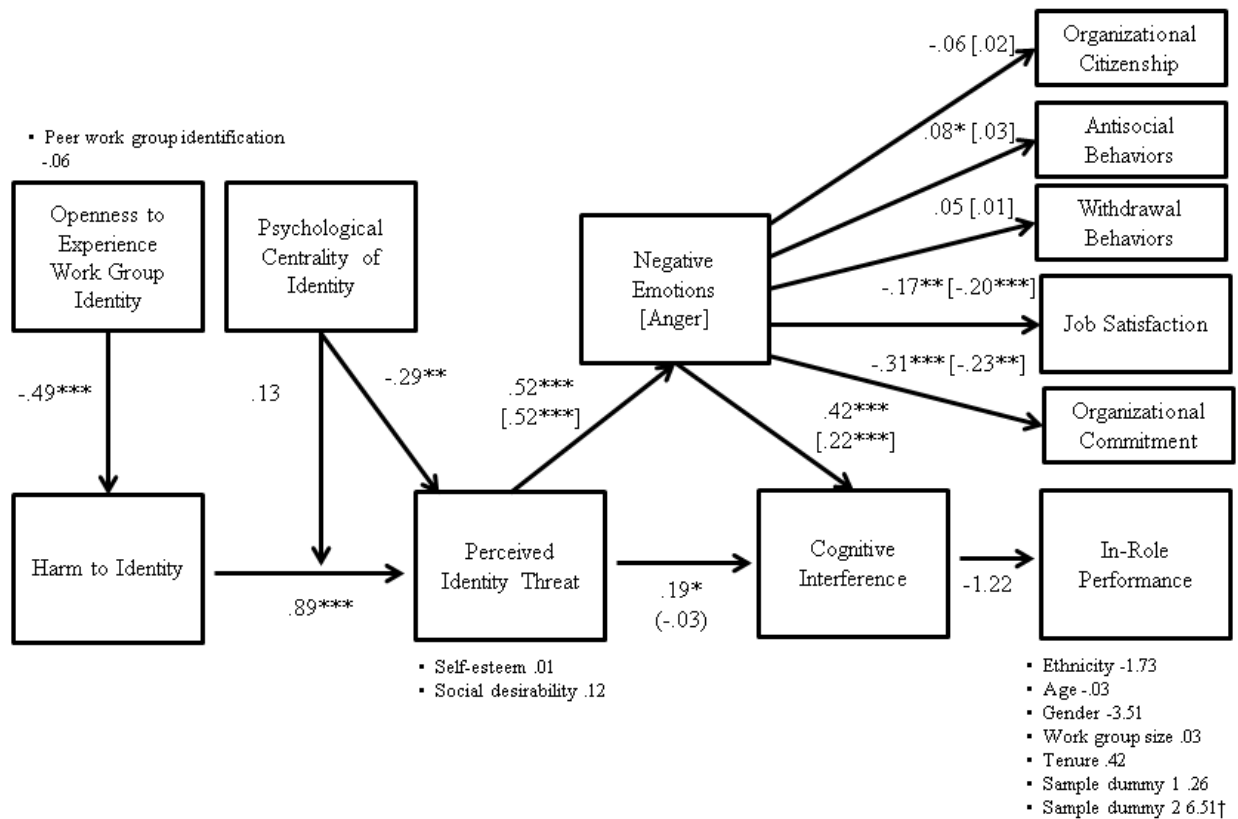
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Discriminant validity. Before testing my hypotheses, I conducted confirmatory factor analyses (CFA) with LISREL 8.80 to further support the construct validity of the psychological centrality construct. Consistent with the findings from Study 1a, I loaded the ten psychological centrality items onto a psychological centrality factor, 14 authenticity items onto an authenticity factor, and four satisfaction items onto a satisfaction factor resulting in a model that fit better ($\chi^2[346] = 831.35$; NFI = .90; CFI = .94; RMSEA = .11) than one in which all items were loaded onto one factor ($\chi^2[349] = 921.42$; NFI = .89; CFI = .93; RMSEA = .13; Δ chi-square = +90.07, $p < .01$).

This further supports the construct validity of psychological centrality.

Test of hypothesized relationships. I again used path analysis in Mplus 7.3 (Muthen & Muthen, 2004) to test the hypotheses. See Figure 6 for the structural model and standardized path coefficients. First, I tested whether harm to identity was positively related to perceived identity threat (hypothesis 1) while controlling for self-esteem and social desirability. This relationship was supported as harm to identity was positively related to perceived identity threat ($\gamma = .89$, $p < .001$). Hypothesis 2 was an interaction hypothesis suggesting that the relationship between harm to identity and perceived identity threat would be strengthened at higher levels of psychological centrality but I did not find support for this relationship ($\gamma = .13$, $p = .38$). However, I did find support for the negative emotional effects of perceived identity threat. Perceived identity threat was positively related to negative emotions ($\gamma = .52$, $p < .001$) and anger ($\gamma = .52$, $p < .001$), providing support for hypothesis 3.

Figure 6. Structural model for Study 3



Note. Standardized path coefficients (γ) are reported. $N = 108$. The values in brackets are standardized coefficients for anger instead of negative emotions. The value in parentheses is the standardized path coefficient when negative emotions or anger is included in the model. The bullet points show the control variables.

$†p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

I also found support for the negative cognitive effects of perceived identity threat. Perceived identity threat was positively related to cognitive interference when neither negative emotions nor anger were in the model ($\gamma = .19, p = .01$), supporting hypothesis 4. In addition, cognitive interference mediated the positive effect of perceived identity threat on cognitive interference through negative emotions and anger (hypothesis 5) as demonstrated with the Monte Carlo method (Selig & Preacher, 2008). The indirect effect of perceived identity threat on

cognitive interference was mediated by negative emotions (95% CI = .10 to .35) and anger (95% CI = .02 to .22), providing support for hypothesis 5.

In hypotheses 6 and 7, I proposed that harm to identity would be positively related to negative emotions (hypothesis 6) or cognitive interference (hypothesis 7), mediated by perceived identity threat, and strengthened by psychologically central identity. Consistent with Study 2, Study 3 did not meet the first step required to demonstrate moderated mediation (Liu et al., 2012). The lack of support for the interaction in hypothesis 2 prevents me from being able to demonstrate moderated mediation so I did not proceed with the analysis.

Consistent with Study 2, I found support for the indirect effect of harm to identity on negative emotions (95% CI = .25 to .70) and anger (95% CI = .25 to .71) through perceived identity threat even though I did not formally hypothesize these relationships. Again, there was not an indirect effect of harm to identity on cognitive interference through perceived identity threat (95% CI = -10.74 to 10.71). This is not surprising given the lack of relationship between perceived identity threat and cognitive interference when negative emotions or anger are in the model.

Hypothesis 8 proposed that participants experiencing cognitive interference would perform at lower levels and hypothesis 9 predicted that cognitive interference would mediate the negative effect of perceived identity threat on in-role performance. I did not find support for hypothesis 8 ($\gamma = -1.22$, $p = .54$) indicating that cognitive interference did not interfere with participants' performance. The lack of effect of cognitive interference on in-role performance also eliminates the possibility of a mediating role by cognitive interference between perceived identity threat and in-role performance. Analysis of the indirect effect with the Monte Carlo

method confirmed the lack of mediation (95% CI = -15.62 to 13.35). Therefore, hypothesis 9 was not supported.

Hypothesis 10a-e predicted that negative emotions would have a negative impact on several other performance behaviors and job attitudes. With regard to other performance behaviors, negative emotions did not affect organizational citizenship behaviors (hypothesis 10a; $\gamma = -.06, p = .13$) or withdrawal behaviors (hypothesis 10c; $\gamma = .05, p = .27$) but it did have a positive effect on antisocial behaviors (hypothesis 10b; $\gamma = .08, p = .04$). However, when the reciprocal transformation of withdrawal behaviors was used, the relationship became marginally significant. There was also a negative effect of negative emotions on job attitudes, specifically job satisfaction (hypothesis 10d; $\gamma = -.17, p = .008$) and organizational commitment (hypothesis 10e; $\gamma = -.31, p < .001$). When anger is in the model instead of negative emotions, the results are consistent except there is a lack of effect of anger on antisocial behaviors ($\gamma = .03, p = .42$). Therefore, hypotheses 10b, 10d, and 10e were supported but 10a and 10c were not supported.

Finally, I proposed in hypothesis 11 that a contextual variable, openness to experience work group identity, would reduce the incidence of harm to identity experienced by team members. I tested this hypothesis while controlling for work group identification, finding support for higher levels of openness to experience work group identity being related to lower levels of harm to identity ($\gamma = -.52, p < .001$).

Study 3 summary. I conducted a field study to provide support for the hypothesized relationships in my theoretical model in an organizational context. The field study was gathered from multiple sources, alleviating some concerns for common method variance. Consistent with Study 2, I demonstrated the negative emotional (hypothesis 3) and cognitive effects (hypothesis 4) of perceived identity threat and beyond Study 2, I supported the subsequent negative effects of

negative emotions including increased levels of antisocial behaviors (hypothesis 10b) and lower levels of job satisfaction (hypothesis 10d) and organizational commitment (hypothesis 10e). The majority of the existing organizational literature on identity threat has focused on how individuals respond to identity threat, specifically the types of actions individuals take to minimize it and how the threat affects their identity. However, the results demonstrated the implications identity threat has for individuals at work. Namely, that individuals experience negative emotions and cognitive interference after experiencing identity threat, and this results in lower levels of attitudes toward work and the increase in less desirable work behaviors such as antisocial behaviors. I also found evidence that contextual factors can have an effect on the incidence of harm to employees' identities. Work groups that were perceived to embody characteristics of openness to experience resulted in lower levels of harm to employees' identities (hypothesis 11). This provides a first step towards understanding how organizations can minimize identity threat.

Consistent with Study 2, I did not support my proposed interaction that psychologically central identities are more sensitive to the incidence of harm (hypothesis 2), and therefore would result in a higher likelihood of individuals perceiving threat. I discuss possible explanations for the lack of support for my interaction hypothesis in both Studies 2 and 3 in the general discussion. I also did not find support for the effect of cognitive interference on in-role performance (hypothesis 8) and other work behaviors such as organizational citizenship behaviors (hypothesis 10a) and withdrawal behaviors (hypothesis 10c). There are a multitude of factors that affect in-role performance, and cognitive interference may be too distal to see an effect. I did consider controlling for intrinsic motivation in an effort to isolate the effect of cognitive interference on in-role performance but intrinsic motivation was not significantly

related to in-role performance. Cognitive interference may affect other work behaviors such as withdrawal behaviors because the utilization of cognitive resources may result in not being able to focus on work, manifesting in withdrawal behaviors. In a model where cognitive interference (instead of negative emotions) predicts withdrawal behaviors, I found a marginally significant effect ($\gamma = .11, p = .06$). This may also provide explanation for the lack of effect of negative emotions on withdrawal behaviors; rather than a negative affective state leading to withdrawal behaviors it may be the cognitive distraction of identity threat that leads individuals to withdraw in the workplace. Finally, negative emotions did not have an effect on organizational citizenship behaviors. Although the existing literature has linked affect to organizational citizenship behaviors, it is possible that the types of negative emotions specifically resulting from identity threat have an effect on aggressive behaviors such as antisocial behaviors but not on an individuals' likelihood of engaging in citizenship behaviors.

The negative correlations between psychological centrality and both harm to identity and perceived identity threat were unexpected (see Table 5). Theoretically, I predicted that individuals would be more likely to perceive identity threat related to more psychologically central identities. Although I also predicted that this relationship would depend on the frequency of harm events related to identities, the negative correlations suggest alternate theoretical explanations. In reviewing the stereotype threat studies on identification and performance in chapter 3, I discussed the differential effects of identification operationalized as solidarity (Branscombe et al., 1999b; Cohen & Garcia, 2005; Ethier & Deaux, 1994; Wong et al., 2003) versus centrality (Bair & Steele, 2010; Schmader, 2002). My review of existing empirical studies showed that individuals who perceived solidarity with an identity were protected from identity threat whereas individuals feeling an identity was highly central were more sensitive to identity

threat. It is possible that centrality operates more like solidarity than I had theorized. Perhaps there is an additional moderating variable such as the level of the identity (i.e., personal, relational, collective) which influences whether centrality results in heightened sensitivity or acts as a buffer. Future research should investigate this possibility.

CHAPTER 5

GENERAL DISCUSSION

I. SUMMARY

To test my theoretical model, I conducted four studies including two online surveys (Studies 1a and 1b) to support the construct validity of psychological centrality, an experiment (Study 2) to provide initial support for some of my hypotheses, and a field study (Study 3) to support all of my hypothesized relationships. In chapter 3, I theoretically proposed that the psychological centrality construct was more than the centrality of identities to individuals' self-concepts and that it actually derives from how congruent identities are to individuals' authentic self. I did not find that the psychological centrality construct included both psychological centrality and authenticity items. In Study 1a, the psychological centrality and authenticity items loaded onto separate factors and in Study 1b, authenticity did not help to predict perceived identity threat above psychological centrality. However, I did provide support for the discriminant validity of psychological centrality from other identification constructs. In Study 1a, I showed that the psychological centrality items loaded onto factors separate from the identification dimensions of solidarity, satisfaction, individual self-stereotyping, and in-group homogeneity. In Study 1b, I demonstrated concurrent validity with psychological centrality explaining more variance in the identity component of collective self-esteem and solidarity better

predicting the membership dimension of collective self-esteem. Finally, in Study 1a, I created a reduced scale for psychological centrality of ten items that can be used in subsequent studies.

After supporting the construct validity of psychological centrality, I tested my hypothesized relationships with a laboratory (Study 2) and field study (Study 3). Results were consistent across the two studies. In Study 2, I manipulated harm to identity and psychological centrality. In Study 3, these constructs were evaluated by full-time employees, peers evaluated the extent to which the work group identity embodied characteristics of openness to experience, and supervisors rated the focal employees' performance and behaviors. Although I did not support the interactive effect of harm to identity and psychological centrality on perceived identity threat in either of the studies, I did demonstrate the negative emotional and cognitive effects of perceived identity threat. I found that perceived identity threat resulted in negative emotions and anger which in turn resulted in higher levels of cognitive interference. Higher levels of cognitive interference did not negatively affect performance in the experiment or in-role performance as measured by supervisors in the field study. However, in the field study, negative emotions and anger resulted in lower levels of job satisfaction and organizational commitment. In addition, negative emotions resulted in increased levels of antisocial behaviors as rated by supervisors. Finally, I also found in the field study that higher levels of openness to experience work group identity as measured by focal employees and their peers resulted in lower levels of harm to focal employees' identities.

II. THEORETICAL IMPLICATIONS AND CONTRIBUTIONS

My dissertation makes three contributions to the organizational literature. First, I bring the psychological centrality construct (Rosenberg, 1979) to the forefront within the organizational literature and develop a scale for measuring the construct. This construct has been

underemphasized within the organizational literature and I demonstrate that the importance of identities to individuals' self-definition is distinct from other well-known identification dimensions such as organizational identification (Mael & Ashforth, 1992) and solidarity (Branscombe et al., 1999b; Leach et al., 2008). Existing organizational research focuses on social identity theory (Ashforth & Mael, 1989; Hogg & Terry, 2000; Tajfel & Turner, 1986) and the effect of situational variables on which identities affect behavior but this research could be missing another critical influence: how important an identity is to an employee's self-definition. Drawing from identity theory (Stryker & Serpe, 1982, 1994), I propose that organizational scholars should also consider how the internal factor of psychological centrality affects employee behavior. Psychologically central identities are top-of-mind across situations (Stryker, 1980) and therefore sensitive so these identities may affect employee behavior whether relevant to the situation or not. Recognizing the psychological centrality of identities lays the groundwork for understanding how organizations and their leaders may affect employees' identities. Taking into consideration the psychological centrality of identities and its potential effect within a wide range of workplace situations opens up entirely new areas of investigation for organizational scholars. I discuss these potential areas in the section on future directions.

Second, I provide a contextual factor that can minimize identity threat in organizations – the extent to which a work group identity embodies the characteristics of openness to experience. The current organizational literature studying how organizations affect employees' identities focuses on the identity work and construction employees undergo (Creed et al., 2010; Dutton et al., 2010; Ibarra & Barbulescu, 2010; Kreiner et al., 2006b; Pratt et al., 2006; Roberts, 2005; Swann et al., 2009) and how organizations facilitate identification (Ashforth et al., 2008; Cooper & Thatcher, 2010; Dutton et al., 1994; Elsbach, 1999; Pratt, 1998, 2000). In relation to identity

threat, the current literature has identified ways in which organizations threaten employees' identities but not how organizations can minimize threat. For example, Creed and colleagues (2010) studied how gay, lesbian, bisexual, and transgender (GLBT) ministers dealt with tensions among their identities within their churches, and Pratt and colleagues (2006) investigated how physicians managed violations to their identities during their medical residencies. Both of these studies discuss how organizations threatened the identities of their employees but the question of how these tensions, violations, or threats can be minimized remains unanswered. I found that if work groups create an atmosphere in which team members are innovative, sophisticated, and complex, team members within the work groups are less likely to experience incidences of harm to their identities. Identifying openness to experience work group identity takes an initial step towards understanding what organizations and their leaders can do to ensure their employees are protected from harm to their identities.

In addition to identifying a specific contextual factor that can minimize identity threat, I demonstrate that the identity of the work group can have an influence on individual team members' behavior. As work group members identify (Ashforth et al., 2008) or socialize with the group, they adopt shared characteristics of the work group (Hofmann & Jones, 2005). Work group members then behave in accordance with the work group characteristics; in this case, resulting in an open attitude towards others and acceptance of diverse thoughts. Providing support for the effect of a group-level factor on individual behavior provides the foundation for investigating other collective constructs that may minimize identity threat such as psychological safety (Edmonson, 1999) or procedural justice climate (Naumann & Bennett, 2000). Future work should investigate how these collective constructs affect the incidence of harm to identity events

and whether group-level factors have a stronger or weaker effect than organizational-level factors.

Third, I contribute to the identity threat literature by uncovering the negative emotional, cognitive, and behavioral implications of identity threat. Many existing studies of identity threat focus on understanding how individuals respond regarding the identity itself or the source of the threat (Elsbach & Kramer, 1996; Griffith & Hebl, 2002; Kreiner et al., 2006a; Petriglieri, 2011). These studies describe the actions threatened individuals take to protect or change their identities, or psychologically cope with the threat. I move beyond the effects of identity threat on individuals' identities to demonstrate the implications it has on employees' emotions, cognitions, and behavior at work. I showed that employees experienced negative emotions and anger at work in response to identity threat, and these emotions then resulted in the increased presence of intrusive thoughts within individuals' cognition. This could have negative implications for organizations because the negative emotions and anger that employees experienced as a result of the identity threat led to poorer attitudes toward the organization and higher levels of less desirable work behaviors. This is of concern for organizations because identity threat can occur in relation to all types of identities whether a personal attribute (e.g., analytical), a relationship (e.g., parent), or group identity (e.g., church-goer) (Brewer & Gardner, 1996). Identities being threatened can also be work or non-work related (Ramarajan & Reid, 2013). The vast range of identities that employees possess suggests the numerous situations that could be perceived as threatening in any given work day. This means that employees are often dealing with events at work that have the potential to produce negative emotions and distract their cognition, further highlighting the need to understand identity threat and how to minimize it.

III. PRACTICAL IMPLICATIONS

Practically, my dissertation suggests that organizations will benefit by acknowledging and valuing employees' psychologically central identities and creating environments that minimize identity threat. Leaders and employees within organizations should be aware that individuals possess a subset of identities that are especially critical to how they define themselves. This evaluation of identities is highly individualized such that the same identity (e.g., ethnicity, group membership, profession) may be psychologically central to one employee but not another. Therefore, employees need to make an effort to understand each other at a deeper level. Organizations can facilitate this understanding by implementing policies in which employees talk through specific questions and topics in one-on-one sessions. One-on-one meetings can facilitate communication and understanding among pairs of employees (Ellinger & Bostrom, 1999; Reina & Reina, 1999). Pairs of employees who participate in an exercise in which they are prompted to discuss and share their psychologically central identities will increase awareness among employees of what is important to each other. Leaders can also invite employees to share their important identities by having an open door policy that welcomes communication between leaders and followers. Organizations that adopt an open door policy encourage their employees to share their diverse ideas and perspectives (Pfeffer, 2005). Similarly, an open door policy may increase the likelihood that employees will feel comfortable sharing information with their leaders about themselves including identities that are highly important to them. An increased awareness of employees' psychologically central identities through practices such as these can reduce the incidence of harm to identities as peers and supervisors are aware of which identities may be sensitive for employees.

Organizations should also recognize that individuals experience harm to their identities and that this experience of identity threat has negative implications for their attitudes and

behavior at work. To create environments that prevent the development of negative attitudes and behaviors, organizations can seek to minimize harm to identities. I proposed that organizations can minimize identity threat by facilitating work groups that are open-minded and accepting of a diversity of personalities and perspectives. To develop work groups that embody these characteristics, organizations can focus on organizational culture and/or developing leaders. Organizations can create an atmosphere in which employees share their important identities by establishing an organizational culture of openness and acceptance. Different from a work group identity, organizational culture refers to a “pattern of basic assumptions” (111: Schein, 1990) shared by members of an organization that have been developed over time as members learn how to deal with problems internally and externally. The organizational culture includes direction to members on how to “perceive, think, and feel” (111: Schein, 1990). Organizations that establish a culture of openness and acceptance can transcend through levels of the organization to affect the identities of work groups and eventually the cognition and behavior of individual members (Ashforth et al., 2008). Another potential way to develop openness to experience work group identities is to focus on training leaders. Leaders can learn to be more cognizant of events that may pose harm to their employees’ identities. Leadership development practices have been created that help leaders better perceive and understand the emotions of others (Day, Zaccaro, & Halpin, 2004). In this same way, leaders can be developed to elicit information from employees and better perceive identities that are psychologically central to their employees. Establishing open work group identities through organizational culture and/or leadership development can ensure organizations support the vast range of identities among employees and protect employees from potential identity threat under unexpected circumstances.

IV. LIMITATIONS

Although my theoretical development and empirical studies provide contributions both theoretically and practically, there are several limitations.

Common method variance. Most of the measures across my four studies are self-report which increases my risk of common method variance (Podsakoff et al., 2003). However, I implemented several practices in an effort to minimize common method variance. One design element I included in my field study (Study 3) was to have the focal employee, peer, and supervisor evaluate different constructs within my model. Peer employees evaluated openness to experience work group identity and supervisors rated the focal employees' performance and work behaviors. This made it impossible for the focal employee to influence the measure of some of the dependent variables including organizational citizenship, antisocial, and withdrawal behaviors, and performance. For openness to experience work group identity, I considered reducing common source bias by measuring the variable with just the peer ratings. However, the results did not differ using the peer-only rating versus the aggregated employee and peer rating, so I only reported results using the aggregated openness to experience work group identity variable.

I also implemented design elements to separate the measurement of the independent, mediator, and dependent variables. First, in the field study (Study 3), I included a lag in time between the focal employees' evaluation of the independent and mediator variables, and the supervisors' performance and behavior ratings. The supervisor survey was sent one month after the focal employee completed his/her survey. This ensured that behaviors captured as the dependent variables occurred after the incidence of harm, psychological centrality, perceived identity threat, negative emotions, and cognitive interference, better enabling conclusions about causality. Second, in the experiment (Study 2) I separated the measurement of the independent

and mediator variables by including two filler tasks in the focal employee survey. One filler task occurred between the psychological centrality and harm to identity manipulations. The second filler task was placed after negative emotions and before cognitive interference. Although it would have been ideal to include filler tasks in the focal employee survey for the field study, I had to eliminate the filler tasks because of time limitations.

Several other tactics were included to reduce other typical sources of common method variance. To reduce apprehension by the focal employee that their supervisor or peer would learn about their responses on the survey, I assured them that their responses were confidential. I also assured the supervisor that the subordinate would not be given access to the information they provided. To minimize item ambiguity I assessed the difficulty of questions using an undergraduate pilot study. The results from the pilot study are discussed under a separate limitation below called “Item difficulty”. To further reduce common method bias, I used scales with different endpoints for predictor and criterion variables and to ensure the quality of responses, I built in attention checks and excluded participants who do not pass them. To reduce the bias of social desirability, I controlled for social desirability.

Finally, I investigated a statistical remedy for reducing common method bias after collecting the data. I was unable to include a methods factor in the structural model for Study 1b because there was not enough power. For Studies 2 and 3, there was not enough power to create a latent methods factor indicated by each of my self-report variables. Therefore, in Studies 2 and 3, I regressed social desirability on each of the self-report variables. This is one method for partialing out variance due to common methods variance (Podsakoff et al., 2003). Social desirability is a surrogate for method variance and structural coefficients are compared with and without this factor to determine the effect of common method variance. For both Studies 2 and 3,

regressing the social desirability variable on each self-reported variable reduced the structural coefficients in some cases but all relationships that were significant without the method surrogate remained significant at least at $p < .05$. Therefore, my findings appear to be robust even with common method variance.

Advancement of psychological centrality construct. My theory for advancing the psychological centrality construct was not supported as my empirical results showed that psychological centrality and authenticity are different constructs. The theoretical grounding for my argument was that the existing definition of psychological centrality was too narrow and ambiguous, focused only on the extent to which identities fulfill the need for self-esteem and comparing identities to one's "self-concept" (Rosenberg, 1979) which is vague. I sought to fill these gaps in definition by suggesting that individuals deem identities as psychologically central to the extent the identities are congruent with the authentic self and therefore allow them to behave authentically (Kernis, 2003; Kernis & Goldman, 2006). My construct validity studies (Studies 1a and 1b) showed that psychological centrality and authenticity are different constructs so it appears that identities that allow authentic functioning are different from psychologically central identities. The gaps in the definition of psychological centrality remain so further work is needed to understand how individuals determine which identities are psychologically central.

We know from Vignoles and colleagues (2006) that central identities fulfill motives beyond self-esteem. Perhaps individuals do not compare identities to a specific "self" but instead determine that identities are more subjectively important based on the fulfillment of a specific subset of identity motives. And perhaps identities that are congruent with the authentic self fulfill a different set of identity motives. Taking a holistic view of the different dimensions of identification and identity motives, it may be that the different dimensions of identification can

be further differentiated by identifying the specific identity motives that align with the various identification dimensions. Further work is needed to determine which identity motives are fulfilled by psychologically central identities and whether specifying these identity motives will fill the gaps in the definition.

Harm to identity versus perceived identity threat. Another limitation was revealed when I explored explanations for why I did not support my interaction hypothesis that perceived identity threat would be more likely if harm was related to a psychologically central identity. There are several explanations that indicate a limitation in the measurement of harm to identity and/or perceived identity threat in both the experiment (Study 2) and field study (Study 3).

One limitation is that it appears that individuals may not experience high levels of harm in relation to specific identities. In Study 2, the mean of harm to identity for those in the harm condition ($n=93$) was 4.38 ($SD = 1.44$) on a 7-point Likert scale with 4 = *neither agree nor disagree*. In addition, the three independent coders read each story and evaluated the story on Aquino and Douglas' (2003) harm to identity items and a general perceived identity threat item "The person experienced a threat to his/her identity" on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Using Aquino and Douglas' (2003) items, the coders evaluated the harm stories as more harmful ($M = 2.28$, $SD = 0.83$) than the stories from the control condition ($M = 1.06$, $SD = 0.26$; $F(1,189) = 189.24$, $p < .001$). The coders also evaluated the harm stories as more threatening on the general perceived identity threat item ($M = 3.44$, $SD = 1.17$) than the stories from the control condition ($M = 1.05$, $SD = 0.27$; $F(1,189) = 384.31$, $p < .001$). This analysis suggests that the harm manipulation was successful in capturing a significantly different level of harm in the harm and control conditions. However, the level of harm experienced was not particularly high. Because the manipulation was successful, it appears

that higher levels of harm may be required in order to identify the interactive effect. Study 3 confirms a low incidence of harm to identity. The mean of the number of times one or more coworkers displayed the behaviors described in the eight harm items was 1.45 on a 5-point Likert scale with “1” representing *never* and “2” representing *1-3 times*. This shows that participants simply did not experience high frequencies of harm to the particular identity identified in the survey.

Separate from the lack of harm to identity experienced, my perceived identity threat measure may not have been effective. There is also the question of whether harm to identity may be a more effective measure than perceived identity threat because of the significant interaction I found in Study 2 when conducting the harm to identity manipulation check. The significant interaction indicated that when individuals wrote about a harm experience related to their first most psychologically central identity (high condition), they experienced more harm to their identity compared to individuals who experienced harm related to their 6th most central identity (medium condition). This suggests that the harm to identity items were either 1) actually measuring perceived identity threat or 2) measuring perceived identity threat better than the perceived identity threat items. First, to understand whether the harm to identity and perceived identity threat measures were capturing different constructs, I conducted CFAs in LISREL 8.80.

For Study 2, I found that a model in which the eight harm items and three perceived identity threat items load onto two factors fit better ($\chi^2[43] = 200.60$; NFI = .96; CFI = .97) than a model in which all 11 items loaded onto one factor ($\chi^2[44] = 421.70$; NFI = .91; CFI = .92; Δ chi-square = +221.10, $p < .01$). For Study 3, I also found that a 2-factor structure in which I loaded the eight harm to identity items and the three perceived identity threat items on their respective factors ($\chi^2[43] = 150.90$, NFI = .91; CFI = .94) was a better fit than a single-factor

structure in which all 11 items loaded onto one factor ($\chi^2[44] = 219.20$; NFI = .87; CFI = .90; Δ chi-square = +68.30, $p < .01$). The CFAs support the discriminant validity of harm to identity and perceived identity threat because the harm items are indicated by a construct distinct from the perceived identity threat items. The CFAs also support content validity because the eight harm items are indicated by the harm to identity construct and the three perceived identity threat items are indicated by the perceived identity threat construct. These analyses suggest that harm to identity and perceived identity threat are appropriately being measured by their respective items and that they are distinct constructs.

Although I show that the two constructs can be distinguished in a CFA, it simply may not be feasible for individuals to distinguish between harm to identity and perceived identity threat through self-report. Threat is an evaluation of *potential harm* in a situation (Lazarus & Folkman, 1984). I sought to separate the incidence or frequency of harm events from perceptions of actual identity threat. However, in order for participants to indicate the frequency of harm events with items such as “criticizing my identity unfairly” or “embarrassing me in relation to my identity in front of others”, they must engage in an evaluation of threat to some degree. In other words, if participants indicate they are aware of the existence of harm events as asked in the *harm to identity* items, they essentially perceive potential harm in those situations, and therefore perceived identity threat. If they are not aware of the existence of harm events to their identity, it may be because they didn’t perceive them as threatening. The two constructs are intertwined and derive from perception so it may not be possible to measure them explicitly. Another challenge is the timing of when the harm to identity threat occurred and the period of time over which participants were evaluating perceived identity threat. In future studies I will capture the timing

of the perceived identity threat in order to either ensure it aligns with the harm to identity experienced or to control for it.

The difficulty in evaluating harm to identity separate from perceived identity threat makes it challenging to capture the sensitivity of psychologically central identities to threat. I cannot simply measure psychological centrality of an identity and perceived identity threat because perceived identity threat would only occur to the extent that harm to the identity exists. In other words, individuals differ in how often they encounter situations in which their identity is harmed. Therefore, I propose experimental methods to capture this sensitivity. I would select one identity shared by all participants and harm it to the same degree across all participants. I proposed that participants who perceived the identity as more central to their self-definition would be more likely to perceive the harm as a threat. I attempted this experimental design in Study 1b but was unable to sufficiently threaten the identity shared by participants. In future studies, I will identify an event that provides variance in perceived identity threat. To identify a threatening event or experience, I will consider specific samples and find out what is threatening to them, and then use that information to create my threat manipulation. Another potential method would be to utilize a diary method in the field. Because it appears that harm to identity is a low base-rate phenomenon, I need to capture the harm to identity events as they occur. A diary method relies less on individuals remembering instances of harm to their identities and instead allows them to capture the experiences as they occur. The frequency of harm events across a period of time can be measured as well as evaluating particular harm stories to determine the degree of harm.

Effect on performance and other behaviors. Another limitation appears to be the measure of performance in my experiment (Study 2) and capturing the negative performance

effects of experiencing high levels of intrusive thoughts. From an experimental standpoint, the stereotype threat literature has repeatedly found support for the effect of decreased working memory capacity on task performance (e.g., Schmader & Johns, 2003). In addition, the anxiety literature has demonstrated the negative effect of cognitive interference on test performance (Mukulincer, 1989; Sarason, 1984). Therefore, future research should explore a combination of using working memory capacity to capture the utilization of cognitive resources and existing performance tasks to test the effects on performance. In the field study (Study 3), I also did not find support for the relationship between cognitive interference and in-role performance. In the discussion for Study 3, I suggested exploring other dependent variables that would be affected by cognitive interference such as withdrawal behaviors. Specific to performance, it simply may not be possible to isolate the effects of cognitive interference given the multiple factors that affect performance in the workplace. In other words, numerous studies have identified factors that affect performance including personality (Barrick & Mount, 1991), self-efficacy (Stajkovic & Luthans, 1998), and feedback interventions (Kluger & DeNisi, 1996) which makes it difficult to find the effect of cognitive interference. In my model, I also did not specify the direct relationship between perceived identity threat and in-role performance. It is possible that individuals experience lower levels of performance as a direct result of perceiving threat. If I include this direct effect in the model, I find a significant negative effect of perceived identity threat on in-role performance ($\gamma = -9.22, p < .001$).

Another possibility is that my measure of cognitive interference was not sufficient. Rather than using a measure of cognitive interference that is more general, I will explore creating a measure that captures the presence of intrusive thoughts specific to identity threat.

Separate from performance, I did not find significant effects of negative emotions on organizational citizenship behaviors and withdrawal behaviors. In my model, I specified direct effects of negative emotions on these other behaviors as well as the job attitudes of job satisfaction and organizational commitment. However, it is possible that there are direct effects of perceived identity threat on these other behaviors and job attitudes rather than solely as a result of negative emotions. When I specify direct relationships between negative emotions/anger on the other behaviors and job attitudes, I find significant effects. Perceived identity threat had a negative effect on organizational citizenship behaviors ($\gamma = -.20, p < .001$), positive effect on antisocial ($\gamma = .19, p < .001$) and withdrawal behaviors ($\gamma = .26, p < .001$), and a negative effect on job satisfaction ($\gamma = -.39, p < .001$) and organizational commitment ($\gamma = -.49, p < .001$).

Item difficulty. In a pilot study with undergraduate students (n=99), I asked whether any of the questions were difficult or ambiguous, and specifically the 12-identity exercise in which participants were asked to provide 12 answers to the question “Who am I?” (Kuhn & McPartland, 1954). As stated in my discussion for Study 2, 40% of participants stated that the 12-identity exercise was hard. In addition, 33-35% of participants thought other questions were difficult and/or ambiguous. In reviewing participant responses, the difficulty and ambiguity appeared to come from the series of psychological centrality items in which the identity they selected was piped into each item. Participants either mentioned that they needed to think hard e.g., “The questions require me to think hard” or that the identity didn’t make sense as a social group e.g., “. . . ‘friendly’ probably wasn’t the best social group/identity for this study . . .” The fact that participants had to think hard about themselves indicates that studies on identity may be difficult in general. I responded to the comments about social groups by removing the solidarity items from studies after Study 1a and collecting the measure of collective self-esteem with

respect to a specific group identity – one’s business school identity – in Study 1b. In future studies, I will reduce the number of identities asked of participants to six identities. Another possibility is to ask participants to provide identities without specifying the number of identities. This would provide me with information on how many identities participants are able to provide. I will also consider focusing participants on one particular identity such as recruiting physicians and asking them to evaluate their physician identity, or narrowing the focus to a specific level of self-representation. For example, asking participants to provide one of their group identities. This will reduce the ambiguity in the items that results because the identity participants provide is piped into each item. Finally, I will explore using implicit methods to capture the centrality of identities.

V. FUTURE RESEARCH

There are fruitful streams of future research from my dissertation. The first area is considering the moderating effect of psychological centrality on existing studies related to identity. Taking into account the psychological centrality of an identity suggests that the effect of any type of identity depends on how central the identity is to individuals. The existing empirical identity literature can be grouped into studies that study identity as identification (e.g., Karelaia & Guillén, 2014; Zhijun, Jing, & Mingjian, 2015), salience (e.g., Powell & Baker, 2014; Strauss, Griffin, & Parker, 2012), or construction (e.g., Nelson & Irwin, 2014; Wille & De Fruyt, 2014). In any of these types of identity studies, psychological centrality could have an effect. For example, in studying identification, Karelaia and Guillén (2014) found that women who identified positively with their gender identity experienced lower levels of conflict between their gender and leader identities which in turn resulted in positive psychological and motivational outcomes. In this case, identification was operationalized as collective self-esteem, so how good

women felt about their gender identity (similar to the satisfaction dimension of identification; Leach et al., 2008) and how positive they perceived others to view women. If the psychological centrality of women's gender identity was also considered in this study, the authors may have found a moderating effect on perceived identity conflict. The centrality of the woman gender identity may lead to higher levels of identity conflict because women want to enact and portray their gender identity (Stryker, 1980) and being a leader may have been perceived as conflicting with their ability to express their woman identity. Therefore higher levels of woman gender centrality may have attenuated the negative effect of gender identification on perceived identity conflict. Another example is Strauss and colleagues' (2012b) finding that the salience of one's future work self (i.e., hopes and aspirations for self at work in the future) is positively related to proactive career behaviors. Although they controlled for future orientation, career commitment (i.e., centrality of career), and career aspirations, the centrality of the future work self could also have an influence. I predict that the effect of future work self salience on proactive career behaviors would be strengthened by higher levels of future work self centrality and weakened by lower levels. Even if one's future work self is salient, top-of-mind, or clear, it must also be important to the individual in order for it to facilitate proactive career behaviors. Overall, the psychological centrality construct has the potential to have a moderating effect in many empirical identity studies.

Second, separate from identity research, organizational scholars may discover new areas of investigation by considering the effect of the psychological centrality of identities within established areas of study such as teams and ethical behavior. Within teams, team (or group or workgroup) identification is an area of study with team identification defined as "the emotional significance that members of a given group attach to their membership in that group" (533: Van

der Vegt & Bunderson, 2005). Studies have found that team identification reduces the negative effects that diversity has on team outcomes (Bezrukova, Jehn, Zanutto, & Thatcher, 2009; Jehn & Bezrukova, 2010; Van der Vegt & Bunderson, 2005). Although demographic or functional differences between team members increase the likelihood of conflict and lower levels of performance, this negative effect is attenuated in the presence of high levels of team identification. Effects on different team outcomes may be found when measuring how central a team's identity is to its members. For example, a sense of belonging to or emotional significance (i.e., team identification) derived from a team may result in higher levels of cooperation (Dukerich et al., 2002) and lower levels of conflict (Jehn & Bezrukova, 2010). However, the extent to which a team is central to a member's identity may predict team efficacy (Kozlowski & Ilgen, 2006) because it is important for team members to self-define themselves as members of the team and therefore possess a level of competence associated with being a team member. Even further, team functioning can be studied in light of the centrality of other types of identities to team members such as professional and functional identities. For example, it may not only be the diversity in professions and functions that affect team conflict and performance (Bezrukova et al., 2009; Van der Vegt & Bunderson, 2005) but the diversity in *how central* professions and functions are to team members. If there is high diversity in functions within a team (e.g., one engineer, one financial analyst, one marketer), this diversity may only be detrimental to cooperation and performance if all of the functional identities are central to its team members. If one of the functional identities is not central to a team member, perhaps the negative effect of diversity will be attenuated. In addition to influencing the study of team functioning, psychological centrality could also play a role in the study of ethical behavior.

There is an established study of identity and ethical behavior with the construct of moral identity (Aquino & Reed, 2002). Moral identity refers to the extent to which a set of moral traits (e.g., caring, compassionate, fair) is important to individuals' self-concept. Existing studies have found that moral identity is positively related to prosocial behaviors (Aquino, McFerran, & Laven, 2011; Aquino & Reed, 2002; Reynolds & Ceranic, 2007). However, considering the psychological centrality of other identities may have differential effects on ethical behaviors. When identities are highly central, individuals behave in a manner that is consistent with the identity (Stryker, 1980) such as being an entrepreneur when one's entrepreneur identity is highly central (Murnieks, Mosakowski, & Cardon, 2012). Therefore, when an organizational or professional identity is highly central, individuals may be more likely to engage in ethical behaviors that support the interests of those identities. Whereas organizational identification, defined as a sense of oneness with the organization (Ashforth & Mael, 1992), leads to cooperative behaviors that support the interests of the organization (Ashforth & Mael, 1989; Dukerich et al., 2002), a highly central organizational identity may be more likely to result in unethical behaviors in the interests of the organization (i.e., unethical pro-organizational behaviors (UPB); Umphress, Bingham, & Mitchell, 2010). Beyond the extent to which employees identify or perceive a sense of oneness with the organization, employees may want to help the organization in order to maintain an identity that is central to their self-definition. UPBs may also arise in relation to other identities such as a relational identity with a co-worker. If employees' relationships with coworkers are highly central to how they define themselves, they may have a higher likelihood of engaging in unethical behaviors for the benefit of coworkers. The construct of psychological centrality introduces several new areas of investigation within the organizational literature.

A third area of future research relates to the study of identity threat. Additional contextual factors can be identified that can reduce the effects of identity threat. Factors can be studied that minimize the effects of threat in two different ways: by reducing the incidence of harm or attenuating the negative effects of perceived identity threat. Authentic leadership is an example that can reduce the incidence of harm because it promotes a culture of change and innovation that welcomes the varying opinions and perspectives of employees (Peterson, Walumbwa, Avolio, & Hannah, 2012). Authentic leaders would be expected to be accepting of the range of diverse identities their followers may possess. By being open and accepting of different identities, there would be a lower likelihood of harm to employees' identities. Another way that identity threat can be minimized is by weakening the negative effects of the negative emotions and cognitive interference that result from perceived identity threat. One example is to explore job resources such as supervisor and co-worker support and social capital to reduce the negative effects of perceived threat (Hobfoll, 1989). Identifying contextual factors that minimize identity threat is beneficial for organizations whether reducing the incidence of harm or attenuating the negative effects of identity threat.

A fourth avenue of research is to investigate the effects of positive identity experiences rather than threatening ones. This would expand our understanding of how experiences related to identities in general affect employees' behavior at work. For example, positive identity experiences may facilitate positive emotions that broaden individuals' cognition (Fredrickson, 2001) and/or develop psychological capacities such as confidence and resilience (Luthans, Avolio, Avey, & Norman, 2007). These positive emotions and cognition may then facilitate positive behaviors and performance in the workplace such as prosocial behaviors and innovation.

Understanding the effects on employees of both positive and negative identity experiences would provide a holistic understanding of how employees' identities affect their behavior at work.

Overall, my dissertation lays the foundation for numerous streams of research including considering the psychological centrality construct across existing areas of organizational research, identifying additional contextual factors to minimize the incidence and effect of identity threat, and looking at the positive side of experiences at work and how they affect employees' identities.

VI. CONCLUSION

The psychological centrality of an identity, currently not investigated in the organizational literature, provides an important variable for consideration in explaining many types of employee behaviors in various contexts. Experiences related to employees' identities affect their behavior at work and I illustrate the negative implications for the workplace of one type of identity experience, identity threat. Employees' identities are important for organizations to consider because negative identity experiences can result in negative effects on emotions, cognition, job attitudes, and behaviors at work. I reveal a contextual factor that can minimize identity threat, laying the groundwork for further understanding how organizations can minimize the negative identity experiences their employees are exposed to and maximize the positive ones.

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APPENDIX A

Measures used in Studies 1a, 1b, 2, 3

Note: items with a * indicate it is one of the ten items used to represent the psychological centrality construct in studies 1b, 2, and 3.

Centrality (Vignoles et al., 2006)/Trait Centrality (Sedikides, 1993)

For the following questions, please think about your identity of ____.

1. How central or marginal is being (a) ____ to your identity? (1 = *Very much marginal* to 7 = *very much central*.) *
2. How important is being (a) ____ in defining who you are? (1 = *not at all* to 7 = *very much*) *
3. How central is being (a) ____ to your self-concept? (1 = *not at all central to my self-conception* to 9 = *extremely central to my self-conception*) *
4. How often do you behave in accordance with your ____ identity? (1 = *never* to 9 = *always*) *
5. How badly would you feel if you were forced to conclude that, based on review of the evidence, you were not (a) ____? (1 = *not at all bad* to 9 = *very bad*)

Centrality subscale from multi-dimensional inventory of Black identity (adapted) (Sellers et al., 1997)

Please write the extent to which you agree with each of the following statements. (1 = *strongly disagree* to 7 = *strongly agree*)

1. Overall, being (a) ____ has very little to do with how I feel about myself. * (R)
2. In general, being (a) ____ is an important part of my self-image. *
3. My destiny is tied to the destiny of other ____.
4. Being (a) ____ is unimportant to my sense of what kind of person I am. * (R)
5. I have a strong sense of belonging to ____.
6. I have a strong attachment to other ____ people.
7. Being (a) ____ is an important reflection of who I am. *
8. Being a (a) ____ is not a major factor in my social relationships. (R)

Role authenticity (Sheldon et al., 1997)

Please rate the extent to which you agree with the following statements regarding your identity of ____ (1 = *strongly disagree* to 7 = *strongly agree*):

1. I experience this aspect of myself as an authentic part of who I am.
2. This aspect of myself is meaningful and valuable to me.
3. I have freely chosen this way of being.
4. I am only this way because I have to be. (R)
5. I feel tense and pressured in this part of my life. (R)

Authentic self-expression (Cable et al., 2013) (1 = strongly disagree to 7 = strongly agree)

1. As (a) ____, I can be who I really am.
2. As (a) ____, I feel authentic.
3. As (a) ____, I don't feel I need to hide who I really am.

Personal Expressiveness (Waterman, 1993)

Please rate the extent to which you agree with each of the following statements (1 = *strongly disagree* to 7 = *strongly agree*):

1. Being (a) ____ gives me my greatest feeling of really being alive.
2. Being (a) ____ gives me my strongest feelings that this is who I really am.
3. When I am engaging activities related to being (a) ____, I feel more intensely involved than I do in most other activities.
4. When I am engaging in activities related to being (a) ____, I feel that this is what I was meant to do.
5. I feel more complete or fulfilled when I am engaging in activities related to being (a) ____ than I do when engaged in most other activities.
6. I feel a special fit or meshing when I am engaging in activities related to being (a) ____.

Identification (Leach et al., 2008; adapted items as cited below)

Please rate the extent to which you agree with each of the following statements (1 = *strongly disagree* to 7 = *strongly agree*):

Solidarity dimension (Cameron, 2004; Doosje et al., 1995)

1. I feel a bond with ____.
2. I feel solidarity with ____.
3. I feel committed to ____.

Satisfaction dimension (Cameron, 2004; Doosje et al., 1995; Ellemers et al., 1999; Luhtanen & Crocker, 1992)

1. I am glad to be (a) ____.
2. I think that being (a) ____ has a lot to be proud of.
3. It is pleasant to be (a) ____.
4. Being (a) ____ gives me a good feeling.

Centrality dimension (Cameron, 2004; Doosje et al., 1995; Ellemers et al., 1999; Luhtanen & Crocker, 1992)

1. I often think about the fact that I am (a) ____.
2. The fact that I am (a) ____ is an important part of my identity. *
3. Being (a) ____ is an important part of how I see myself. *

Individual self-stereotyping (Doosje et al., 1995; Spears et al., 1997)

1. I have a lot in common with the average ____ person.
2. I am similar to the average ____ person.

In-group homogeneity (Ellemers et al., 1997; Spears et al., 1997)

1. ____ people have a lot in common with each other.
2. ____ people are very similar to each other.

Other identification items (Doosje et al., 1995; Ellemers et al., 1997; Jackson, 2002)

1. I see myself as (a) ____.
2. I identify with other ____ people.
3. Being (a) ____ just feels natural to me.
4. I feel personally implicated when ____ are criticized.
5. ____ are an important group to me.
6. I have a lot of respect for ____.

Organizational identification (Mael & Ashforth, 1992)

Please rate the extent to which you agree with each of the following statements (1 = *strongly disagree* to 5 = *strongly agree*):

In studies 1a and 2:

1. When someone criticizes ____, it feels like a personal insult.
2. I am very interested in what others think about being (a) ____.
3. When I talk about being (a) ____, I usually say 'we' rather than 'they'.
4. ____ successes are my successes.
5. When someone praises ____, it feels like a personal compliment.
6. If a story in the media criticized ____, I would feel embarrassed.

In study 3:

1. When someone criticizes my work group, it feels like a personal insult.
2. I am very interested in what others think about my work group.
3. When I talk about my work group, I usually say 'we' rather than 'they'.
4. My work group's successes are my successes.
5. When someone praises my work group, it feels like a personal compliment.
6. If a story in the media criticized my work group, I would feel embarrassed.

Collective self-esteem (Luhtanen & Crocker, 1992)

In study 1b: Please indicate the extent to which you agree with each of the following statements about your social group related to your business school identity. (1 = *strongly disagree* to 5 = *strongly agree*)

Membership subscale

1. I am a worthy member of the social groups I belong to.
2. I feel I don't have much to offer the social groups I belong to. (R)

3. I am a cooperative participant in the social groups I belong to.
4. I often feel I'm a useless member of my social groups. (R)

Private subscale

5. I often regret that I belong to some of the social groups I do. (R)
6. In general, I'm glad to be a member of the social groups I belong to.
7. Overall, I often feel that the social groups of which I am a member are not worthwhile. (R)
8. I feel good about the social groups I belong to.

Public subscale

9. Overall, my social groups are considered good by others.
10. Most people consider my social groups, on average, to be more ineffective than other social groups. (R)
11. In general, others respect the social groups that I am a member of.
12. In general, others think that the social groups I am a member of are unworthy. (R)

Identity subscale

13. Overall, my group memberships have very little to do with how I feel about myself. (R)
14. The social groups I belong to are an important reflection of who I am.
15. The social groups I belong to are unimportant to my sense of what kind of a person I am. (R)
16. In general, belonging to social groups is an important part of my self-image

Perceived identity threat (Leach et al., 2008; Mikulincer, 1989)

In study 1b: Please indicate your agreement with each of the following statements. (1 = *strongly disagree* to 5 = *strongly agree*)

1. I worry that my business school identity is receiving less respect.
2. My sense of being a business school student is threatened.
3. How much did you feel threatened? (1 = *not at all* to 7 = *very much*)

In study 2: Think about the experience you wrote about and indicate your agreement with each of the following statements. (1 = *strongly disagree* to 5 = *strongly agree*)

1. The experience made me worry that my identity as ____ received less respect.
2. The experience threatened my sense of being ____.
3. How much did you feel threatened by the experience? (1 = *not at all* to 7 = *very much*)

In study 3: Please rate the extent to which you agree with each of the following statements (1 = *strongly disagree* to 5 = *strongly agree*)

1. I worried that my identity of (being) _____ received less respect during the last 6 months.
2. My sense of being (a) _____ was threatened during the last 6 months.
3. I feel that my identity of (being) _____ was threatened during the last 6 months. (1 = *not at all* to 7 = *very much*)

Harm to identity (adapted) (Aquino & Douglas, 2003)

In study 2: Think about the experience you just wrote about and indicate your agreement with the following statements. Someone or some group . . . (1 = *strongly disagree* to 7 = *strongly agree*).

In study 3: Please indicate the number of times that one or more of your coworkers displayed the following behaviors toward your identity of (being) _____ **within the last 6 months**. (1: *Never*, 2: *1–3 times*, 3: *4–6 times*, 4: *7–9 times*, and 5: *10 or more times*)

1. . . . made insulting comments about my identity.
2. . . . looked at my identity in a negative way.
3. . . . judged my identity in an unjust manner.
4. . . . criticized my identity unfairly.
5. . . . questioned my abilities or judgment in relation to my identity.
6. . . . embarrassed me in relation to my identity in front of others.
7. . . . unfairly blamed me for a negative outcome in relation to my identity.

Negative emotions (Watson et al., 1988)

In study 2: Please indicate how you feel about what you wrote about. (1 = *not at all* to 7 = *very much*)

In study 3: Please indicate the extent to which you agree with the following statements. **During the last 6 months at work**, I felt: (1 = *not at all* to 7 = *very much*)

1. Irritable
2. Distressed
3. Ashamed
4. Upset
5. Nervous
6. Guilty
7. Scared
8. Hostile
9. Jittery
10. Afraid

Anger (Spencer & Rupp, 2009)

1. Pissed
2. Irritated (already included above in negative emotions)
3. Angry
4. Mad
5. Displeased
6. Resentful
7. Bitter
8. Fury
9. Annoyance

Cognitive interference (Sarason et al., 1986)

The following questions concern the kind of thoughts that go through people's heads when they have to concentrate on something such as working, reading directions, or reading a book. The following is a list of thoughts, which, in your past experience, you may have had while working on various types of tasks. Please estimate how often each thought was occurring to you **during the last 6 months at work**. (1=*never*, 2=*once*, 3=*a few times*, 4 = *often*, 5 = *very often*)

1. I was thinking about something that made me feel guilty.
2. I was thinking about personal worries.
3. I was thinking about something that made me feel tense.
4. I was thinking about something that made me feel angry.
5. I was thinking about something that happened earlier in the day.
6. I was thinking about something that happened in the recent past.

Self-esteem (Rosenberg, 1965)

In study 2: Please write the extent to which you agree with each of the following statements regarding the identity you evaluated throughout this survey. This identity makes me . . . (1 = *strongly disagree* to 5 = *strongly agree*)

1. . . . feel that I am a person of worth, at least on an equal basis with others.
2. . . . feel that I have a number of good qualities.
3. . . . feel that I am a failure. (R)
4. . . . feel that I am able to do things as well as most other people.
5. . . . feel that I do not have much to be proud of. (R)
6. . . . feel a positive attitude toward myself.
7. . . . satisfied with myself.
8. . . . wish I could have more respect for myself. (R)
9. . . . feel useless at times. (R)
10. . . . think I am no good at all. (R)

Social desirability (Paulhus, 1991)

The following statements represent behaviors you may have conducted in general (at work and outside work). Please indicate the degree of your agreement with each statement by circling the appropriate number. (1 = *strongly disagree* to 5 = *strongly agree*):

1. I sometimes tell lies if I have to.
2. I never cover up my mistakes.
3. There have been occasions where I have taken advantage of someone.
4. I never swear.
5. I sometimes try to get even rather than forgive and forget.
6. I always obey laws, even if I'm unlikely to get caught.
7. I have said something bad about a friend behind his or her back.
8. When I hear people talking privately, I avoid listening.
9. I have received too much change from a salesperson without telling him or her.
10. When I was young I sometimes stole things.
11. I have never dropped litter on the street.
12. I sometimes drive faster than the speed limit.
13. I have done things that I don't tell other people about.
14. I never take things that don't belong to me.
15. I have some pretty awful habits.
16. I don't gossip about other peoples' business.
17. I have taken sick-leave from work or school even though I wasn't really sick.
18. I have never damaged a library book or store merchandise without report.

Demographic & team variables

1. What is your gender: male female
2. Please indicate your age: ____ years
3. What is your ethnicity (check all that apply):

African American: ____

Asian: ____

Caucasian/White: ____

Hispanic: ____

Other: ____ (Please explain: _____)

4. Are you presently employed?

Yes, full time _____
 Yes, part-time _____
 No, but have been employed previously _____
 Have never been employed _____

5. Please indicate what level of education you have completed.
 High school
 Some college
 Bachelor's degree
 Master's degree
 Doctorate degree
6. Is English your first language? yes no
7. How long have you been (were you) a member of the work group you evaluated?
8. How many team members are (were) in the work group you evaluated?

Job performance

(Ashford & Black, 1996; Black & Porter, 1991)

Please rate the subordinate relative to others on a percentage basis over the last month (0% - 100%). For example, if the individual is equivalent to others, they would receive "100%". If they are at half the level of others, they would receive a "50%":

1. Overall performance
2. Ability to get along with others
3. Completing tasks on time
4. Quality of performance
5. Achievement of work goals

(Williams & Anderson, 1991)

Please rate the performance of this particular employee over the last month [in general] by answering the following questions. (1 = *strongly disagree* to 5 *strongly agree*)

1. Adequately completes assigned duties.
2. Fulfills responsibilities specified in job description.
3. Performs tasks that are specified of him/her.
4. Meets formal performance requirements of the job.
5. Engages in activities that will directly affect his/her performance evaluation.
6. Neglects aspects of the job he/she is obligated to perform (R).
7. Fails to perform essential duties (R).

(Liden et al., 1993)

Please rate the performance of this particular employee in general by answering the following questions.

1. This subordinate is superior (so far) to other new subordinates that I've supervised before. (5-pt strongly disagree to strongly agree)
2. Rate the overall level of performance that you observe for this subordinate. (5-pt: unacceptable/outstanding)
3. What is your personal view of your subordinate in terms of his or her overall effectiveness? (5-pt: very ineffective/very effective)
4. Overall, to what extent do you feel your subordinate has been effectively fulfilling his or her roles and responsibilities? (5-pt: not effectively at all/very effectively)

Organizational citizenship behaviors (Williams & Anderson, 1991) (1 = strongly disagree to 5 = strongly agree)

1. Attendance at work is above the norm.
2. Gives advance notice when unable to come to work.
3. Takes undeserved work breaks. (R)
4. Great deal of time spent with personal phone conversations. (R)
5. Complains about insignificant things at work. (R)
6. Conserves and protects organizational property.
7. Adheres to informal rules designed to maintain order.
8. Helps others who have been absent.
9. Helps others who have heavy work loads.
10. Assists supervisor in his/her work (when not asked).
11. Takes time to listen to co-workers' problems and worries.
12. Goes out of the way to help new employees.
13. Takes a personal interest in other employees.
14. Passes along information to co-workers.

Antisocial behaviors (Aquino & Douglas, 2003)

Please indicate how often this particular employee performed these behaviors over the last month. (1: Never, 2: 1–3 times, 3: 4–6 times, 4: 7–9 times, and 5: 10 or more times)

1. Saying or doing something to purposely hurt other coworkers while at work
2. Saying unkind things to purposely harm other coworkers while at work
3. Doing unkind things to purposely harm other coworkers while at work
4. Criticizing other coworkers while at work
5. Saying nasty things to other coworkers while at work

6. Starting arguments with other coworkers while at work

Withdrawal behaviors (Jackson et al., 2006; Lehman & Simpson, 1992)

Within the last month, how often has this employee . . . (1 = *never* to 5 = *very often*)

1. left work early without permission
2. taken longer lunch or rest break than allowed
3. been absent from work activities
4. chat with co-workers about nonwork topics
5. left work for unnecessary reasons
6. seemed to be daydreaming rather than working
7. spent work time on personal matters rather than group duties
8. put less effort into job than should have
9. talked about leaving current job or work group
10. let others do their work

Job satisfaction (1 = very dissatisfied to 5 = very satisfied)

(Edwards & Rothbard, 1999)

1. In general, I am satisfied with my job
2. Being an employee at this organization is very enjoyable
3. All in all, being an employee at this organization is great

(Hackman & Oldham, 1975)

1. Generally speaking, I am very satisfied with my job.
2. I am generally satisfied with the type of work I do on this job.
3. I am interested in my work.
4. I feel energized by the work I do.
5. I feel a great sense of personal satisfaction when I do this job well.
6. The work I do on this job is very meaningful to me.

Organizational commitment (Allen & Meyer, 1990) (1 = strongly disagree to 7 = strongly agree)

1. I would be very happy to spend the rest of my career with this organization.
2. I enjoy discussing the organization with people outside it.
3. I really feel as if this organization's problems are my own.
4. I think that I could easily become as attached to another organization as I am to this one. (R)
5. I do not feel like "part of the family" at my organization. (R)
6. I do not feel "emotionally attached" to this organization. (R)
7. This organization has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to my organization. (R)

Openness to experience work group identity (Hofmann & Jones, 2005)

Please rate the accuracy with which each of the following words describes the atmosphere or character of your work group. In other words, think about the extent to which each of the following words describes the behavior of the team members in your work group. (1 = *to a very small extent*, 2 = *to a limited extent*, 3 = *to some extent*, 4 = *to a considerable extent*, 5 = *to a great extent*)

1. Uncreative (R)
2. Innovative
3. Intellectual
4. Imaginative
5. Creative
6. Unsophisticated (R)
7. Simple (R)
8. Unimaginative (R)
9. Complex
10. Shallow (R)

Self-expression psychological climate – adapted (Brown & Leigh, 1996)

Please rate the extent to which you agree with each of the following statements regarding your work group. In this work group . . . (5-pt strongly disagree to strongly agree):

1. . . . team members can express their true feelings regarding the work group's identity and what we stand for.
2. . . . team members can freely express their thoughts about the work group's identity and what we stand for.
3. . . . expressing your true feelings about our identity and what we stand for is welcomed.
4. . . . nobody will pick on me even if I have different opinions about our identity and what we stand for.
5. . . . I'm worried that expressing true thoughts about our work group identity and what our work group stands for would do harm to myself.

Intrinsic motivation (Hackman, 1980) (1 = strongly disagree to 5 = strongly agree)

1. My opinion of myself goes up when I do this job well.
2. I feel a great sense of personal satisfaction when I do this job well.
3. I feel bad and unhappy when I discover that I have performed poorly on this job.
4. My own feelings generally are not affected much one way or the other by how well I do on this job. (R)
5. Most people on this job feel a great sense of personal satisfaction when they do the job well.
6. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.

APPENDIX B

Validity and reliability of scales used

Scale	Author(s)	# items	Sample	Validity	Reliability ¹
Centrality	Vignoles, et al., 2006	2	82 Christians (948 identity elements)	- Self-esteem motive ($\beta=.14^{***}$) - Continuity motive ($\beta=.21^{***}$) - Meaning motive ($\beta=.41^{***}$)	$r=.73$
			233 high school graduates & 246 expecting parents (5,114 identity elements)	- Self-esteem motive ($\beta=.20^{***}$) - Continuity motive ($\beta=.21^{***}$) - Meaning motive ($\beta=.24^{***}$)	$r=.68$
Trait centrality	Sedikides, 1993	3	140 American undergrad psych students	Negative impressions of others ($F(2, 272)=3.47, p<.04$)	$r=.40$
Centrality subscale of MDI	Sellers, et al., 1997	8	474 African-American (AA) college students	- Contact with other AAs ($r=.39^{**}$) - Contact with other Whites ($r=-.46^{**}$)	$\alpha=.75-.78$
Role authenticity	Sheldon et al., 1997	5	193 American undergrad psych students	Satisfaction with role: employee ($r=-.56^{**}$), student ($r=-.53^{**}$)	$\alpha=.72-.82$
Authentic self-expression	Cable et al., 2013	3	175 students	- Work engagement ($B=.57^{***}$) - Job satisfaction ($B=.51^{***}$) - Performance ($B=1.62^{***}$)	$\alpha=.91$
Personal expressiveness	Waterman, 1993	6	249 American students	- Investing great deal of effort ($r=.40^{***}$) - Having high level of concentration ($r=.32^{***}$)	$\alpha=.90$
Identification – solidarity	Leach et al., 2008	3	464 European undergrad students	<i>na</i>	$\alpha=.88-.90$
			413 European undergrad students	Membership collective self-esteem ($r=.28^*$)	<i>na</i>
Identification – satisfaction	Leach et al., 2008	4	464 European undergrad students	<i>na</i>	$\alpha=.88-.90$
			413 European undergrad students	- Private collective self-esteem ($r=.54^*$) - Public collective self-esteem ($r=.35^*$)	<i>na</i>
Identification – centrality	Leach et al., 2008	3	464 European undergrad students	<i>na</i>	$\alpha=.80-.86$
			413 European undergrad students	Identity collective self-esteem ($r=.33^*$)	<i>na</i>
			440 European undergrad students	Perceived threat ($r=.15^*$)	<i>na</i>
			36 Dutch participants	Perceived threat ($r=.29^\dagger$)	<i>na</i>

1. r represents correlation, α represents coefficient alpha

Note. $^\dagger p<.10$ $^*p<.05$ $^{**}p<.01$ $^{***}p<.001$

Scale	Author(s)	# items	Sample	Validity	Reliability ¹
Identification – individual self-stereotyping	Leach et al., 2008	2	464 European undergrad students	<i>na</i>	$\alpha=.89-.93$
			413 European undergrad students	• Depersonalization ($r=.43^*$)	<i>na</i>
Identification – in-group homogeneity	Leach et al., 2008	2	464 European undergrad students	<i>na</i>	$\alpha=.87-.89$
			413 European undergrad students	• Meta-contrast ($r=.16^*$)	<i>na</i>
Organizational identification	Mael & Ashforth, 1992	6	297 male college alumni	• Contributions to school ($\beta=.30^{***}$)	$\alpha=.87$
Harm to identity	Aquino & Douglas, 2003	7	367 employees from 3 companies	• Antisocial behavior ($B=.157^{***}$)	$\alpha=.93$
Perceived identity threat	Leach et al., 2008	2	440 European undergrad students	• Centrality ($r=.15^*$)	$\alpha=.74$
Negative affect	Watson, Clark & Tellegen, 1988	10	Samples ranging from 203-586 adults	• Distress & dysfunction ($r=.74$) • Depression ($r=.58$) • Anxiety ($r=.51$)	$\alpha=.87$
Anger	Spencer & Rupp, 2009	9	206 college students	• Emotional labor ($r=.41^{**}$)	$\alpha=.95$
Guilt	Spencer & Rupp, 2009	3	206 college students	• Emotional labor ($r=.32^{**}$)	$\alpha=.85$
Collective self-esteem	Luhtanen & Crocker, 1992	16	887 undergrad psych students	• Rosenberg (1965) self-esteem ($r=.36^{***}$)	$\alpha=.87$
			180 undergrad psych students	• Collectivism ($r=.34^{***}$)	$\alpha=.89$
Cognitive interference	Sarason et al., 1986	6	451 undergrad psych students	• Tendency to have test-irrelevant thoughts ($r=.34^{***}$)	$\alpha=.91$
			302 undergrad psych students	• Tendency to have test-irrelevant thoughts ($r=.35^{***}$)	Factor loadings .39-.69; 56% of covariance
Openness collective personality	Hofmann & Jones, 2005	10	448 pizza franchise employees	• Transformational leadership ($B=.53^{**}$)	$\alpha=.84$
Self-expression psychological climate	Brown & Leigh, 1996	4	178 sales representatives	<i>na</i>	$\alpha=.83$
			112 sales representatives	<i>na</i>	$\alpha=.73$

1. r represents correlation, α represents coefficient alpha

Note. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Scale	Author(s)	# items	Sample	Validity	Reliability ¹
Job performance	Ashford & Black, 1996	5	69 managers	▪ Build relationships with boss ($\beta = .56^{***}$) ▪ Positive framing ($\beta = .31^*$)	$\alpha = .91$
Job Performance	Williams & Anderson, 1991	7	127 employees and supervisors	▪ Organizational citizenship behavior - individual ($r = .52^*$) ▪ Organizational citizenship behavior - organization ($r = .55^*$)	$\alpha = .91$
Job performance	Liden et al., 1993	4	116 subordinate-supervisor dyads	• Leader LMX ($\beta = .35^*$)	$\alpha = .93$
Organizational citizenship behavior	Williams & Anderson, 1991	14	127 employees and supervisors	• Positive arousal ($r = .16-.24^*$)	Individual: $\alpha = .88$ Org: $\alpha = .75$
Antisocial behaviors	Aquino & Douglas, 1993	6	367 employees from 3 companies	• Identity threat ($r = .53^{**}$) • Attitude toward revenge ($r = .52^{**}$)	$\alpha = .88$
Withdrawal behaviors	Jackson, et al., 1996; Lehman & Simpson 1992	10	1,325 municipal employees	• Job involvement ($r = -.37^{**}$) • Job satisfaction ($r = -.39^{**}$)	$\alpha = .84$
Self-esteem	Rosenberg, 1965	10	Meta-analysis: 135 studies (169 correlations)	• Job satisfaction ($p = .24$, 95% CI excluded 0)	<i>na</i>

1. r represents correlation, α represents coefficient alpha

Note. † $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

APPENDIX C

Performance task in Study 2

Please imagine you are part of the management team at The El Gusto Company.

The El Gusto Company, a subsidiary of Food Inc., is undergoing expansion. They are in the process of selecting sites for 15 new Mexican restaurants to be constructed in the Northeastern cities during the next year. The El Gusto management has decided that seven factors are very important in deciding where a Mexican restaurant of the type they have should be located:

1. Traffic density on the near-by roads
2. Competitive situation in the Mexican restaurant segment
3. Parking facilities
4. Retail sales in the surrounding community
5. Population density within a 5 mile radius of the restaurant
6. Unemployment in the area
7. Population growth in the area

The management has studied these seven factors and has determined their order of importance as well as the cutoff limits for each factor. The following shows the ranking of the factors by the order of importance. (1=most important, 7=least important).

area retail sales -- 4
 competitive situation -- 2
 unemployment rate -- 6
 traffic density --1
 population growth -- 7
 population density -- 5
 parking facilities – 3

The minimum required values, or cutoff limits, for factors on a 100 point basis are:

area retail sales -- 24
 competitive situation -- 25
 unemployment rate -- 13
 traffic density -- 18
 population growth -- 18
 population density -- 18
 parking facilities – 21

The El Gusto management hired a consulting firm to evaluate six potential restaurant sites in suburban Philadelphia. The El Gusto management requested that the consulting firm score each site on each factor on a 100 point basis. The results of the scoring are shown below. The El Gusto management wants to select one of these sites for construction. Given the importance ranking and cutoff points for the factors, the objective of the management is to choose the best site. Review the information below and then rank the sites from the best site to the worst site.

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Retail Sales	30	34	38	23	26	19
Competition	37	32	25	22	28	18
Unemployment	13	18	12	16	15	17
Traffic	29	19	18	32	24	16
Population Growth	16	15	17	22	16	30
Population Density	19	17	21	15	24	12
Parking Facilities	17	28	30	19	25	34