

**GOOD AT THIS BUT NOT AT THAT: MULTIDIMENSIONAL SELF-EVALUATIONS
AND DIMENSIONAL COMPARISONS AT WORK**

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ABSTRACT

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Social comparison theory (Festinger, 1954) underlies findings and theory in many organizational behavior literatures, such as identity, justice, and compensation. Yet, the field has neglected to incorporate comparison theories introduced in other psychology literatures. Dimensional comparison theory (DCT; (Möller & Marsh, 2013) argues that, in addition to external comparisons to referent other, individuals also make internal comparisons across different dimensions of the self, defined within a multidimensional self-evaluation. This dissertation argues that DCT is related to, but distinct from, existing concepts within organizational behavior and is thus critical to integrate into our understanding of work. In three studies, a vignette study, one experiment, and one field study, I propose examining the effect that dimensional comparisons along these abilities have on individuals' psychological investment as well as the resulting achievement and satisfaction in these dimensions. Further, I build upon existing DCT research in educational psychology through explicitly hypothesizing the interactive effect of dimensional and social comparisons, considering the role that the importance of the dimension to the group and the individual plays in these relationships, and examining dimensional comparisons using polynomial regression techniques.

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“Oh, I’m a lucky [wo]man

To count on both hands

The ones I love”

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INTRODUCTION

Social comparison theory (Festinger, 1954, p. 22) is ubiquitous and underlies much of modern organizational behavior research. Social comparison theory plays a large role in the theoretical tenants underlying the justice (Greenberg, 2011), identity (Brewer & Gardner, 1996; Tajfel et al., 1979), and compensation literatures (Harris et al., 2008; Jackson et al., 1992; Obloj & Zenger, 2017; Tenbrunsel & Diekmann, 2002; Trevor & Wazeter, 2006). Beyond providing theoretical groundwork for these literatures, social comparison theory recently has supported advancements in a wide variety of organizational behavior topics, such as explaining why individuals react to differences in social exchange relationships (i.e., LMX; Hu & Liden, 2013; Tse et al., 2013; Vidyarthi et al., 2010), in recasting workplace gossip as functional (Brady et al., 2017), and in measuring the impact of idiosyncratic deals (Liao et al., 2017; Marescaux et al., 2019; Vidyarthi et al., 2016). It has even been used to explain why team members engage in harming behaviors toward their teammates (Campbell et al., 2017; Lam et al., 2011; Spence et al., 2011), why employees experience strain following experiences of aggressive humor (Huo et al., 2012), and why women experience more conflict in same-sex relationships at work than men (Sheppard & Aquino, 2017). Clearly, this theory has been fundamental not only in spawning specific literatures, but also to furthering organizational behavior as a field more generally.

Despite its prevalence, the field of organizational behavior has neglected to incorporate developments in comparison theories that have long been adopted in other areas of psychology. Other branches, most notably educational psychology, have argued that in addition to comparing ourselves externally to similar others, we also maintain certain internal comparisons that affect our self-concepts of our abilities (Marsh, 1986). These internal comparisons fall into two categories: temporal comparisons, or comparisons between our current self-evaluation and a past

(or future) evaluation (Albert, 1977), and dimensional comparisons, or comparisons between our evaluation in one dimension to our evaluation on another dimension (Möller & Marsh, 2013). For example, in educational psychology, a person making a social comparison would assess her verbal ability against a classmate's, temporal comparisons might be drawn between her verbal ability in Grade 3 versus Grade 5, and dimensional comparisons might be drawn between her verbal ability and math ability. These different internal comparisons have significant effects on individuals' self-concepts and, consequently, goal striving and achievement (Marsh et al., 2014; Möller & Köller, 2001; Möller & Savyon, 2003). Given that many findings within the field of organizational behavior rely on social comparison theory as a theoretical underpinning, incorporating these internal comparisons into our understanding of individual's formation of their self-concepts at work, and the resulting impact of these comparisons, is of the utmost importance.

This dissertation contributes to the field of organizational behavior in a number of ways. First, I seek to introduce the concept of dimensional comparisons and a multidimensional self-evaluation to the organizational behavior literature. Indeed, in their theory paper on dimensional comparisons, Möller & Marsh (2013) commented that dimensional comparisons are not often investigated outside of education. Although there is evidence for a multidimensional academic self-evaluation in children (Marsh & Craven, 2006; Shavelson et al., 1976), there is not yet an equivalent of how this multidimensional self-evaluation translates to the work environment in adults. At the root of this issue may be that it is difficult to define "universal" dimensions of evaluation at work and in adulthood, as experiences are so varied. Thus, I devote some of this dissertation to outlining how dimensions at work could be conceptualized and offer multiple methods to measure and manipulate dimensional comparisons. With some understanding of how

dimensional comparisons could be studied and what effect comparisons along dimensions have, further empirical research that incorporates these comparison theories will follow.

Next, I use this theorizing to explain one perplexing workplace phenomenon – why individuals fail to “level out” their equally necessary skills at work and instead commit to some ability domains they already excel at and divest from ones in which they perform poorly (i.e., specialization when it is not required for the job). In the academic context, dimensional comparisons have been used to explain students’ interest in specific majors in college (Gaspard et al., 2018; Guo et al., 2017; Umarji et al., 2018), teachers’ interest in different knowledge domains that they already are successful in (Sorge et al., 2019), and even students’ striving for different career fields related to subjects they score well on (Guo et al., 2017; Lazarides & Lauermann, 2019; Saß & Kampa, 2019). In line with educational psychology theory, I argue that when dimensional comparisons are made at work, individuals will have lower investments, achievement, and satisfaction in the worse-off domain, but these outcomes will be higher for the better-off domain. In short, dimensional comparisons may offer one theoretical explanation for why individuals “double down” in areas they already excel at and neglect to invest in skill areas they are not as good at.

Outside of organizational behavior, this exploration contributes back to the dimensional comparison conversation in educational psychology in a number of ways. First, I examine dimensional comparisons in an experimental study, which largely mimics previous experimental designs in educational psychology (e.g. Möller & Köller, 2001; Wolff et al., 2018). However, my field study uses polynomial regression to capture dimensional comparisons, rather than assuming that comparisons occur through negative correlations (Möller & Marsh, 2013). This is a novel

technique for research in dimensional comparisons and may offer a more nuanced view of how these comparisons affect domain-specific investments, achievement, and evaluations.

Second, I examine the unique interactive effect of dimensional and social comparisons. While past studies have demonstrated that dimensional comparisons are integral and primary to the academic self-concept (Arens et al., 2016; Marsh et al., 2014; Möller et al., 2020; Niepel et al., 2014), recent work has argued that social comparison effects are still stronger than dimensional or temporal comparison effects (Strickhouser & Zell, 2015; Wolff et al., 2018; Zell & Strickhouser, 2020). Again, however, these comparisons have rarely been examined together, never tested directly against each other outside of the academic context, and only tested together through experimental designs. This is particularly concerning as the dimensions of self-concept become more differentiated among elementary-school children as they age (Marsh & Ayotte, 2003), suggesting that dimensional comparisons could be more salient and impactful in the adult working context than in adolescent academic contexts.

Third, it is likely that the importance of certain dimensions is not prioritized in the same way as they are in children (e.g., through standardized test scores and grade point averages), but instead are shaped by social contexts at work (i.e., comparisons to others in the group and the importance of the dimension to the group). Thus, not only is it likely that dimensional comparisons occur among adults, but that these effects may manifest differently than they do in the academic context. Through examining these comparisons together in adults, I demonstrate that dimensional comparisons are important and relevant as individuals leave their childhood academic domains, persisting into adulthood and impacting employees at work.

To begin this dissertation, I review the theoretical origins of dimensional comparison theory and the relevant empirical findings within the education field. As social comparison is

relevant to many OB literatures, dimensional comparison theory similarly relates to many concepts within OB. I then contrast the idea of a multidimensional, hierarchical self-concept with identity, core self-evaluations, domain-specific self-esteem, the pursuit of multiple goals, and job performance. Then, I turn to a discussion of the content of dimensions and develop arguments for the effects these dimensional comparisons have for performance, satisfaction, and commitment to these ability domains. I also provide some extensions to educational psychology research through considering a) how the perceived importance of each dimension to the group and the individual affects the impact of the comparisons, b) how social and dimensional comparisons interact, and c) alternative approaches to measuring dimensional comparisons.

LITERATURE REVIEW: DIMENSIONAL COMPARISONS IN EDUCATION RESEARCH

The Multidimensional, Hierarchical Self-Concept in Children

The first to posit multiple dimensions in self-concept in the educational psychology was Shavelson et al. (1976). This model argued self-concepts in children can be broken down into multiple hierarchical dimensions. At the top of the hierarchy is a higher-order global self-concept, which is comprised of many lower-order domain-specific self-concepts. Because of this hierarchical structure, a situation that impacts self-concept in one domain may shift that self-concept in that domain, but unlikely to shift much in a global sense. Therefore, global self-concepts higher in the hierarchy are much more stable than those lower in the hierarchy, as lower-order self-concepts are more susceptible to change (Shavelson et al., 1976). At the top of Shavelson et al.'s (1976) hierarchy is a global self-concept, which is divisible into non-academic and academic dimensional self-concepts. These dimensions are further subdivided in the academic space by different subjects (i.e., math, science) and in the non-academic space by emotional, social, and physical (i.e., physical ability, appearance) self-concepts.

Further, the Shavelson et al., (1976) model argued for seven distinct features of this multidimensional, hierarchical self-concept, which are likely to also hold true in a similar model in adults. First, they argued that self-concepts are *organized* into categories by individuals. Self-concepts are *multifaceted* as individuals differentiate these categories and are *hierarchical* in that individuals arrange these categories from general to specific (e.g., academic by subject and non-academic by emotional, social, and physical). They also contend that global self-concepts are *stable* in that those at the top of the hierarchy are derived from lower-order self-concepts, so are insulated from situations that might change one lower-order self-concept. Self-concepts are

argued to be *developmental*, such that they provide a means to differentiate and define oneself, and *evaluative* in that self-concepts are formed through a comparison to some reference point (e.g., an “ideal” or a peer or another dimension). Finally, they argued that self-concepts are *differentiable* in that they can be parsed from the outcomes that they are supposed to predict or be derived from (e.g., achievement). In support of this model, Shavelson et al. (1976) developed a multi-trait, multimethod matrix (Campbell & Fiske, 1959) using existing research and measures of self-concept in educational psychology, finding some preliminary support for these key theoretical features of the model.

The Internal/External Frame of Reference Model

While Shavelson et al.’s (1976) model explored the *content* of the multidimensional, hierarchical self-concept in children, Marsh (1986) further described the *process* through which children form these self-concepts. Marsh (1986) proposed the internal/external (I/E) frame of reference model, where children have both external frames of reference (i.e., a comparison to a relevant other) and internal frames of reference (i.e., a comparison to another domain) that are used for forming specific self-concepts. In this theoretical model, positive correlations between achievement and self-concepts within-domain and negative correlations between achievement and self-concepts across-domain represent these internal frames of references. Most importantly, he theorized a null relationship between self-concepts across domains, which suggests comparisons drive these effects, rather than the interdependence among self-concepts. Thus, this model was the first to argue that assessments within a domain do not singularly drive specific self-concepts but instead are influenced by comparisons made in other dimensions as well as against others or an ideal. A meta-analysis on the I/E model supported these key associations

(Möller et al., 2009), and this theory has been recently extended to non-academic contexts (i.e., the generalized I/E frame of reference model; Möller et al., 2016), which I expand on later.

Dimensional Comparison Theory

Möller and Marsh (2013) built on the I/E frame of reference model to develop their theory of dimensional comparisons. In social comparisons (Festinger, 1954), one compares oneself to an external frame of reference of a peer or an ideal. In temporal comparisons (Albert, 1977), one compares oneself to an internal frame of reference of the self at a different time point in the past. In dimensional comparisons, one compares oneself to an internal frame of reference of one's achievement in a different domain within the multidimensional self-concept (Möller & Marsh, 2013).

For example, Lucy, a NASA engineer, a part of a large engineering team that is working to build a rocket for NASA. Lucy's job responsibilities are split 50/50. Half of her job is based on her engineering abilities, ensuring that her piece of the rocket, the wing, is engineered according to specifications. The other half of her job is based on her teamwork abilities, working with other members of the NASA engineering team to ensure that her rocket wing works well with the other parts of the rocket. To be successful at her job, Lucy needs to excel in *both* areas. If she doesn't engineer the rocket wing according to specifications, then she has failed in her engineering role as the rocket wing may not function on its own. If she doesn't work with the other engineers to ensure her wing works well with the rest of the rocket, then she has failed in her engineering role as the rocket wing may not fit with other parts of the rocket. In her engineering role, Lucy might make a social comparison of her engineering abilities to her coworker's engineering abilities, she might make a temporal comparison of her engineering

abilities at age 30 versus age 25, and she might make a dimensional comparison of her engineering abilities to her teamwork abilities.

Thus, in dimensional comparison theory, there is a “target” domain, which is the domain in which the comparison is being made (i.e., Lucy’s engineering ability today in this example), and the “standard” domain, which is the frame of reference domain (i.e., coworker’s engineering ability, the Lucy’s engineering ability at age 25, and Lucy’s teamwork abilities in these examples). For clarity in the remainder of this dissertation, I will use the term “focal” domain for “target” domain and “comparison” domain for “standard” domain.

Möller and Marsh’s (2013) dimensional comparison theory bears a number of similarities to social comparison theory. Upward and downward comparisons operate similarly in social and dimensional comparisons. Downward directions, where the focal is better than the comparison (i.e., Lucy’s engineering abilities are *better* than her teamwork abilities), are theorized to produce favorable outcomes in the focal domain. Upward directions, where the focal is worse than the comparison (i.e., Lucy’s engineering abilities are *worse* than her teamwork abilities), are theorized to produce unfavorable outcomes in the focal domain. Similar effects have been shown in social comparison research. For example, downward social comparisons are related to a) positive job attitudes (Brown et al., 2007), b) positive emotions, such as pride (Smith, 2000), and c) functional workplace behaviors, such as organizational citizenship behaviors (Spence et al., 2011). On other hand, upward social comparisons are related to a) adverse organizational attitudes (Brown et al., 2007), b) negative emotions, such as shame and depression (Smith, 2000), and c) dysfunctional behaviors, such as undermining (Campbell et al., 2017) and resume fraud (Dineen et al., 2017).

However, it is worth noting that not all upward social comparisons are damaging, such as when individuals wish to improve and the upward social comparison serves as a motivating goal that prompts optimism (Smith, 2000; Smith & Sachs, 1997; Ybema & Buunk, 1993). Yet, this is a theoretical nuance that is *not* shared in dimensional comparison theory. In this theory, downward dimensional comparisons, where the focal domain is better off than the comparison domain, are theorized to improve self-concepts in the focal domain, and upward dimensional comparisons, where the focal domain is worse off than the comparison domain, are theorized to degrade self-concepts in the focal domain (Möller & Marsh, 2013). The opposite effect occurs for the comparison domain for upward and downward dimensional comparisons. Essentially, dimensional comparisons are theorized to reap benefits to the comparatively better-off domains and harm self-concepts in the comparatively worse-off domains.

Second, both social and dimensional comparison theories predict differences in effects based on the similarity of the domains. Social comparison theory argues that individuals tend to prefer referents that are similar to themselves (Festinger, 1954), though the selection of referents is a complex process that sometimes involves dissimilar referents (Kulik & Ambrose, 1992). Even so, a selection of a referent more similar to oneself in social comparison theory produces stronger effects than a referent that is dissimilar (Wood, 1989). In the same vein, dimensional comparison theory predicts that effects of dimensional comparisons are stronger when domains are more similar. For example, a comparison between math and science is theorized to produce stronger effects than comparisons between math and a foreign language subject. Research within dimensional comparison theory has supported that similarity of subjects does have an effect on subsequent self-concepts and outcomes of those self-concepts (Wolff et al., 2020).

Lastly, social and dimensional comparison theories both speculate on the focus of ones' comparison, whether the individual wishes to contrast with the referent or assimilate to the referent comparison. A contrast effect occurs when the individual seeks to widen the comparison between the focal and comparison domains, whereas an assimilation effect occurs when the individual seeks to narrow the comparison between the focal and the comparison domains. For example, if Lucy *contrasts* her engineering abilities with her teamwork abilities, she should experience greater differences in self-concepts across these two domains. If she *assimilates* her engineering abilities with her teamwork abilities, then the self-concepts across the two domains would be more similar. Social comparison research supports these contrast and assimilation effects when comparisons are across people (Collins, 1996). For comparisons across dissimilar domains, dimensional comparison theory argues that self-concept in the better-off domain increases (a contrast effect), while the self-concept in the worse-off domain decreases (Möller & Marsh, 2013). For similar domains, the self-concept in the worse-off domain increases (an assimilation effect).

Möller & Marsh (2013) offered empirical evidence from research on the I/E frame of reference model to support their claims in their initial theoretical article, and, in general, correlational and experimental studies within education research have supported theoretical tenants in dimensional comparison theory. A recent meta-analysis (Möller et al., 2020) found positive correlations for achievement and self-concept within domain ($\rho = .57$ for math achievement to math self-concept; $\rho = .46$ for comparison domain achievement to self-concept; $k = 118$; $N = 213,121$) as well as negative correlations from achievement on one domain to self-concept in another ($\rho = -.17$ for math to comparison and $\rho = -.20$ for comparison to math; $k = 118$; $N = 213,121$), supporting contrast effects. Aside from correlational studies, which are

common in educational psychology research (e.g., Gaspard et al., 2018; Marsh et al., 2014; Pinxten et al., 2015), dimensional comparison contrast effects have been found in experimental designs (Müller-Kalthoff, Jansen, et al., 2017; Wolff et al., 2018), where comparison information is manipulated. Moreover, diary studies of university and high school students have related daily dimensional comparisons (e.g., “today, I fought with my parents, but it comforts me that everything’s all right with my sister”) to changes in positive and negative affect (Möller & Husemann, 2006, p. 349). Thus, dimensional comparison theory in education research has robust support for many of its key tenants.

However, the most contested finding from this theory surrounds the assimilation effects, where downward (upward) comparisons in similar domains enhances (degrades) self-concepts in worse-off (better-off) domains. For example, an assimilation effect would occur if high achievement in physics produces high self-concepts in biology, despite a low achievement in biology. While contrast effects among dissimilar domains are strong and significant (Möller et al., 2020), the cross-domain effects of similar domains have produced either weak or non-significant effects (and sometimes small contrast effects; Möller et al., 2020). The participant’s perception of the similarity of the domains somewhat tempers this effect (Helm et al., 2016; Möller et al., 2006; Wolff et al., 2020), but a failure to find an assimilation effect meta-analytically may suggest that there is little to no spillover of positive (or negative) self-concepts among similar subject domains in children. This runs contrary to what we might consider a halo error in other-reports (Cooper, 1981; Thorndike, 1920), where an individual who achieves in one domain will experience a higher rating in a similar domains (e.g., I arrived on time to work, so I must also be a good performer). Instead, this finding suggests that someone who achieves high in one domain is unlikely to experience positive spillover of the self-concept in the worse-off

similar domain and may even reduce their self-concept in the worse-off domain as they do in dissimilar domains.

Generalized Internal/External Frame of Reference Model

Following dimensional comparison theory, the generalized I/E frame of reference model (Möller et al., 2016) expanded to include dimensions that are not specific to children. This theory argued that the associations in Marsh (1986) could be expanded to non-academic dimensions and has received some empirical support. Instead, “perceptions” of abilities in two domains (or achievement in the original I/E model) are positively related to self-concept, learning, and motivation within-domain and negatively related to self-concept, learning and motivation across domains. Despite still being embedded in the education field, some evidence supports this generalization of the original model. For example, Arens and Preckel (2018) found support effects of dimensional comparisons across physical ability and academic subjects (math and German as a native language). Similarly, Chanal et al. (2009) found effects of dimensional comparisons across physical education classes, math, and verbal domains. Tietjens et al. (2005) found evidence for dimensional comparisons across different sports (track & field, swimming, soccer, and basketball). Additionally, there is some support for dimensional comparisons in personality, such as the fundamental social judgements of agency and communion among high schoolers (Helm et al., 2017). Thus, it is likely that a multidimensional, hierarchical self-concept model persists beyond the childhood academic domains for which Shavelson et al. (1976), Marsh (1986), and Möller & Marsh (2013) developed theories. In the following paragraphs, I delineate the empirical support for and relevant extensions to the theories presented above as it pertains to the adult working context.

Empirical Support for Dimensional Comparison Theory

In support of dimensional comparison theory, education scholars find that children hold multidimensional self-concepts, make comparisons across these different dimensions, and differentiation across these dimensions increases over time. Notably, Jansen et al. (2015) tested a one-factor model of over 6,000 high schoolers' science self-concepts, where biology, chemistry, and physics self-concepts were reflected in the same factor, and a three-factor model, where biology, chemistry, and physics self-concepts were separated. They found that the three-factor model provided better fit. Thus, there is some factor analytic supporting the separation of some dimensions of self-concept. Additionally, the pattern of correlations across dimensions described in Möller & Marsh (2013) are not specific to math and verbal ability and have been replicated in large samples across different countries and academic subject dimensions (Guo et al., 2018; Kadir et al., 2017; Möller et al., 2009; Niepel et al., 2014; Pinxten et al., 2015). For example, in a study of over 15,000 Dutch students, Marsh et al. (2014) discovered positive associations with achievement in math, Dutch as a native language, and English as a foreign language and respective self-concepts, as well as negative correlations between math achievement and Dutch/English subject self-concepts.

Finally, consistent with the developmental feature of Shavelson et al.'s (1976) model, researchers have also proposed that dimensional comparisons become more important as children age. Contrary to studies on older children (i.e., secondary school and above) some studies find weak or no support for dimensional comparison effects in early elementary school children (i.e., Grades 2-4; Lohbeck & Möller, 2017; Weidinger et al., 2019) and dimensions become more distinct between Grades 2-6 (Marsh & Ayotte, 2003). In a recent meta-analytic test of individuals aged 5 to 28 (mean age = 13.45), Orth et al. (2020) found that nearly all the

domain-specific self-evaluations included in their meta-analytic test changed over time (except for physical appearance and athletic abilities). Thus, it is dimensions not only change over time, but that they become more distinct and differentiated as children enter adolescence and transition to adulthood, where skills become more specialized.

More important than dimensional comparison effects on the self-concept is the impact that this fluctuation in the self-concept has on children's motivation and interest in each dimension, which further impacts subsequent achievement in these areas. Changes in academic self-concepts resulting from dimensional comparisons can affect children's anxiety in that particular subject (Arens et al., 2017), the perceived value of the subject to children (Dietrich et al., 2015; Gaspard et al., 2018), interest in the subject (Schurtz et al., 2014), and even the value they place on school in general (Schütte et al., 2017). Taken in the context of the positive within-domain associations and negative between-domain associations, this suggests that children who make downward dimensional comparisons are likely to make stronger investments (in terms of interest, value, and affect toward) the focal subject and weaker investments (in terms of interest, value, and affect toward) the comparison subject. Stated differently, children's achievement in math is likely to impact their striving in verbal, or other subject domains.

Indeed, in education, scholars have linked students' dimensional comparisons to their desire to pursue STEM fields (Guo et al., 2018) and their selection of college majors (Gaspard et al., 2019; Umarji et al., 2018). It has even been used to explain why boys pursue more math-related careers than girls (Lazarides & Lauermann, 2019; Saß & Kampa, 2019). These studies argue that when girls perceive that their performance is higher in verbal than it is in math, they are more motivated and interested in verbal than in math and, subsequently, achieve more in verbal than in math. In sum, this line of research reinforces the notion that dimensional

comparisons have important effects above and beyond just the self-concept. When the domain-specific self-concept is affected, it also has the potential to impact children's investment in both the comparison and the focal domains, which, consequently, affects their achievement in those domains.

Generalizing this theorizing to the adult domain, the comparisons employees make from one domain is likely to impact investment both within a domain and across domains, such that employees will *invest in* better-off domains and *divest from* worse-off domains, even when dimensions are equally necessary for the job role. Supporting this notion, pre-service science teachers received test scores on three distinct types of knowledge pertinent to their field: knowledge of the content they teach, knowledge on how they teach the content to students, and knowledge of how they manage the classroom. As with children, achievement in each domain had positive correlations with self-concepts within-domain and negative correlations with self-concepts across domains (Paulick et al., 2017). Further, this predicts teacher's interest in the content knowledge and teaching skill domains (Sorge et al., 2019), which may have implications for how these teachers ultimately develop their skills in these knowledge areas. For example, a teacher could become a knowledge expert with deficiencies in abilities to teach the content or a great teacher with deficiencies in the subject matter. Alternatively, Lucy could become particularly good at her engineering abilities, but her perfectly operational wing may not fit with the rest of the rocket because her deficiencies in her teamwork abilities. Thus, dimensional comparisons could affect professional career decisions and may affect more than just self-concepts in each domain.

The Relative Strength of Social and Dimensional Comparisons

Recently, dimensional comparison theory has made the leap from educational psychology journal outlets into social psychology. Strickhouser and Zell (2015) were the first to directly explore the differences in the strength of social and dimensional comparison effects. In their first study, they contrasted social and dimensional comparisons (i.e., upward social and downward dimensional were presented together and vice versa), finding that self-evaluations and affect were more positive when downward comparisons were made of either social or dimensional and that the effects of upward and downward social comparisons were stronger than the effects of upward and downward dimensional comparisons. In their second study, they varied the direction of one comparison type (i.e., upward or downward), while holding the other constant (i.e., lateral). Again, they found that self-evaluations and affect were highest when downward social comparisons were made, followed by downward dimensional comparisons. On the other hand, upward comparisons were more adverse for self-evaluations and affect when the comparison type was social rather than dimensional. In sum, this article demonstrated that social comparisons have stronger effects than dimensional comparisons, and both upward and downward comparisons of either type influence one's affect and self-evaluation similarly.

Elaborating on the 2015 article, Zell and Strickhouser (2020) investigated downward and upward dimensional, social, *and* temporal comparisons on affect and self-evaluations, varying the downward/upward directions. In Study 1, they found that the effects of social comparisons were significantly larger than the effects of dimensional and temporal comparisons. They also found an unexpected, not hypothesized interaction between social and dimensional comparisons, such that dimensional comparisons buffered the effect of upward and downward social comparisons. Study 2 in this article was similar to the design of Study 1, except while varying

upward/downward comparisons for one type, they kept other comparison types constant. Using this design, they again found that social comparisons had the strongest effect on self-evaluations and affect, then dimensional, then temporal as well as an unexpected interaction of dimensional and social comparisons.

When considered jointly, these two articles are foundational in not only establishing that there are differences in the strength of dimensional and social comparisons, but also in demonstrating (albeit inadvertently) that dimensional and social comparisons should be considered together, and dimensional comparisons explain important variance in self-evaluations. However, a major limitation of these studies as it relates to the present research is that both Strickhouser and Zell (2015) and Zell and Strickhouser (2020) used an undergraduate student sample with math and verbal ability as dimensions and only assessed the impact on self-evaluations and affect on the focal dimension, neglecting the effects on the comparison dimension.

Taken as a whole, the research and theories presented thus far from the educational psychology field suggest that children hold multifaceted, hierarchical self-concepts. To derive their domain-specific self-concepts, children compare of their abilities to reference points derived from their peers, of themselves at various times, and/or of their different abilities. Changes in the self-concept resulting from these comparisons impact achievement in both focal and comparison domains via motivation, interest, investment, and other significant outcomes. It is also likely that these comparisons do not operate independently as argued in Strickhouser and Zell (2015) and Zell and Strickhouser (2020), but instead reinforce and build on one another. Finally, there is some empirical research and theory to support that these effects are not limited to children, nor to the academic dimensions prevalent in the educational psychology research but

can instead be applied more generally to adults and dimensions that are important to employee's self-concepts. However, thus far, I have primarily focused on empirical evidence and theory derived from educational psychology research and journal outlets with samples of children or young adults. It is important to understand how these ideas differ from and are similar to existing work and concepts within organizational behavior, which I examine in the next section.

LITERATURE REVIEW: DIMENSIONAL COMPARISONS VERSUS ORGANIZATIONAL BEHAVIOR CONCEPTS

Although dimensional comparison theory has never been used within the field of organizational behavior, there are many very comparable concepts to dimensional comparisons and a multidimensional self-concept that exist in the field. In this section, I compare the idea of multidimensional self-concepts in educational psychology with identity (and, in particular, multiple identities), core self-evaluations, domain-specific self-esteem (in particular, organizational-based self-esteem), the pursuit of multiple goals, and job performance. Accordingly, I demonstrate that the idea of a multidimensional self-concept as described in education research is similar to, but different from, existing concepts in organizational behavior. To conclude, I highlight research within organizational behavior that has implicitly and, in a few cases, explicitly, researched internal comparisons. I argue that organizational behavior could benefit from understanding dimensional comparison processes at work.

Before I begin comparing constructs, it is important to understand the similarities and differences in how “self-concept” is defined in both education research and organizational behavior. Even within both literatures, the definition of self-concept is perceived to be murky (Campbell et al., 1996; Shavelson et al., 1976). Central to both is that content of self-concept utilizes both description (“who am I?”) and evaluation (“how good am I?,” Campbell et al., 1996; Shavelson et al., 1976). For example, Lord et al. (1999) define the self-concept as “the broad amalgam of knowledge, experienced self-views, possible selves, and self-relevant goals that individuals see as self-relevant or self-descriptive.” From educational psychology, Shavelson et al. (1976, p. 411) define self-concept as “a person's perception of himself,” which is “formed through his experience with his environment [...] and influenced by environmental

reinforcements and significant others.” Both imply that the content of self-concept is an understanding of the self (i.e., “self-views,” “self-descriptive,” and “perception of himself”) as well as some evaluation of this sense of self (i.e., “self-relevant goals” and “environmental reinforcements”).

The primary difference in *empirical* research conducted on self-concept in the identity literature and self-concepts in educational psychology is the emphasis on description versus evaluation components of self-concepts. In the identity literature, self-concept has become interchangeable with self-identity (e.g., Ramarajan, 2014; Van Knippenberg et al., 2005), and much of the research here seeks to understand how individuals define themselves through different lenses (e.g., Lucy is an engineer and a teammate) or integrate these lenses to define oneself, such as in research on intersectionality and multiple identities (Liu et al., 2019; Ramarajan, 2014). On the other hand, educational psychology often equates self-concept with self-evaluation (e.g., Möller & Marsh, 2013; Orth et al., 2020). Consequently, much of the empirical research is grounded on evaluations of children’s specific abilities, such as test scores and grades, and much of the theoretical work is on how individuals formulate these self-evaluations, such as research on big-fish, little-pond effects and internal comparison theories, and relationships between evaluations and achievement. Therefore, although both educational psychology and organizational behavior use the term “self-concept” and the terminology they use to define self-concept is alike, the way that they theorize, discuss, and measure self-concept is slightly different. While educational psychology emphasizes the “evaluation” component, organizational behavior emphasizes the “description” component.

Dimensional Comparisons and Identity

The most related work in organizational behavior to dimensional comparisons and self-evaluations in educational psychology explores how individuals define themselves with multiple identities. In a recent review, Ramarajan (2014) integrated social psychological, micro psychological, psychodynamic/developmental, critical, and intersectional perspectives. This review highlighted how individuals can hold different descriptions of themselves, which can be related to each other and be activated together. Although the focus in this review is on *description* aspect of self-concepts (or self-identity), she argues that identities are interconnected in a network structure. Identities are related to one another, build upon each other, and various aspects are activated in different contexts. The multifaceted nature of description does provide some support to the notion that the evaluative aspect of self-concepts may also be related and/or interact. She even asserts that a poor assessment in one identity domain is likely to influence assessments in other domains, which hints at some type of comparison process across identity domains.

Similarly, in a recent review, Liu et al. (2019) explained that multidimensionality, or how multifaceted a group is in terms of the makeup of members' attributes and social relationships, is an important influence on effective group functioning. Both of these reviews highlight that the description of the self is a complex network of associations that differ across situations and contexts, presenting an even more complex view of the self than Shavelson et al.'s (1976) model for children. Because *descriptions* of the self are multifaceted and interrelated, as argued in these two reviews, *evaluations* of the self are also likely to be multifaceted and interrelated in adults. For example, Lucy may define herself as an engineer and a team player *yet* evaluate herself positively as an engineer and negatively in her teamwork.

Interestingly, and in support of integrating dimensional comparison theory into the organizational behavior literature, social comparisons play a critical role in the self-concept theorizing in the identity theories. Brewer and Gardner (1996) describe three different levels of describing and understanding the self: personal, which is built upon comparisons to relevant others; relational, which is built upon comparisons to an ideal role, and collective, which is built upon intergroup comparisons. Similarly, Lord et al.'s (1999) description of the components of working self-concepts involve comparisons to others' traits at the individual level, a comparison to a prototypical role (i.e., a social individual ideal) at the interpersonal level, and a comparison to the prototypical group (i.e., a group social ideal) the group or collective level. In self-verification research (e.g., Pelham & Swann, 1989; Swann et al., 2002; Swann et al., 1992), which investigates if the current self matches the ideal self (arguably a type of temporal comparison), a common measure (Pelham and Swann (1989) self-attributes questionnaire) introduces a social comparison when individuals are assessing their self-concepts along certain dimensions (e.g. "rate yourself compared to others on physical ability"). Thus, these articles, which have spawned many other empirical research articles on self-concepts, self-identity, and self-construal (e.g., Fehr & Gelfand, 2010; Johnson et al., 2006; Johnson et al., 2012), hinge on an underlying social comparison process to activate these identities. Again, if social comparison influences the *description* component of self-concept, then likely the field should also aim to understand how other comparison processes might similarly impact the *evaluation* component of self-concept.

Dimensional Comparisons and Core Self-Evaluations

Because this dissertation is focused on the self-evaluation aspect of a multidimensional self-concept, another relevant organizational literature is work on core self-evaluations (CSEs).

CSEs are “fundamental appraisals that people make of their own self-worth, competence, and capabilities” (Chang et al., 2012). Instead of focusing on descriptions of the self in the identity literature, and similar to self-concepts in education research, CSEs involve an evaluation of the self, measured by self-esteem, generalized self-efficacy, emotional stability, and locus of control (Judge, 1997). In line with self-verification theory, where individuals with high self-esteem will seek out positive feedback and low self-esteem will seek out negative feedback (Swann et al., 1992), high CSE individuals self-verify (i.e., seek out information that confirms their high CSE) and report higher job satisfaction (Judge & Bono, 2001). Interestingly, Judge’s (1997) criteria for traits to assess CSE requires that they be both evaluative and dispositional, which implies that CSEs are a self-evaluation that is stable across time (Chang et al., 2012). Thus, this line of research bears a considerable resemblance to Shavelson et al.’s (1976) conceptualization of global self-concepts in children, which are characterized by stability and their evaluative nature.

While the construct of CSE is measured multidimensionally (Chang et al. 2012), this does not align with the way that multiple dimensions are defined in education research. The underlying constructs of CSE of self-esteem, generalized self-efficacy, emotional stability, and locus of control are likely to be more reflective of different facets that generate a broad understanding of the self (e.g., Lucy’s assessment of herself overall), rather than a specific assessment of an individuals’ ability in one area (e.g., Lucy’s assessment of her engineering abilities). Moreover, the antecedents of CSE are not well-researched and CSE is often used as a predictor or a moderating variable, rather than a dependent variable (Chang et al., 2012). Stated differently, it is unknown how (or if) particular abilities impact a “core” self-evaluation or how this core self-evaluation develops, which is a question that work on a multidimensional self-concept and dimensional comparisons seems poised to answer. Even Chang et al. (2012, p. 87)

note that “it is not clear how CSE, a fundamental and broad evaluation of oneself that underlies other narrower evaluations, can be represented as a narrow and momentary evaluation of oneself.” Therefore, although CSE is related to Shavelson et al.’s (1976) idea of global self-concepts, the CSE literature has thus far neglected to theorize about the composition of narrow (i.e., not core) self-evaluations, which Möller & Marsh (2013) believe are formed through multiple comparison processes and may contribute to our understanding of how lower-level self-evaluations generate a broader CSE.

Dimensional Comparisons and Domain-Specific Self-Esteem

Although there has been some work on domain-specific self-esteem (Leary & Baumeister, 2000), self-esteem is not exactly the same as the evaluative component of self-concept. Self-esteem is a self-evaluation with feeling attached to it (e.g., Lucy is good at engineering, and it makes her happy versus Lucy good at engineering) and is more grounded in our subjective perceptions of our ability rather than from our objective ability (Leary & Baumeister, 2000). Yet, findings in this area may provide some preliminary evidence for a multidimensional self-concept and dimensional comparisons. Organization-based self-esteem (OBSE; Pierce et al., 1989), defined as “the degree to which organizational members believe they can satisfy their needs by participating in roles within the context of an organization” is perhaps most analogous to Shavelson et al.’s (1976) conceptualization of the “academic” self-concept in children. Indeed, OBSE theory has some of the same theoretical roots as Shavelson et al. (1976), and Pierce et al. (1989) drew upon some of this work in OBSE theory. Both the “academic” self-concept and OBSE are more specific than a global self-concept or CSE and are based in a particular context. However, like Shavelson et al. (1976) constructed for academics in children, OBSE could be further broken down into more specific sub-facets. If adults have a

hierarchical self-concept, a parallel to children would involve two primary subdimensions of work (academics in children) and non-work (non-academics in children) that may be further subdivided. For example, as academics can be divided into math and verbal, Lucy's OBSE could be divided into her engineering and teamwork competencies.

Notably, research from OBSE indicates the dimensional self-concept may be informative for the field of organizational behavior over and above a broad measure of self-esteem. In a meta-analysis of OBSE outcomes, Bowling et al. (2010) discovered that OBSE was a better predictor of work-related outcomes than general self-esteem. Thus, there may be value in understanding what dimensions form the basis of our self-evaluations at work, as they may have critical implications for those particular dimensions that may not be reflected in some broad measure (e.g., of job performance as a whole versus specific facets of job performance).

Dimensional Comparisons and Multiple Goals

Because dimensional comparisons involve self-evaluations that could occur in multiple aspects of a job, another related literature is research on the management of multiple goals. While "multiple" in this literature is conceptualized in many ways (e.g., speed versus accuracy of a goal or distal versus proximal goals; Unsworth et al., 2014), dimensional comparisons are most related to work that examines the *pursuit* of multiple goals, such as striving to improve both engineering and teamwork competencies simultaneously. Schmidt and DeShon (2007) detail how comparisons are made between performance and desired states, which produce discrepancies, which subsequently influence pursuit of goals. Importantly, they find that individuals devote resources to resolving larger discrepancies first, which is a finding that has been replicated throughout the multiple goal literature (Unsworth et al., 2014). Yet, this finding conflicts with what dimensional comparison theory might suggest, where individuals invest more

in dimensions they are already good at (i.e., one with a smaller discrepancy between current and desired end state).

One reason for the divergence might involve *where* individuals are forming the comparison – in the multiple goal literature, discrepancy (or comparison) is perceived between the desired end state of the engineering competency and current state of engineering competency, while in dimensional comparisons, the discrepancy (or comparison) is *across* competencies of the current state of engineering competencies to the current state of teamwork competencies. Dimensional comparison theory and the multidimensional self-evaluation does not involve desired end states, but instead uses a current state to inform where individuals might set a desired end state. In other words, self-evaluations derived from dimensional comparisons could *inform* discrepancies and goal setting. Indeed, based on work in educational psychology that links dimensional comparisons to actual achievement in an area, they have some effect on motivation, goal setting, and goal pursuit. Moreover, the generalized I/E frame of reference model explicitly argues that dimensional comparisons affect motivation within a dimension (Möller et al., 2016). However, dimensional comparisons may not always lead to a goal setting or goal pursuit process.

Specifically, dimensional comparisons are likely to have the greatest influence on expectancies in goal setting, or the likelihood that one can achieve a goal if effort is devoted to it (Vroom, 1964). Because dimensional comparisons affect ones' self-evaluation in both the comparison and the focal domain, it is likely that these comparisons have some effect on the perceived expectancy of achieving a goal in each domain. Multiple goal selection research suggests that individuals will devote resources to goals that are higher in expectancy (Schmidt & Dolis, 2009), which would be consistent with dimensional comparison theory where individuals invest more in domains that they have relatively high self-evaluations for. Thus, while

dimensional comparisons are not the same as the comparisons discussed in the multiple goal literature, it is very likely that dimensional comparisons play some role in the management of multiple goals.

Dimensional Comparisons and Job Performance

Finally, the multidimensional self-concept conceptualized in education is similar to, yet distinct from job performance. Individual job performance is defined “as things that people actually do, actions they take, that contribute to the organization’s goals” (Campbell & Wiernik, 2015, p. 48). As job performance is an aggregation of actions of one person that furthers organizational functioning, many scholars have offered different dimensions of performance, from the specific job performance factors derived from Project A that studied Army personnel (Campbell et al., 1990) to the general job performance factors of task versus contextual performance (Borman & Motowidlo, 1993; Borman & Motowidlo, 1997). Because there are many typologies of performance dimensions, it is likely that performance feedback along certain dimensions are a critical input (and/or output) in the development of a multidimensional self-concept and the dimensional comparison process.

While job performance may play a significant role in the formulation of a self-evaluation, it is not analogous to the self-concept described in educational psychology. Whether in aggregate or broken into specific sub-facets, job performance is derived from some *external* evaluation, rather than an *internal* self-evaluation. Therefore, sub-facets of job performance are akin to the achievement feedback (i.e., test scores, grades) that students receive in educational psychology research on dimensional comparisons. Similar to the bandwidth-fidelity issue highlighted in OBSE research, it is more likely for outcomes of dimensional comparisons of specific abilities at work to affect the specific performance outcomes to which they are related. For example,

Campbell (2012) identified eight basic factors of individual performance that are likely to carry across different hierarchical levels, job roles, and industries, as a “universal competency model of performance” (Campbell & Wiernik, 2015, p. 55). Thus, it is likely that individuals may dimensionally compare their achievement along these factors in forming their self-concept within a particular factor, and performance may serve as both an input and an output of the dimensional comparison process.

Despite my emphasis on the distinctiveness of the multidimensional self-concept and dimensional comparisons from similar concepts in organizational behavior, I do not claim that internal comparisons have never been investigated within our field or adjacent fields. Although not termed “dimensional comparisons,” (Linville, 1985, 1987) explored “self-complexity” or how individuals hold different self-aspects that comprise of their self-view. For example, in one of her studies, she allowed undergraduate students to define themselves based on their roles, relationships, activities, and personality traits, finding that more complex self-definitions insulated individuals from large swings in affect and self-appraisals following failures or successes. Though she did not test this directly, this line of work suggests the possibility of dimensional comparisons in adults. For instance, one explanation for her findings might be that individuals with more evaluations to compare to (or more reference points) may be able to use dimensional comparisons to insulate themselves from inferior performance on one particular dimension.

Beyond the scope of internal comparisons examined in educational psychology, a well-researched area in organizational behavior has explored comparisons that are to a self that has not yet been experienced. Self-regulation theory argues that we hold multiple representations of the self that we compare our present self to (i.e., the “ideal” or “who I ideally would be” and

“ought” selves or “who I should be”; Higgins, 1997) that affect our motivation and behavior. Self-verification theory argues that individuals wish to align their own perception of self with others’ perception of them (Swann et al., 1992), even going as far as to present different versions of the self to different people (Swann et al., 2002). The theory of alternative selves (i.e., “who I could have been”) suggests that we hold many representations and comparisons of our current self to other possible versions of the self (Obodaru, 2012). Although some of this OB research and theory is more focused on descriptions rather than evaluations of the self, overall, this research implies that organizational behavior has broadly considered and valued the effect that internal comparisons, whether to a different self in the past, in the real future, or in a hypothetical future, has on our cognitions and behavior, albeit not always explicitly.

To summarize, the literature reviewed thus far underscores three key ideas. First, dimensional comparisons occur in children along academic (e.g., school subjects) and non-academic (e.g., physical ability, personality traits) domains and have significant effects on children’s self-evaluations in those domains. The direction of these comparisons then prompts investment or divestment in these domains. Second, the way that dimensional comparisons and the multidimensional self-concept are conceptualized in educational psychology, as well as in this dissertation, is distinct from the way that organizational behavior conceptualizes the related constructs of identity, core self-evaluation, domain-specific self-esteem, the pursuit of multiple goals, and job performance, yet these fields offer some support for this effect within their research. For clarity, I now refer to “self-concepts” as “self-evaluations” to distinguish it conceptually from self-identity or self-descriptions. Third, different methods of comparison than social comparison is not necessarily new to OB, but dimensional comparisons have not explicitly been explored despite work across multiple literatures that seems to suggest that they may be

present in the work context. Thus, it is likely that adults hold multidimensional self-evaluations and that dimensional comparisons may occur in these self-evaluations. In the next section, I establish what this might look like at work.

DEFINING A MULTIDIMENSIONAL SELF-EVALUATION AT WORK

Given the complexity of adult lives, it is likely that there could be many ways to depict a multidimensional self-evaluation at work depending on the way that one conceptualizes of “dimensions.” In education, the dimensions underlying “academics” are simply one’s abilities in a specific subject (e.g., math, science). Such a basic and efficient view of dimensions is likely not applicable to adults, who have a multitude of ways that they can define and evaluate themselves at work, both across social groups and across different abilities. Thus, we could define “dimensions” based on different social groups that an employee is embedded in, based on different ability sets that are required of an employee, or both.

Although dimensional comparisons across contexts are likely to occur in adults and I will expand on this in the next section, I focus my hypothesizing herein on comparisons drawn across abilities *within* a particular group. I examine how employees make comparisons of different abilities to each other within one group in their work domain, which affects their psychological investment and behavior in each of these domains. Thus, relevant questions emerge of how do we define “abilities” at work and what “abilities” are most relevant?

Although Möller & Marsh (2013) use the term “abilities,” it is unlikely that we have such clear and frequent evaluations of abilities in adulthood as we do in academics through report cards and test scores. Moreover, their conceptualization is unlikely to align with the way that OB scholars conceive of abilities, as “basic capabilities” that are “stable over time” (Morgeson & Dierdorff, 2011, p. 9). Often, employees do not receive a formal “grade” other than their annual or bi-annual performance evaluation. Informal feedback could range from a congratulatory or berating email from the boss after a presentation to monthly check-in meetings with a supervisor. Another similar concept is what positive psychology terms a “character strength” (Peterson &

Seligman, 2004). However, strengths are perceived to be stable and unchanging over time and are reflective of natural tendencies, rather than changeable capabilities (Peterson & Seligman, 2004). Therefore, strengths more so reflect enduring individual differences.

Perhaps the most analogous construct in OB to the way “abilities” are defined in educational psychology are competencies, or “collections of knowledge, skills, and abilities” (Campion et al., 2011). Employees are aware of competencies and receive feedback on them regularly at work (formally or informally), and competencies are also more malleable than basic capabilities. Competencies are top-down dimensions of job performance, which cut across different roles within an organization (Campion et al., 2011), so most individuals within an organization would have a sense of how they compare both to others on certain competencies and to themselves on competencies as they change job roles (e.g., promotions or demotions). In other words, most organizations have some competency dimensions that could serve as a basis for one to form a multidimensional self-evaluation and, consequently, make comparisons across competency dimensions, timepoints, and peers. Therefore, we are likely to be acutely aware of our achievement in these areas at work, whether that information is derived informally or formally.

BOUNDING THE CURRENT RESEARCH

As noted above, there are many ways that we could conceive of “dimensions” and consider how individuals compare across dimensions within and outside of work. In this section, I detail alternative conceptualizations that could exist at work and define the logic surrounding the boundaries of my hypothesizing below.

In many organizations, smaller workgroups are often embedded in larger, interdependent systems of teams, or multiteam systems (Mathieu et al., 2002). For example, Lucy could evaluate herself as a good individual contributor on her rocket wing engineering team and a good contributor in working with external suppliers of parts for the wing. As it pertains to the work context, the way that individuals define themselves when they are embedded in teams within larger systems of teams does in fact impact the way individuals perceive their identity (Mell et al., 2019; Porck et al., 2019).

Additionally, employees might belong to multiple work groups within an organization (O'Leary et al., 2011). Consequently, employees could evaluate themselves as a valued contributor within each workgroup (e.g., Lucy is good at engineering for both the rocket wing team and for the control panel team). Indeed, identities are also affected when employees are members of multiple teams (Rapp & Mathieu, 2019). Thus, it is likely that individuals are making some level of dimensional comparisons across contexts. For example, Porck et al. (2019) describe the individual, team, and multiteam system identities as “nested” within one another, where multiple identities at various levels can be simultaneously salient.

For example, perhaps Lucy works on the rocket wing project at NASA that is interdependent with other work teams (e.g., she is a member of a team of engineers designing the rocket and works with external suppliers making parts for the rocket wing). It is likely that she

holds a different self-evaluation when presenting to her fellow NASA engineers than she might when presenting the same information to her external counterparts. Although the ability type (i.e., presentation ability) remains the same, Lucy may receive different feedback on achievement on her presentation skills in the engineering group than she does in the externally facing group, which may impact her self-evaluation in presenting in each group if she dimensionally compares her presentation abilities in both groups. This may be impactful for her as an engineer if her promotion to a higher management position requires that she can communicate well with both internal and external team members.

Aside from task-related groups, employees could be involved with affinity groups or employee resource groups (ERGs) within their companies, which are employee-led groups whose members share demographic (e.g., women), life stage (e.g., working parents), or functional characteristics (e.g., sales; Friedman et al., 1998; Welbourne et al., 2017). Additionally, employees could be involved in a multitude of different social groups in their non-work domain and could use a non-work dimension in their self-description, and thus, their self-evaluations (e.g., a church group, a hockey team, or a family unit). Thus, the complex way that employees structure their identities, or descriptions of the self, through social groups within and outside of work could inform a similarly complex, multidimensional self-evaluation.

Although lines of research around comparing self-evaluations across multiteam systems, multiple task groups, and ERGs are important, I do not examine them here. Membership in multiple social groups at work and outside of work is an evolving area of research, and there are no existing typologies of group types or levels of identity nesting to draw on. As our knowledge of the multidimensional self-description within and across social groups expands, understanding dimensional comparisons across groups may prove more accessible. Further, dimensions defined

by ability sets (e.g., math and verbal skills) aligns most closely with Möller & Marsh's (2013) dimensional comparison theory. Again, I do not argue that dimensional comparisons are irrelevant across-context and indeed this could be an interesting avenue for future exploration, but it is simply not the focus of the research here.

I could have also selected to incorporate temporal comparisons into my hypotheses as an alternative form of internal comparison, as others have (Strickhouser & Zell, 2015; Wolff et al., 2018; Zell & Strickhouser, 2020). Indeed, two notable studies in organizational behavior have also either examined temporal comparisons (Albert, 1977) directly or used temporal comparisons in their theorizing. Chun et al. (2018) explored the effects of temporal and social comparisons in perceptions of fairness of a performance evaluation process, finding that temporal comparisons were perceived as more fair than social comparisons. Similarly, Reh et al. (2018) used temporal comparison theory to explain why individuals undermine and envy peers that pose a potential future status threat. Thus, scholars in organizational behavior are beginning to recognize the importance of temporal comparison theory and incorporate these into their research. However, in this dissertation, I focus first on internal comparisons that are made across competencies at work, with the intention to expand to temporal comparisons as a part of a larger program of research detailed in my discussion.

Finally, dimensional comparison effects from educational psychology are often treated as equally necessary for student achievement – overinvesting in math and underinvesting in verbal means that the student will not be well-rounded in his or her education. If we assume that Lucy's job performance is contingent equally on her engineering (50% of the job) and teamwork (50% of the job) competencies, a dimensional comparison that results in overinvesting in her engineering competency and underinvesting in her teamwork competency would harm her

overall job performance due to this persistent imbalance. However, there may be jobs where this is not the case. Consider a surgeon, whose job requires both performing surgeries (90% of the job), but also maintaining good bedside manner (10% of the job). A comparison that results in overinvesting in surgical skills is likely to improve overall job performance, as this is far more critical to the job overall than bedside manner. Although these cases are important theoretically, I focus my theorizing here on the simplest case for the distribution of the dimensions of comparison to demonstrate effects on organizational outcomes – where two skills are equally necessary for the job role.

Thus, there are certain boundaries to the hypotheses I develop below and the theorizing herein. First, I am examining dimensional comparisons *within* one task group, rather than across levels (e.g., self, team, multiteam system, organization) or multiple groups (e.g., task and/or non-task social groups). Second, I do not include comparisons between the work and non-work domain (e.g., work group versus cycling group versus family unit). Third, I am only examining internal comparisons that occur at one point in time across competencies rather than internal comparisons that occur across the past or the future self to the present self in one competency. Fourth, for simplicity, I am considering dimensional comparisons across *two equally necessary* (50/50) competencies at work, rather than considering job roles where one competency is far more central to the role than the other or job roles with many varied competencies. Although my hypotheses are limited by these conditions, I offer further ideas for how my methods and theory could extend these boundaries in future work in the discussion section.

HYPOTHESIS DEVELOPMENT

In the following section, I apply and build upon the theories of Shavelson et al. (1976), Marsh (1986), Möller & Marsh (2013), and Möller et al. (2016) to argue that dimensional comparisons likely happen at work as they do in academics. I contend that dimensional comparisons subsequently affect performance and satisfaction in the focal domain as well as performance and satisfaction in the comparison domain. I also identify and hypothesize multiple levers that alter these relationships. Drawing on self-enhancement theory, I offer an explicit argument for the interactive effect of dimensional comparisons and social comparisons as well as considering how the importance of the dimension to the group and to the individual affects these relationships. Finally, I argue that commitment, or the psychological bonds that individuals form in these domains, underlies the relationship between dimensional comparisons, evaluations, and achievement within and across domains.

Dimensions of Comparison at Work

Although the *process* of dimensional comparisons does not differ much between childhood and adulthood, the *content* of dimensional comparisons does not remain same. In other words, after individuals depart school, they shed the multidimensional self-concept that is defined by academic and non-academic domains. Instead, work may substitute for the academic domain and non-work (i.e., leisure activities, family) is analogous to the non-academic domain. Within work, important abilities may not necessarily include math and verbal abilities. For example, Lucy's engineering job may require math abilities, but may only require minimal verbal abilities, whereas a public relations job places a great emphasis on verbal abilities and math skills are not needed as much. Thus, the content of a multidimensional self-evaluation in adults at work may vary from job to job and across individuals.

Because there are many different sets of competencies across job roles and industries, in this dissertation, I place less of an emphasis on the *content* of the competency (e.g., the knowledge, skills, and abilities required for engineering or public relations roles) and a higher emphasis on how critical these competencies are for the job role. As noted earlier, I assume here that the dimensions of comparison are two equally necessary competencies for the job role. This is due to the implications for the outcomes, discussed below. If we assume that Lucy's job role equally requires engineering and teamwork skills, then she will make drastically different choices than if her skills were *not* equally weighted. For example, if Lucy engages in a dimensional comparison that results in a higher investment in her engineering skills, this may be a dysfunctional behavior if both engineering and teamwork are equally critical for overall job success, but this may be a functional behavior if 90% of her job is based on her engineering skills. As noted earlier, this represents a key boundary condition of the theoretical arguments below, which assume the domains of comparison are weighted equally.

As described throughout the literature review, it is likely that dimensional comparisons derived from a multidimensional self-concept are present in the adult working context. In the education space, scholars have theorized (Möller et al., 2016) and found that dimensional comparisons are not limited to the frequently-researched comparisons across math and verbal abilities, but span comparisons in personality traits (Helm et al., 2017), physical abilities (Chanal et al., 2009; Tietjens et al., 2005), and different school subjects (Möller et al., 2009; Möller et al., 2020; Niepel et al., 2014; Pinxten et al., 2015). The work reviewed thus far also demonstrates that comparisons can change over time, potentially growing stronger as individuals age (Lohbeck & Möller, 2017; Marsh & Ayotte, 2003; Orth et al., 2020; Weidinger et al., 2019). Moreover, the presence of dimensional comparisons seems especially likely given the multidimensional,

complex nature of individuals' descriptions of the self at work (Liu et al., 2019; Ramarajan, 2014) and findings from OBSE (Bowling et al., 2010), which suggest that comparisons are likely to have effects that explain unique variance in domain-specific outcomes. If adults make dimensional comparisons between their competencies at work, what then is the effect on these domains?

Domain-Specific Outcomes of Dimensional Comparisons

The specificity-matching issue or the bandwidth-fidelity problem argues that one must trade off precision of the assessment with breadth of the assessment, and these issues are not new to organizational behavior (Cronbach & Gleser, 1965; Edwards, 2001). This problem suggests that high bandwidth assessments may not be as precise as low bandwidth assessments, but low bandwidth assessments are likely to assess a specific measure very well (i.e., high fidelity). Moving beyond theoretical treatments of this issue, empirical findings seem to confirm that matching the specificity of predictors to criterion can lead to additional variance explained, when broad predictors, rather than specific predictors, are used to explain broad outcomes (e.g., CSE and job performance; Judge et al., 2003) and when specific predictors, rather than broad predictors, are used to explain specific outcomes (e.g., domains of person-environment fit to specific targets of counterproductive work behaviors; Harold et al., 2016). Judge and Kammeyer-Mueller (2012) argue that the choice of a broad or specific approach should be guided by theory, evidence, and feasibility.

In the case of multidimensional self-evaluations, both theory and evidence suggest a specific approach to studying outcomes is appropriate. Möller & Marsh (2013) argue that dimensional comparison theory has primary, immediate effects on domain-specific evaluations, which could subsequently impact global self-evaluations. Empirically, education scholars have

matched specific predictors (i.e., math feedback) with specific criterion (i.e., math self-evaluations), finding significant effects as outlined previously. Although both theory and evidence on the multidimensional self-evaluation indicate that a specific approach is the most suitable, the trickier question surrounds feasibility - what *domain-specific* outcomes would these comparisons relate to in organizational behavior?

In educational psychology, the outcomes of dimensional comparisons most often investigated are evaluations and achievement in the focal and comparison dimensions. Dimensional comparisons follow a basic process: individuals receive relevant formal or informal feedback information on two dimensions, compare feedback across these two dimensions implicitly or explicitly, the comparison between the two influences how proficient they perceive they are in a particular domain, and thus their striving and achievement in that domain. Education scholars find that there are significant path-analytic relationships (often measured cross-sectionally) between performance feedback in the focal domain and self-evaluations and achievement in the focal domain as well as the comparison domain (Möller et al., 2020), which are used to argue for this process implicitly.

Moreover, experimental designs, where dimensional comparisons are made explicitly, have also supported this general process. For example, Wolff et al.'s (2018) Study 1 had two tests (figure analogies and word analogies) and provided manipulated feedback to participants where the performance on one test was better (or worse) than their performance on the other test, finding that these comparisons affected self-evaluations of the focal and the comparison dimensions. Similarly, Möller & Köller (2001) provided individuals with feedback that their performance on Task A was better (or worse) than their performance on Task B, which subsequently impacted their self-perceptions of competence on both tasks. Thus, empirical

evidence from education, where dimensional comparisons are implicitly and explicitly measured, would support that dimensional comparisons are likely to prompt shifts in domain-specific self-evaluations and achievement.

However, whether self-evaluations and achievements improve or decline from the dimensional comparison is dependent on the valence of the comparison. As reviewed earlier, dimensional comparison theory posits that downward comparisons (i.e., focal dimension is better than the comparison dimension) are likely to produce more positive self-evaluations in the focal dimension and more negative self-evaluations in the comparison dimension (Möller & Marsh, 2013). Upward comparisons (i.e., the focal is worse than the comparison) are posited to have the opposite effect, where self-evaluations in the focal dimension are weakened and strengthened in the comparison dimension. As described above, these contrast effects are generally supported in studies in the field, where dimensional comparisons are implicitly assumed (Möller et al., 2020), and in the lab (Müller-Kalthoff, Jansen, et al., 2017; Wolff et al., 2018) where dimensional comparisons are explicitly made for the participant. Therefore, if the process of dimensional comparison is the same across one's lifespan and generalizes to adulthood, it is likely that if the dimensional comparison is more downward in direction than upward, self-evaluations and achievement in the focal domain are higher and self-evaluations and achievement in the comparison domain are lower. Conversely, upward dimensional comparisons at work are likely to diminish self-evaluations in the focal domain and elevate self-evaluations in the comparison domain. Simply put, the better-off domains get better, and the worse-off domains get worse.

When individuals are at work, "self-evaluations" in each domain are likely to be reflected in satisfaction in a particular domain. Although scholars to date have not considered how comparisons across different dimensions impacts evaluations within a particular domain,

scholars have long explored satisfaction with different facets of the job and the self. For example, organizational researchers have measured satisfaction toward the job, which is defined as an overall evaluative judgment of the job (Weiss, 2002), both as an overall measure and with different dimensions of the job (e.g., pay, promotions; McFarlin & Rice, 1992). Similarly, individuals have measured satisfaction in different domains of life, such as “family satisfaction,” “marital satisfaction,” “life satisfaction,” and “team satisfaction” (Heller & Watson, 2005; Lapierre et al., 2008; Rice et al., 1992; Van der Vegt et al., 2001). Research on varied targets of satisfaction at work and outside of work have important implications, as it suggests that individuals form domain-specific evaluations of specific areas of at work and in life. Thus, if satisfaction reflects an evaluative judgement of a particular domain, then it follows that dimensional comparisons are likely to impact satisfaction within that domain.

Further, if self-focused downward social comparisons prompt pride while self-focused upward social comparisons prompt depression and shame (Smith, 2000), then these emotions are may influence positive or negative attitudes towards each domain for dimensional comparisons as well. If Lucy perceives her engineering competency is better than her teamwork competency, then she may feel pride, and consequently, higher satisfaction, in her engineering and shame or depression about her teamwork competency, and, as a result, lower satisfaction.

Therefore, if individuals perceive they are performing better in the focal domain than the comparison domain (a downward comparison), they are more likely to be satisfied with the focal domain and dissatisfied with the comparison domain. Conversely, if individuals perceive they are doing worse in a domain, they are more likely to be dissatisfied in the focal domain and satisfied with the comparison domain. Therefore:

Hypothesis 1: *The valence of the dimensional comparison (where downward comparisons are positively valenced and upward comparisons are negatively valenced) is a) positively related to satisfaction in the focal domain and b) negatively related to satisfaction in the comparison domain.*

Similarly, “achievement” is a particularly important outcome of dimensional comparisons in educational psychology (Möller et al., 2020). When individuals are at work, “achievement” could be represented as performance in a particular domain. As described earlier, job performance is multidimensional (Campbell, 2012; Borman & Motowidlo, 1993, 1997). While performance feedback along dimensions can be an *input* in the development of a multidimensional self-concept and the dimensional comparison process, they are also an *output* of the same process. When individuals engage in dimensional comparisons, the resulting investment in each area is likely to impact one’s performance in each area. For example, Lucy perceives that her engineering competency is better than her teamwork competency, she is likely to make investments in her engineering competency and divest from her teamwork competency. If she invests more in engineering, then she is likely to achieve more in her engineering competency than in her teamwork competency as there are more resources devoted to this domain. Thus,

Hypothesis 2: *Valence of the dimensional comparison (where downward comparisons are positively valenced and upward comparisons are negatively valenced) is a) positively related to performance in the focal domain and b) negatively related to performance in the comparison domain.*

Levers of Dimensional Comparisons: The Roles of the Importance of Focal Dimension to the Group and to Individuals

Now that I have established that comparisons along these two dimensions are relevant to domain-specific evaluations and achievement in the workplace, it is important to understand major differences between multidimensional self-evaluations at work and in academics. In education research, the bulk of the dimensions explored have been within the academic context (Möller et al., 2020). As a result, most of dimensional comparison research to date is based on dimensions that are equally important to the individual and to the group in an overall academic self-evaluation. For example, a principal does not tell students that math is more important than verbal skills in school. SAT scores is the sum of scores of the two sections (which are essentially math and verbal abilities), and GPAs factor in grades from each subject equally. Thus, generally speaking, dimensions within a multidimensional academic self-evaluation are often equally important to an overall evaluation, both from the individuals' perspective and from the organization's perspective. However, at work, while the criticality of these two domains to overall job role may be the same across individuals (e.g., Lucy's 50/50 split across engineering and teamwork), the importance placed on these domains may vary by group and by individual.

At the group level, many OB theories demonstrate how individuals, groups, or entities directly or indirectly transmit norms, attitudes, emotions, and behaviors to others. For example, work on social learning theory (Bandura, 1986; Bandura & McClelland, 1977) argues that individuals learn and mimic the behavior of others through social interactions, and work on social influence (Cialdini & Goldstein, 2004) demonstrates that individuals will conform to group norms to aid in preserving a positive self-evaluation. Similarly, OB scholars have argued for many different ways that we transfer our behaviors and attitudes to others. Leader behaviors,

whether positive (e.g., ethical leadership; Mayer et al., 2012; Mayer et al., 2009; Schaubroeck et al., 2012) or negative (e.g., abusive supervision; Hoobler & Brass, 2006; Liu et al., 2012; Mawritz et al., 2012) can “trickle down” to lower-level employees. Emotions in groups are “contagious” (Barsade, 2002; Pugh, 2001), whereby individuals “catch” emotions from others, such that individual emotions influence the emotions of others in the group. In fact, Wo et al. (2019, p. 2226) discuss the many ways that we can transmit our emotions, behaviors, attitudes, and perceptions to others through “trickle-down, trickle-out, trickle-up, trickle-in, and trickle-around” effects. Simply put, at work, we are highly susceptible to the influence of others. Consequently, it is likely that the perceived importance that the group places on each dimension impacts one’s interpretation of the feedback related to that dimension and the effect of the comparison on evaluations and achievement. Notably, it is not an *aggregate* measure of importance – what is critical to this effect is each individual’s *perception* of what domains are important to the group rather than some group consensus around what domains are important.

Specifically, individuals may perceive different importance of the focal domain to the group. When focal domain is perceived to be higher in importance to the group, it is likely to produce stronger effects of both upward and downward comparisons. If the focal domain is particularly important, then a favorable (i.e., downward) comparison, where the focal is better than the comparison, is likely to produce an even higher evaluation and achievement level as individuals perform well on a socially valued skill. On the other hand, an unfavorable (i.e., upward) comparison, where the focal is worse than the comparison, is likely to produce even lower evaluations and achievement in the focal domain. For example, if Lucy perceives her group places a high importance on her engineering competency, receives feedback that her engineering competency is better than her teamwork competency, then it is likely her evaluation

and achievement will be even higher in her engineering competency. Conversely, if she perceives that the NASA team places a greater emphasis on working well with others, then perhaps a downward comparison of engineering (focal) and teamwork (comparison) would not have as great of an effect on evaluations and achievement in her engineering competency. She would hold a lower evaluation of and achievement in the teamwork (comparison) domain, as that is what is important to the group. Therefore, the effects of dimensional comparisons on satisfaction and performance in the focal and the comparison domain are likely to be shaped by the perceived importance of the domain to the group.

Hypothesis 3a: *The positive relationship between the valence of dimensional comparisons and satisfaction in the focal domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is more positive when the focal domain is high (versus low) in importance to the group.*

Hypothesis 3b: *The negative relationship between the valence of dimensional comparisons and satisfaction in the comparison domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is less negative when the focal domain is low (versus high) in importance to the group.*

Hypothesis 4a: *The positive relationship between the valence of dimensional comparisons and performance in the focal domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is more positive when the focal domain is high (versus low) in importance to the group.*

Hypothesis 4b: *The negative relationship between the valence of dimensional comparisons and performance in the comparison domain is moderated by the perceived*

importance of the focal domain to the group, such that the relationship is less negative when the focal domain is low (versus high) in importance to the group.

Although group-level importance certainly has a major influence on the relationship between dimensional comparisons and evaluations and achievement, it is also likely that individual perceptions of the importance of the dimension shape these relationships as well. It is important to differentiate between these individual-level contingent areas and group-level contingent areas, as they may not align. For example, Lucy might have a group that highly values technical abilities, but to her, building great relationships at work is most important. Thus, it is critical to examine effects of both, as they may operate differently.

As argued in the literature review, self-esteem is not precisely the same as self-evaluations, but work in the area of contingent self-esteem (Crocker & Wolfe, 2001) may inform how we understand what dimensions are applicable and self-relevant to individuals. The basic premise from this research is that individuals may ground their self-esteem more strongly in certain domains of their life, such as job performance (Ferris et al., 2015; Ferris et al., 2010), academic competence (Crocker, Karpinski, et al., 2003; Crocker, Luhtanen, et al., 2003), and romantic relationships (Knee et al., 2008). Indeed, in their measurement development of the scale of contingent self-esteem, Crocker, Luhtanen, et al. (2003) articulated different domains on which self-esteem could be contingent (e.g., academic competence, appearance, competition).

At work, when individuals' self-esteem is less contingent on work performance, they are more affected by their self-esteem level at work (Ferris et al., 2009a; Ferris et al., 2015; Ferris et al., 2010). One explanation for these findings is that individuals who place a high importance on a particular domain are unlikely to adjust their behaviors based on how they perform in the group, because they value that domain so much personally. In the context of a dimensional

comparison, this could imply that individuals, who place a high importance on one particular domain, will continue to strive in that domain regardless of their comparisons across domains. For example, Lucy, who places a substantial individual importance on her engineering competency, is likely to still invest and strive in engineering even if it is worse than her teamwork competency. On the other hand, if she does not see it as particularly important, she might adjust her investment in engineering based on the comparisons she makes to other domains. Thus, this suggests that dimensional comparisons are less salient for individuals who place a high importance on the focal domain.

Hypothesis 5a: *The positive relationship between the valence of dimensional comparisons and satisfaction in the focal domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is more positive when the focal domain is low (versus high) in importance to the individual.*

Hypothesis 5b: *The negative relationship between the valence of dimensional comparisons and satisfaction in the comparison domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is less negative when the focal domain is high (versus low) in importance to the individual.*

Hypothesis 6a: *The positive relationship between the valence of dimensional comparisons and performance in the focal domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is more positive when the focal domain is low (versus high) in importance to the individual.*

Hypothesis 6b: *The negative relationship between the valence of dimensional comparisons and performance in the comparison domain is moderated by the perceived*

importance of the focal domain to the individual, such that the relationship is less negative when the focal domain is high (versus low) in importance to the individual.

Levers of Dimensional Comparisons: Social Comparisons

Another major difference between academics and the work context is the role of social comparison effects in the dimensional comparison process. In education, there has been considerable debate about whether social and dimensional comparison effects operate independently or jointly, though the original theory speculated that these effects may be partially independent and partially interdependent (Möller & Marsh, 2013). Some studies that have examined joint social and dimensional comparisons have found no interaction (Möller & Köller, 2001; Müller-Kalthoff, Helm, et al., 2017), arguing that this supports independent effects. Yet, others have found interactions between social and dimensional (Strickhouser & Zell, 2015; Wolff et al., 2018; Zell & Strickhouser, 2020), supporting interdependent effects. Although these studies have investigated how social and dimensional comparisons reinforce one another, none have explicitly theorized and tested the interdependence of these two comparisons. Within the studies that have looked at all three comparison types, social comparisons have the strongest effect on self-evaluations, then dimensional comparisons, with temporal comparisons showing weak or no effect on self-evaluations (Strickhouser & Zell, 2015; Wolff et al., 2018; Zell & Strickhouser, 2020). That said, many studies either have had low sample sizes (Wolff et al., 2019) or correlational designs (Möller & Köller, 2001; Müller-Kalthoff, Helm, et al., 2017), which can make it difficult to deduce how (or if) these two types of comparisons reinforce one another to affect domain-specific satisfaction and performance.

Within organizational behavior, social comparisons play a foundational role in many streams of research. As an example, Adams (1965) equity theory incorporated the tenant of

relative deprivation from social comparison theory (Festinger, 1954) to explain why individuals experience (un)fairness when their own input-output ratio is (un)favorable compared to relevant others (Greenberg, 2011; Greenberg et al., 2007). Following this logic, distributive justice perceptions could be derived from a social comparison of one's outcomes to another's outcomes. Embedded in the consistency rule of procedural justice (Thibaut & Walker, 1975) is a social comparison, where one compares the current procedures with the procedures used with a different person (or temporally, across time). Finally, interactional justice (Bies & Moag, 1986) examines how one is treated and how this compares to expectations (derived from past experiences or others' experiences). Justice is not the only OB literature where social comparisons are central to theory. Social comparisons are used to explain effects in performance appraisals and compensation (Harris et al., 2008; Jackson et al., 1992; Obloj & Zenger, 2017; Tenbrunsel & Diekmann, 2002; Trevor & Wazeter, 2006), leader-member exchange relationships (Hu & Liden, 2013; Tse et al., 2013; Vidyarthi et al., 2010), workplace gossip (Brady et al., 2017), and identity (Brewer & Gardner, 1996; Lord et al., 1999). Clearly, social comparisons are deeply embedded in organizational behavior processes and are relevant for individuals, which suggests that individuals may use some combination of dimensional and social comparisons at work.

Because individuals seek to maintain a positive self-image and be positively viewed by others (Sedikides & Gregg, 2008) and a positive self-image protects oneself from threats and helps promote positive well-being (Ferris & Sedikides, 2018), it is likely that the combination of dimensional and social comparisons are most potent when used to self-enhance. Dimensional comparison theory argues that these comparisons across dimensions are automatic and spontaneous as long as the relevant feedback information is available to individuals (Möller &

Husemann, 2006; Möller & Marsh, 2013), so it is likely that these comparisons are not done deliberately, but instead are fairly automatic. Additionally, Linville's (1985; 1987) work, which found that high "self-complexity" preserved individual's self-appraisals following failures or successes, underscores that those who have more frames of reference to draw on to compare a dimension to (e.g., both an internal dimensional reference and an external social frame of reference) can better maintain a positive self-evaluation following failure. Thus, in the presence of negative (upward) *dimensional* comparisons, individuals tempering these unfavorable comparisons with downward *social* comparisons to preserve their positive self-image (whether intentionally or unintentionally) are likely to produce more positive evaluations and achievement in the focal domain.

On the other hand, when individuals experience negative (upward) *social* comparisons, individuals tempering these upward social comparisons with downward *dimensional* comparisons to preserve their positive self-image (again, intentionally or unintentionally) are likely to produce more positive evaluations in the focal domain. For example, if Lucy makes an unfavorable dimensional comparison between engineering and teamwork competencies (e.g., "I'm so much worse at engineering than I am getting along with my team"), but then is able to buffer this with a favorable social comparison (e.g., "but, I'm much better at engineering than Sally!"), she may hold a more positive evaluation for and higher achievement in that focal domain than if she instead engaged in an unfavorable social comparison (e.g., "and, ugh, I'm much worse at engineering than Sally!"). In other words, individuals who maintain compensatory social and dimensional comparisons due to self-enhancement motives are likely to subsequently impact domain-specific outcomes. Thus,

***Hypothesis 7a:** The positive relationship between the dimensional comparison valence and satisfaction in the focal domain is moderated by social comparison valence in the focal domain, such that the relationship is more positive when social comparison valence is more downward than upward.*

***Hypothesis 7b:** The negative relationship between the dimensional comparison valence and satisfaction in the comparison domain is moderated by social comparison valence in the focal domain, such that the relationship is less negative when social comparison valence is more downward than upward.*

***Hypothesis 8a:** The positive relationship between the dimensional comparison valence and performance in the focal domain is moderated by social comparison valence in the focal domain, such that the relationship is more positive when social comparison valence is more downward than upward.*

***Hypothesis 8b:** The negative relationship between the dimensional comparison valence and performance in the comparison domain is moderated by social comparison valence in the focal domain, such that the relationship is less negative when social comparison valence is more downward than upward.*

Linking Dimensional Comparisons, Satisfaction, and Performance: Domain-Specific Commitments

In the previous section, I hypothesized that dimensional comparisons affect satisfaction and performance in each domain and that these are tempered by social comparisons and the perceived importance of the dimension to the group as well as to the individual. However, I have not speculated on *why* dimensional comparisons have these effects on satisfaction and performance.

Aside from evaluations and achievement, the most studied outcomes of dimensional comparisons in education surround one's investment in each domain. Often in an attempt to explain why dimensional comparisons affect self-evaluations and achievement in each domain, education scholars have studied how dimensional comparisons affect students' value of the subject (Gaspard et al., 2018), interest in the subject (Gaspard et al., 2019; Sorge et al., 2019; Umarji et al., 2018), and affect towards the domain (Arens et al., 2017; Möller & Köller, 2001; Strickhouser & Zell, 2015; Zell & Strickhouser, 2020). These findings suggest that the dimensional comparison process induces different investments across domains, which subsequently impact evaluations and achievement in each domain. Understanding this investment/divestment process is crucial in education because the outcomes of these trade-offs result in tangible long-term consequences. Indeed, this basic theoretical process has been used to explain why dimensional comparisons relate to selection of college majors (Gaspard et al., 2019; Umarji et al., 2018), desires to pursue STEM fields (Guo et al., 2018), and has been used to explain the gender gap in math-related careers (Lazarides & Lauermann, 2019; Saß & Kampa, 2019). Therefore, in organizational behavior, it is critical to understand how dimensional comparisons affect investment (or divestment) in certain domains as this investment over time could impact further downstream outcomes than just immediate satisfaction and performance as highlighted here, such as the pursuit of managerial positions, the development of job-related skills and knowledge, and even the desire for internal (or external) job mobility.

One such measure that may prove useful and may reflect investment in a domain at work is commitment to the domains of comparison. Over the years, many scholars have theorized on distinct types and targets of commitment. To name only a few, Hollenbeck et al. (1989) explored commitment to goals, Allen and Meyer (1996) argued for three types of organizational

commitment rooted in reasons for staying (or for not leaving), and Ellemers et al. (1998) discussed differences in commitment to one's career, team, and organization. Clearly, in the commitment literature, there is a wide variety of dimensions and targets of commitment to select from, as in the satisfaction and performance literatures.

With this in mind, Klein et al. (2012) developed the theory of target-free commitment. In this theory, they posit that most of these different conceptualizations of commitment can be consolidated to one bond type. This commitment bond is characterized by “volitional dedication to and responsibility for” a target (Klein et al., 2012, p. 130). Therefore, commitments could be a signal of psychological investment – “responsibility” suggests some kind of psychological obligation to the domain, while “dedication” suggests some kind of devotion of psychological resources. Again, dimensional comparison theory and research suggests that dimensional comparisons are likely to result in differential investments in each domain. Assuming that commitment is an expression of psychological investment, it then follows that more downward dimensional comparisons at work result in higher commitments to the focal domain and lower commitments in the comparison domain. While certainly there are other more behavioral or psychological outcomes that are relevant consequences of dimensional comparisons and domain-specific self-evaluations, this conceptualization offers a number of benefits theoretically and empirically.

Importantly, and in line with a conceptualization of a multidimensional self-evaluation, this theory distinguishes between commitment and identification. While identification integrates the self with the target (i.e., I am a part of this organization), commitment does not require integration (i.e., I am dedicated to this organization; Klein et al., 2014; Klein et al., 2012). Thus, individuals may hold many different domains of self-descriptions (i.e., self-identities) and self-

evaluations, which are distinct from their commitment to these domains. In addition, Klein et al.'s (2012) theory allows for multiple commitments to be held, which do not necessarily need to conflict and allows for commitments to be directly compared to each other with a simple assessment (Klein et al., 2014). Consequently, the theory around and validation of this construct not only allows for an investigation of an outcome that reflects the investment resulting from dimensional comparisons, but it also does so in a way that also allows for a comparison of these commitments across domains.

As discussed earlier, when individuals compare across dimensions, they are likely to experience higher satisfaction and performance in domains that are better-off and lower satisfaction and performance in domains that are worse-off comparatively. Empirical work in education contends that these comparisons correspond to the investment decisions that individuals make – investing in better-off domains and divesting from worse-off domains. Even Klein et al. (2012) speculated on the role of evaluations in commitment, arguing that more positive evaluations are related to elevated levels of commitment. Commitment to a target demonstrates responsibility for and dedication to a target, which represents one way of investing in a domain. Specifically, when individuals engage in more favorable (i.e., downward) dimensional comparisons, individuals commit to (or invest in) focal domains that are better off comparatively and decommit from (or divest from) comparison domains that are worse-off. Following a dimensional comparison, individuals' satisfaction and performance in the focal and comparison domains can be explained by their commitment to (or investment in) those domains. Thus,

***Hypothesis 9a:** Commitment in the focal domain mediates the positive relationship between valence of the dimensional comparisons and satisfaction in the focal domain.*

Hypothesis 9b: Commitment in the comparison domain mediates the negative relationship between valence of the dimensional comparisons and satisfaction in the comparison domain.

Hypothesis 10a: Commitment in the focal domain mediates the positive relationship between valence of the dimensional comparisons and performance in the focal domain.

Hypothesis 10b: Commitment in the comparison domain mediate the negative relationship between valence of the dimensional comparisons and performance in the comparison domain.

Additionally, focal-free commitment is theorized to be a “socially constructed psychological state” (emphasis added; Klein et al., 2012, p. 137), which aligns with the social comparison and group importance moderating factors. Because these commitments are shaped by social factors, certainly interactions of dimension comparisons with comparisons to others and the perceived importance of the domain to the group influences commitment levels. If individuals engage in a compensatory comparison process, it is possible that the social forces that shape the satisfaction and performance effects of dimensional comparisons will also influence the underlying investments that one makes in those dimensions. Individuals who engage in self-enhancement also may feel that further investing in domains they excel at may reap further rewards of higher satisfaction and performance in those domains, while divesting from underperforming domains may mitigate further losses in those domains. Similarly, if individuals perceive a higher group importance placed on certain domains, then committing to those domains (as a result of higher self-evaluations) will also result in social benefits for the individual, as they demonstrate competence in a socially valued domain. Therefore,

Hypothesis 11a: Social comparison valence in the focal domain will moderate the indirect effect of the valence of dimensional comparisons and task satisfaction via

commitment in the focal dimension, such that the indirect effect is positive and strongest when social comparison valence is downward (vs upward).

Hypothesis 11b: *Social comparison valence in the focal domain will moderate the indirect effect of the valence of dimensional comparisons and group satisfaction via commitment to the comparison dimension, such that the indirect effect is negative and weaker when social comparison valence is downward (vs upward).*

Hypothesis 12a: *The importance of the focal dimension to the group will moderate the indirect effect of the valence of dimensional comparisons and task satisfaction via commitment to the focal dimension, such that the indirect effect is positive and strongest when the importance of the focal dimension to the group is higher (versus lower).*

Hypothesis 12b: *The importance of the focal dimension to the group will moderate the indirect effect of the valence of dimensional comparisons and group satisfaction via commitment in the comparison dimension, such that the indirect effect is negative and weaker when the importance of the focal dimension to the group is higher (versus lower).*

OVERVIEW OF STUDIES

Because no study is without flaws (McGrath, 1981), the two studies planned here test these hypotheses with alternative and complementary approaches. Study 1, a vignette design, extends my running example from my theory development of Lucy the NASA engineer. I ask participants to put themselves in Lucy's position in a variety of different experimental scenarios and report how they would feel. In Study 2, an experimental design involving a case study, invokes comparisons *explicitly* as has been done in educational and social psychology experiments, but only tests main effects of dimensional comparisons as well as interactions with social comparisons on satisfaction outcomes. In this study, I vary the direction of the dimensional comparison and direction of the social comparison. Results are tested through ANOVAs, planned comparisons, mediation tests, and the index of moderated mediation (Hayes, 2015). Although I test mediation in Study 1 and 2, I do not establish temporal precedence in Study 1 and 2.

I build on this design in Study 3 through examining dimensional comparisons implicitly through empirical approaches that are both familiar and unique to this area of research. I begin by testing two alternative operationalizations of dimensional comparisons in a pilot test. One operationalization asks participants directly how much they compare and the other asks participants to report their competency in each domain and empirically models the comparisons across the dimensions. I also ask half of the participants to explicitly reflect on the dimensional comparison between two domains. I then test all of my hypotheses, including the hypothesized interactive effects of importance of the dimension to the individual and importance of the dimension to the group.

STUDY 1 METHODS

Sample and Procedure

In Study 1, I conducted a vignette study. I recruited 503 participants for this study through an online sample collected via CloudResearch. Participants were paid \$2.00 for their participation. 441 participants were in the primary conditions for the study, and the remainder were in the supplemental condition (absolute performance feedback). For the 441 participants, 246 individuals identified as male (55.8%), 190 identified as female (43.1%), 3 identified as gender variant/non-conforming (1%), 1 identified as transgender female, and one participant declined to report their gender. 316 individuals identified as White/Caucasian (71.7%), 27 identified as Black American (6.1%), 26 identified as Hispanic/Latino/Chicano/Puerto Rican (5.9%), 21 identified as East Asian (4.8%), 16 identified as Black non-American (i.e., African, West Indian, etc.; 3.6%), 11 identified as South-East Asian (2.5%), 7 identified as South Asian (1.6%), 3 identified as Pacific Islander (.7%), 14 identified as Bi-racial/Mixed Race/Multicultural or other (3.2%). The average age of the participants was 40.3 years ($SD = 10.9$ years).

Participants read a story about Lucy, the NASA engineer. They were told that Lucy's job requires two skills that are weighted equally – her engineering skills and her teamwork skills – and a description of how these skills were relevant for her job. Participants then read two pieces of feedback on these two skills. One piece of feedback was on how one dimension compares to another (e.g., “Lucy's engineering abilities are **BETTER** than her teamwork skills”), and another was on how the focal dimension compares to others' ratings (e.g., “Lucy's engineering abilities are **BETTER** than her coworkers' engineering abilities”). Thus, participants were randomly assigned to be presented with a comparison that is either downward social/downward dimensional, downward social/upward dimensional, lateral social/downward dimensional, lateral

social/lateral dimensional comparison, lateral social/upward dimensional, upward social/downward dimensional comparison, or upward social/upward dimensional (seven conditions). I included one exploratory condition that examines absolute performance (see exploratory analyses section for this study). Then, participants are asked to respond to items for commitment and satisfaction for each dimension as if they were Lucy. Full text for the conditions and the study is included in the Appendix.

Measures

The stems for all of the questions ask participants to rate their agreement with items on a five-point scale (1 = strongly disagree to 5= strongly agree), as if they were Lucy. For satisfaction in each domain, I adapted a three-item measure from Brayfield and Rothe (1951) to be domain-specific. A sample item includes “I would feel fairly satisfied with my engineering skills.” Coefficient alpha for this three-item measure was .95 for the engineering domain and .95 for the teamwork domain.

For commitment, I adapted measures from Klein et al. (2014) for each ability dimension. A sample item includes “How committed would you be to your engineering skills?” This target-free commitment measure has been extensively psychometrically validated across different targets of commitment (e.g., goal commitment, team commitment, organizational commitment). Coefficient alpha for this three-item measure was .96 for the engineering domain and .96 for the teamwork domain

I also measured competency in each domain as a manipulation check. For competency, I will adapt measures used Zell & Strickhouser (2020) for each ability dimension. A sample item includes “I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.” Full measures are included in the Appendix.

STUDY 1 RESULTS

I analyzed my results in Stata version 13.1 for pairwise comparisons and ANOVAs, and Mplus version 7 was used for mediation and mediated moderation analyses. Participants who failed the manipulation check, or report they strongly disagree, disagree, or somewhat disagree with the corresponding statement for their condition, were excluded from the analysis. 23 individuals failed the manipulation check and were dropped from subsequent analyses. The 23 individuals did not differ significantly from the other 418 individuals in terms of ethnicity, job rank, or age. Table 1 contains the descriptive statistics and correlations for Study 1, and Table 2 contains the means and standard errors across conditions.

For Hypotheses 1a and 1b, I used pairwise comparisons to determine the difference between conditions for upward, downward, and lateral dimensional comparisons amongst the lateral social comparison conditions. Hypothesis 1a predicted that there would be a positive relationship between dimensional comparison valence and satisfaction in the focal domain, while Hypothesis 1b predicted there would be a negative relationship between dimensional comparison valence and satisfaction in the comparison domain. The one-way ANOVA was significant for satisfaction in the focal domain ($F(2, 164) = 78.73, p < .01$). Further, pairwise comparisons revealed that focal domain satisfaction for upward dimensional comparisons ($M = 3.02, S.E. = .10$) was significantly lower than for lateral ($M = 4.59, S.E. = .09$) and downward dimensional comparisons ($M = 4.59, S.E. = .11$). A contrasting pattern emerged for satisfaction in the comparison domain. The one-way ANOVA was significant for satisfaction in the comparison domain ($F(2, 164) = 35.42, p < .01$). Further, pairwise comparisons revealed that comparison domain satisfaction for downward dimensional comparisons ($M = 3.21, S.E. = .12$) were significantly lower than lateral ($M = 4.56, S.E. = .11$) or upward dimensional comparisons ($M =$

4.11, S.E. = .12). Thus, both Hypothesis 1a and 1b were supported. Plots of these findings can be found in Figure 1 and 2. Individuals who were better in one area over another were more satisfied in their better-off domain and less satisfied in their worse-off domain.

For Hypotheses 7a and 7b, I used ANOVAs to determine the significance of the overall model and the interactions of dimensional and social comparison. Hypothesis 7a predicted that social comparison valence would moderate the effect of dimensional comparison valence on focal domain satisfaction (more positive when social comparison valence is more downward than upward), while Hypothesis 7b predicted this moderation effect on comparison domain satisfaction (less negative when social comparison valence is more downward than upward). The significance of the two-way ANOVA was significant for focal domain satisfaction ($F(6, 417) = 64.02, p < .01$) and the comparison domain satisfaction ($F(6, 417) = 20.32, p < .01$). However, the interaction term was significant for focal domain satisfaction ($F(2, 417) = 4.19, p < .05$), but not for comparison domain satisfaction ($F(2, 417) = .47, p > .05$). Results for the interaction on the focal domain for Hypotheses 7a are plotted on a bar chart by condition in Figure 3. As shown in Figure 3, satisfaction was higher when downward social comparison dimensions were made over upward social comparison dimensions, regardless of if the dimensional comparison was upward or downward. Thus, individuals who say they are “worse at this than that,” but are able to buffer this with “but, I’m better at this than Sally!” experience higher satisfaction in “this” than those who say “this” is the same or worse than Sally.

For Hypothesis 9 and 11, I tested mediation in MPlus using bias-corrected bootstrapping with 1,000 replications to create a confidence interval around the indirect effect. For Hypothesis 9, which hypothesizes that domain-specific commitment mediates the relationship between dimensional comparison valence and domain-specific outcomes, I used a subset of the sample,

where social comparisons were kept constant. The 95% confidence interval around the indirect effect of dimensional comparisons on focal domain satisfaction via focal domain commitment did not include zero and was positive ($IE = .266$, 95% $CI = [.134, .399]$). Additionally, the indirect effect of dimensional comparison on comparison domain satisfaction via comparison domain commitment was negative, but did include zero ($IE = -.16$, 95% $CI = [-.33, .001]$). Thus, Hypothesis 9a was supported, but Hypothesis 9b was not. Therefore, individuals who say they are “better at this than at that” have higher satisfaction in the focal domain due to their higher focal domain commitment that results from this comparison process.

Finally, I tested the hypothesized moderated mediation in Hypotheses 11 using a bias-corrected bootstrapped 95% confidence interval around Hayes’s (2015) index of moderated mediation with 1,000 replications. Hypothesis 11 predicted that social comparison valence would moderate the indirect effect of dimensional comparisons on focal domain satisfaction (11a) and comparison domain satisfaction (11b), such that these relationships would be more positive in the focal domain for downward social comparisons and less negative in the comparison domain for downward social comparisons. The 95% confidence interval around the index of moderated mediation did not include zero for both focal domain satisfaction as an outcome (Index = $-.11$, 95% $CI = [-.20, -.029]$), but did include zero for comparison domain satisfaction as an outcome (Index = $.071$, 95% $CI = [-.04, .19]$). The conditional indirect effect for downward social comparisons was lower ($IE_{\text{downward}} = .171$, 95% $CI = [.08, .258]$) than the conditional indirect effect of upward social comparisons ($IE_{\text{upward}} = .381$, 95% $CI = [.253, .509]$). Thus, Hypothesis 11a and 11b were not supported. Although favorable social comparisons do not play a role in the comparison domain, an unfavorable social comparison can be offset by a favorable dimensional

comparison, which impacts one's satisfaction to the domain through investments made in the focal domain.

Study 1 Supplemental Analyses

As noted above, I included a supplemental condition where Lucy simply receives feedback that she is performing above expectations. Shown in Table 2, the means for satisfaction in the focal domain for the absolute condition ($M = 4.73$, $S.E. = .10$) were not significantly different from the downward social/downward dimensional condition ($M = 4.70$, $S.E. = .11$), the downward dimensional/lateral social ($M = 4.60$, $S.E. = .10$), or lateral social/lateral dimensional conditions ($M = 4.59$, $S.E. = .11$). However, when unfavorable comparison information was introduced (i.e., when an upward dimensional or social comparison was present), there was a significant difference from the absolute positive feedback condition. Additionally, for the comparison domain, absolute positive feedback ($M = 4.43$, $S.E. = .13$) was not significantly different from the lateral social/lateral dimensional condition ($M = 4.56$, $S.E. = .13$), but it was significantly different from the other conditions that would have been favorable for the comparison dimension, such that it was lower when an upward dimensional comparison was paired with an upward social comparison ($M = 3.33$, $S.E. = .12$), with a lateral social comparison ($M = 3.99$, $S.E. = .13$), and with a downward social comparison ($M = 3.81$, $S.E. = .14$). Thus, while favorable absolute feedback may not differ much from favorable relative feedback, the largest difference between absolute and relative feedback occurs in outcomes in comparison domain.

STUDY 1 DISCUSSION

Through a vignette design where participants put themselves in the shoes of “Lucy the NASA Engineer,” Study 1 tested if dimensional comparisons had any effects on outcomes relevant to the work domain. There were indeed effects of dimensional comparisons on satisfaction in both the focal and comparison domains – individuals who said they were “better at this than that” experienced higher satisfaction in “this” and lower satisfaction in “that.” Further, I found evidence for a buffering effect of social comparisons, such that unfavorable social or dimensional comparisons can be offset by corresponding favorable comparison for the focal domain. Lucy could offset the negative effects of saying to herself “I’m worse at this than that” if she says “but, I am better than Sally at this!” Additionally, commitment to the focal domain underlies this relationship in the focal domain – the dimensional comparison process affects satisfaction because of the investments that individuals make in these areas. However, these effects are constrained to the focal domain, not the comparison domain.

STUDY 2 METHODS

Sample and Procedure

As argued above, the primary purpose of Study 2 is to ensure that the model holds when social and dimensional comparisons made for participants in an experimental setting. Thus, I used a sample of online research participants in my experiment. The Appendix provides further information on the text for the surveys and experiment. To summarize these materials, participants completed a response to a case study about a fictitious project management team for a pharmaceutical drug. In the project manager case study, participants are told 50% of their case response will be judged on the project management competency and 50% on their teamwork competency. Participants were told that their responses will be rated by others. However, no such rating is conducted. Finally, they completed a survey that asks for their commitment and satisfaction for project management and teamwork domains, a manipulation check, and demographic questions.

Two days after their initial survey, which participants are told is due to the ratings collection for their responses in the initial survey, participants are welcomed back to the survey, reminded of the task, and shown their responses. They then received manipulated feedback for dimensional and social comparisons. This manipulated feedback provided two pieces of information. As with Study 1, one piece of feedback was a dimensional comparison (e.g., “Your performance in project management was **BETTER** than your teamwork ratings.”) and the other was a social comparison (e.g., “Your performance in project management was **BETTER** than the average rating on this task”). Similar manipulations have been used in the dimensional comparison work in education (e.g. Möller & Köller, 2001) as well as in social psychology (Strickhouser & Zell, 2015; Zell & Strickhouser, 2020). The full manipulation text can be found

in the Appendix, which replicate the conditions from Study 1 (seven conditions with one exploratory condition). Following the manipulation, participants completed surveys that ask about their satisfaction and commitment in each domain. Online participants were compensated \$2.00 for their participation (\$.50 for the first survey and \$1.50 for the second survey).

For Study 2, 518 participants completed both surveys. 445 participants were in the primary conditions for the study, and the remainder were in the supplemental condition (absolute performance feedback). For the 445 participants, 228 individuals identified as male (51.2%), 216 identified as female (48.5%), 1 identified as transgender female, and one participant declined to report their gender. 346 individuals identified as White/Caucasian (77.8%), 29 identified as Black American (6.5%), 13 identified as Hispanic/Latino/Chicano/Puerto Rican (2.9%), 18 identified as East Asian (4.0%), 9 identified as Black non-American (i.e., African, West Indian, etc.; 2.0%), 5 identified as South East Asian (1.1%), 6 identified as South Asian (1.4%), 1 identified as Pacific Islander (.2%), 18 identified as Bi-racial/Mixed Race/Multicultural or other (4.0%). The average age of the participants was 41.1 years ($SD = 10.97$ years). However, of these participants, 67 failed manipulation checks for a final sample of 378.

Measures

Full measures are included in the Appendix and are the same as Study 1. As with Study 1, for satisfaction in each domain, I adapted a three-item measure from Brayfield and Rothe (1951) to be domain-specific satisfaction, measures from Klein et al. (2014) for commitment to each ability dimension, and a measure of competency in each domain as a manipulation check. Coefficient alphas were within acceptable levels for satisfaction (.90 for both the focal and the comparison domain satisfaction) and commitment (.96 for both the focal and comparison domain commitment).

Analytical Approach

I analyzed my results in Stata version 13.1 for pairwise comparisons and ANOVAs, and Mplus version 7 was used for mediation and mediated moderation analyses. Participants who failed the manipulation check, or report they strongly disagree with the corresponding statement for their condition, were excluded from the analysis. 67 individuals failed the manipulation check and were dropped from subsequent analyses. The 67 individuals did not differ significantly from the other 378 individuals in terms of ethnicity, job rank, or age.

STUDY 2 RESULTS

For Hypotheses 1a and 1b, I predicted a positive relationship with dimensional comparisons and satisfaction in the focal domain and a negative relationship with dimensional comparisons and satisfaction in the comparison domain. I used pairwise comparisons to determine the difference between conditions for upward, downward, and lateral dimensional comparisons among the lateral social comparison conditions. The one-way ANOVA was significant for satisfaction in the focal domain ($F(2, 170) = 10.67, p < .01$). Further, pairwise comparisons revealed that focal domain satisfaction for upward dimensional comparisons ($M = 3.09, S.E. = .13$) was significantly lower than for lateral ($M = 3.82, S.E. = .11, p < .05$) and downward dimensional comparisons ($M = 3.77, S.E. = .12, p < .05$). These results are depicted in Figure 4. However, inconsistent with Study 1, the one-way ANOVA was not significant for satisfaction in the comparison domain ($F(2, 170) = .07, p > .05$). Thus, Hypothesis 1a was supported, but Hypothesis 1b was not. Individuals who were better in the focal area over the comparison area were more satisfied in their better-off domain, but this did not hold true for the comparison domain.

For Hypotheses 7a and 7b, which predicted that social comparisons moderated the effect of dimensional comparisons on satisfaction in the focal and comparison domain, I used ANOVAs to determine the significance of the overall model and the interactions of dimensional and social comparison. The overall model was significant for focal domain satisfaction ($F(6, 376) = 10.95, p < .01$), but the interaction was not significant ($F(2, 376) = 1.17, p > .05$). Additionally, the overall model was not significant for comparison domain satisfaction ($F(6, 377) = 1.89, p > .05$). Thus, inconsistent with Study 1, Hypothesis 7a and 7b were not supported.

For Study 2, favorable social comparisons did not offset unfavorable dimensional comparisons (or vice versa).

For Hypothesis 9 and 11, I followed the same analytical approach as Study 1. The 95% confidence interval around the indirect effect of dimensional comparisons on focal domain satisfaction via focal domain commitment did include zero and was positive ($IE = .077$, 95% $CI = [-.024, .185]$). Additionally, the indirect effect of dimensional comparison on comparison domain satisfaction via comparison domain commitment was negative and included zero ($IE = .018$, 95% $CI = [-.001, .037]$). Thus, inconsistent with Study 1, Hypothesis 9a and Hypothesis 9b were not supported. For Study 2, the relationship between dimensional comparisons and satisfaction was not explained through one's commitment to each domain.

Finally, I tested the hypothesized moderated mediation in Hypotheses 11 using a bias-corrected bootstrapped 95% confidence interval around Hayes's (2015) index of moderated mediation with 1,000 replications. Hypothesis 11 predicted that social comparison valence would moderate the indirect effect of dimensional comparisons on focal domain satisfaction (11a) and comparison domain satisfaction (11b), such that these relationships would be more positive in the focal domain for downward social comparisons and less negative in the comparison domain for downward social comparisons. The 95% confidence interval around the index of moderated mediation did include zero for both focal domain satisfaction as an outcome ($Index = .02$, 95% $CI = [-.05, .10]$), and for comparison domain satisfaction as an outcome ($Index = .02$, 95% $CI = [-.05, .08]$). Thus, Hypothesis 11a and 11b were not supported. Again, for Study 2, unfavorable dimensional comparisons were not offset by favorable social comparisons in either domain via commitment to each domain.

Study 2 Supplemental Analyses

As noted above, I included a supplemental condition where individuals simply receive feedback that they are performing above expectations. Consistent with Study 1, the mean for the absolute condition ($M = 4.25$, $S.E. = .11$) was not significantly different from the downward social/downward dimensional condition ($M = 4.15$, $S.E. = .11$). Inconsistent with Study 1, I did find significant differences between the absolute feedback condition and the downward dimensional/lateral social and lateral dimensional/lateral social conditions. Additionally, consistent with Study 1, for the comparison domain, absolute feedback ($M = 4.27$, $S.E. = .11$) was significantly different from the other conditions that would have been favorable for the comparison dimension, such that it was lower when an upward dimensional comparison was paired with an upward social comparison ($M = 3.42$, $S.E. = .14$), with a lateral social comparison ($M = 3.65$, $S.E. = .14$), and with a downward social comparison ($M = 3.76$, $S.E. = .14$). Thus, I found in Study 2 that absolute feedback differed from some of the conditions where favorable (i.e., downward comparisons) or neutral (i.e., lateral comparisons) relative feedback is provided for both the focal domain satisfaction and comparison domain satisfaction.

STUDY 2 DISCUSSION

While Study 2 replicated the most important finding from Study 1, that dimensional comparisons affect satisfaction in the focal domain, I failed to find support for the rest of my hypotheses. I did not find that this relationship was explained by commitment in either domain or that social comparisons played a role in shaping this relationship. However, Study 2 faced a number of limitations. I collected this data via an online MTurk sample, where around 20% of my sample failed the manipulation check. This could indicate a few issues with the design. First, there might have been too much of a time lag between the two surveys, such that individuals might not have recalled the task, the feedback might not have been as salient, or they might not have believed the false feedback. I expand on these limitations in the general discussion section.

STUDY 3 PILOT

As there is no established measure of dimensional comparisons in the literature, I piloted two ways of measuring dimensional comparison valence. Following Hinkin (1998), I created a list of 20 potential items to measure upward dimensional comparisons and 20 potential items to measure downward dimensional comparisons (Measure A). I derived from the definitions of dimensional comparisons in Möller and Marsh (2013), but also items adapted from social comparison orientation, frequency, and valence measures (e.g., Brown et al., 2007; Butzer & Kuiper, 2006; Eddleston, 2009; Gibbons & Buunk, 1999; O'Brien et al., 2009). Full items that were piloted are included in the Appendix.

While the validation above describes one way of measuring dimensional comparisons on a scale, I also piloted a measure of dimensional comparisons that uses polynomial regression to depict implicit comparisons using perceived competency in each domain (Measure B; Edwards, 2002; Edwards & Parry, 1993). This technique offers a number of advantages. First, it overcomes issues with a difference score approach employed in Measure A to calculate valence, where I reverse code upward comparison items and create a composite score across upward/downward comparisons (Edwards, 1995). Instead, this approach allows one to model the relative differences in one dimension compared to another (i.e., the extent of the “upwardness” or “downwardness” of the comparison) as it relates to my outcome variables (commitment, satisfaction, and performance) in each domain. Second, it can be expanded to include moderation and mediation (Edwards, 2002). Third, this approach allows a test for significance of the discrepancy and agreement between the two measures as well as the curvature of this line. The significance of these coefficients models how differences (or similarity) in competencies explains variance in evaluations, performance, and commitment in each domain.

Pilot Measure Item Sort Sample and Procedures

Per recommendations in Hinkin (1998), I used a sample of 100 students for the initial item sort. Individuals sorted the 40 items into either “upward dimensional comparison,” “downward dimensional comparison” or neither category. Upward dimensional comparison items were reverse scored to create a single measure of dimensional comparison valence. For the domain-specific competency items, individuals sorted the items according to whether the item refers to the performance of the dimension or does not fit that description. Again, per recommendations in Hinkin (1998), I used a sample of 100 students for the initial item sort for both measures. Individuals were randomly assigned to receive Measure A or Measure B first. Individuals sorted measures according to the corresponding dimensions for each measure. Following this sort and per Anderson and Gerbing (1991), I calculated a substantive-validity coefficient (and the proportion of substantive agreement for both Measure A & B of dimensional comparisons. The substantive-validity coefficient is meant to “reflect the extent to which respondents assign an item to its posited construct more than to any other construct” (Anderson & Gerbing, 1991, p. 734). As both measures were tapping into two categories (upward versus downward for Measure A and proficiency on Dimension A versus B for Measure B), I assumed that if the item in question did not reflect one of these categories, there was a probability of .5 that it could be assigned to either category. Given the formula provided in Anderson & Gerbing (1991) and a sample size of 100, the critical value was .18 for my sample.

If the items are categorized into non-intended categories, they were discarded for the EFA. For the 100 participants, 62 individuals identified as male, 36 identified as female, and two participants declined to report their gender. 73 individuals identified as White/Caucasian, 6 identified as Black American (6.1%), 10 identified as Asian, 5 identified as 2 identified as

Hispanic/Latino/Chicano/Puerto Rican, 4 identified as Bi-racial/Mixed Race/Multicultural, and 5 participants declined to report their ethnicity. The average age of the participants was 20.9 years ($SD = .64$ years).

Pilot Measure Item Sort Results

Results from the item sort can be found in Table 5 and 6. For Measure A, and as shown in Table 5, the substantive validity coefficient did not meet the critical value for items 2, 11, 12, and 13 for the upward dimension and for items 9 and 20 for the downward dimension. I dropped items that did not meet the critical value for both directions (i.e., item 2 was dropped for both upward and downward dimensions). For Measure B, I provide the substantive validity coefficients in Table 6. As shown in this table, two items did not meet the critical values for the scale, items 5 and 6.

Pilot Measure Exploratory Factor Analysis Sample and Procedures

With both measures, I used a sample size of 200 to conduct an exploratory factor analysis (EFA) on these measures. Any factors that correlated below .4 with other items in the factor were discarded. Finding Eigenvalues that are greater than 1 and examining a scree test would support a two-factor solution from the EFA for Measure A and Measure B (Hinken, 1998). Additionally, I examined coefficient alpha for these scales to ensure internal consistency of the pared down measures (Cortina, 1993). These two initial steps were conducted with a sample of undergraduate students. Taken together, these steps resulted in narrowing the set of items and ensuring an internally consistent measure.

Pilot Measure EFA Results

For Measure A, Eigenvalues were 11.56 for the first factor, 5.98 for the second factor, 1.18 for the third factor, and .998 for the fourth factor. However, an examination of the scree

plot, provided in Figure 5, shows a significant drop off after the second factor. Additionally, the first two factors explain 62.6% of the variance, which meets the minimum threshold of 60% (Hinkin, 1998). Thus, for theoretical and empirical reasons, I selected a two-factor solution. I did also find some of my items cross-loaded on both factors, so I dropped these items for subsequent analyses. The full results of my EFA can be found in Table 7 and Table 8.

Similar to Measure A, for Measure B, Eigenvalues were 6.99 for the first factor, 5.24 for the second factor, 1.43 for the third factor, and .67 for the fourth factor. However, an examination of the scree plot, provided in Figure 6, shows a significant drop off after the second factor. Additionally, the first two factors explain 67.9% of the variance, which meets the minimum threshold of 60% (Hinkin, 1998). Thus, for theoretical and empirical reasons, I selected a two-factor solution. I did also find one of my items did not reach the threshold of .40 for either factor, so I dropped this item for subsequent analyses. The full results of my EFA can be found in Table 9 and Table 10.

Pilot Measure CFA Sample and Procedure

Finally, I ran a confirmatory factor analysis (CFA) with a sample size of 200 MTurk workers. For the CFA, results were assessed based on fit statistics and loading on the factors. I followed Hu and Bentler (1999) recommendations for fit statistics. I used a cutoff of .93 for CFI, .06 for RMSEA, and .08 for SRMR, and chi-square difference tests to determine the appropriate model (Hu & Bentler, 1999). While I aimed for a non-significant chi-square within the best fitting model, a significant chi-square may be acceptable if the remaining fit indices indicate good fit (Hinkin, 1998).

Pilot Measure CFA Results

Table 11 presents the results from CFA of the two-factor model for Measure A. Although not within all the ranges as recommended by Hu and Bentler (1999), results from this model indicated a satisfactory fit with the data, as $\chi^2 (df = 53, n = 221) = 198.98, p < .01$, standardized root mean square residual (SRMR) = .06, comparative fit index (CFI) = .92, and root mean square error of approximation (RMSEA) = .11. The range of standardized factor loadings was from .65 to .91. Further, I performed a chi-square difference test between the one-factor and two-factor models (fit statistics: $\chi^2 [df = 54, n = 221] = 880.78, p < .01$; SRMR = .24; CFI = .55; RMSEA = .26). The chi-square difference test was significant ($\chi^2 [df = 1] = 681.80, p < .01$). Thus, this suggested the two-factor model fitted these data well. Coefficient alpha was .92 for the downward dimension and .90 for the upward dimension.

Table 12 presents the results from CFA of the two-factor model for Measure B. Again, fit statistics were not within ranges as recommended by Hu & Bentler (1999), but this model indicated a satisfactory fit with the data, as $\chi^2 (df = 49, n = 221) = 334.10, p < .01$, SRMR = .03, CFI = .95, and RMSEA = .10. The range of standardized factor loadings was from .83 to .93. To further support the two-factor model solution, I performed a chi-square difference test between the one-factor and two-factor models (fit statistics: $\chi^2 [df = 48, n = 221] = 2551.74, p < .01$; SRMR = .35; CFI = .44; RMSEA = .33). The chi-square difference test was significant ($\chi^2 [df = 1] = 2,217.64, p < .01$). Coefficient alpha was .96 for Dimension A and .97 for Dimension B. I used the reduced set of items arrived at through this process with two factors for both Measures A and B of dimensional comparisons.

STUDY 3 PRIMARY STUDY METHODS

Study 3 Primary Study Sample and Procedure

This data collection was conducted at a field site of major gift officers at a large university. These individuals are directly working with donors to secure major gifts for the university (e.g., funding for scholarships and facilities). Within their jobs, multiple areas are prioritized. First, they have individual tasks (e.g., building relationships with donors individually). Second, they have goals that relate to their collaboration with their team (e.g., working with others in their units or across the university to solicit gifts). These two competencies were identified by the university as competencies of interest, are a part of the formal job performance rating, and performance metrics are equally weighted at the organizational level across these two competencies (i.e., joint and individual solicitations are “counted” the same at the organizational level). To ensure that these two areas are necessary for the job, I conducted informal interviews with 10 major gift officers.

This study involved three surveys. The first survey collected data on the importance of the focal dimension to their workgroup (i.e., individual solicitation skills) and to the individual, dimensional comparisons as described in the pilot measures, social comparisons, as well as their commitment, satisfaction, and performance in each of the dimensions and demographic questions. Those who completed all three surveys were eligible for a lottery for one of five \$300 prizes.

Ninety-nine participants completed the first survey, 64 participants completed the second survey, and 47 participants completed the third survey for a total of 210 observations across the three timepoints. 23 individuals identified as male (25.3%), 67 identified as female (73.6%), and 9 participants declined to report their gender. 79 individuals identified as White/Caucasian

(86.8%), 3 identified as Black American (3.3%), 2 identified as East Asian (Chinese, Japanese, Korean, etc.), and one person identified as Southeast Asian (Cambodian, Laotian, Vietnamese, etc), South Asian (Indian, Pakistani, etc.), Pacific Islander (Filipino, Samoan, etc.). 3 identified as Bi-racial/Mixed Race/Multicultural, and 8 participants declined to report their ethnicity. The average age of the participants was 43.1 years ($SD = 11.4$ years). Participants were in their roles for an average of 4.61 years, ($SD = 3.84$), at the organization for an average of 8.76 years ($SD = 5.79$), and in fundraising for an average of 14.14 years ($SD = 8.44$)

Study 3 Primary Study Measures

Dimensional comparison valence was measured using items finalized in the pilot study described above. Thus, I approached the measurement of dimensional comparison valence both directly in a scale and indirectly through my methodological approach that utilizes polynomial regression. Social comparison valence in the focal domain will be measured using four items from Gibbons and Buunk (1999) for both upward and downward social comparison directions. I made several adjustments to the original items in the scale. First, I dropped the reversed scored item to minimize the number of items per scale, and I also dropped the item from the original scale that refers specifically to the social skill domain to avoid conflating it with a dimensional comparison of relational skills. Additionally, I adapted these to ask about these behaviors within the time interval measured, rather than a broad orientation scale. Finally, I altered the referent to indicate the direction of the comparison and to be specific to the focal domain. For example, one of the original items reads “I often compare how my loved ones are doing with how others are doing,” and the adapted version for upward dimension is “I compared how I did with individuals, who are better than me in individual solicitation skills.” Respondents rated these items on a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree, for both social and

dimensional comparisons. Upward directions were reverse-coded and aggregated with downward directions to form a single measure that captures an overall measure of social comparison valence. A similar procedure was used to calculate Measure A of dimensional comparison valence.

To assess the importance of the focal dimension to the group and to the individual, I asked participants to report on how important taskwork competencies are to them and to the group using three items of in-role behaviors adapted from Williams and Anderson (1991). For the group, the stem for this scale asked participants to rate the importance of taskwork to the group. For the individual, the stem for this scale asked participants to rate the importance of each of these items to themselves. A sample item is: “Individuals engaging in solicitations that only benefit themselves.” Individuals will rate these from 1= not important at all to 5 = extremely important.

For my outcomes, I used the same adapted measure as Study 1 & 2 for the specific commitments to the taskwork and teamwork domains from Klein et al. (2014). A sample item includes “How committed are you to securing donations individually?” To assess satisfaction in each domain and similar to Study 1 & 2, I used measures adapted from Brayfield and Rothe (1951) which ask how satisfied they are with their individual and collaborative work. A sample item is: “I feel fairly satisfied with my individual solicitations.” To assess performance in each domain, I used individual solicitations and joint solicitations each month as my outcome in each domain. Because my analysis is over time, I lagged my dependent variables (i.e., satisfaction and performance in both dimensions) by one month.

Exploratory Reflection Condition

Half of the major gift officers in the sample reported on their competency in each area (no reflection condition). The other half received an intervention that asks them to reflect on the differences across these two dimensions (reflection condition). In the reflection condition, and in keeping with other reflection-type activities that require three items of reflection (e.g., Lanaj et al., 2019), I asked participants three sets of questions. The first question asks participants to directly reflect on their comparison (“reflecting on how you rated each competency, how do your proficiencies in these competencies compare? Are they similar or different? Which is higher or lower?”). The second and third questions asks individuals about their cognitions and affect surrounding this comparison (“what thoughts do you have regarding this comparison?” and “how does this comparison make you feel?”). In my supplemental analysis, I explore whether this reflection condition has an effect on my outcomes.

Study 3 Analytical Approach

First, and as noted above, to ensure that there is one variable that represents valence, I reverse-coded all the upward items for Measure A of dimensional comparisons and for social comparisons. Once these items were reverse-coded, I aggregated these measures to form a single continuous measure for dimensional comparison valence (Measure A) and one for social comparison valence.

For analyses involving Measure B, I use polynomial regression to model main effects on my outcomes for Hypotheses 1 and 2. Polynomial regression and response surface plotting involves a comparison of two predictors within the same conceptual domain and are on the same scale to predict some outcome of this comparison (Edwards, 2002). The formula for this regression includes a squared term of the X and Y variables as well as their interaction, as well

as the main effect of X and Y (Edwards & Parry, 1993). These polynomial terms are used to generate a “response surface” or a three-dimensional depiction of the effect of X and Y on Z (Edwards & Parry, 1993). Within these plots, the line of perfect agreement ($x = y$) represents how the similarity of these domains relates to an outcome, while the line of incongruence ($x = -y$) reflects how the difference in these domains relates to the outcome. Thus, in the case of my hypotheses, X represents perceived competency on the focal domain, while Y represents the perceived competency within the comparison domain. Consequently, a significant line of incongruence would indicate that as X and Y diverge, this divergence explains variance in satisfaction and performance in each domain. This aligns with my hypotheses that the direction and degree of the difference in the comparison (upward or downward) matters for outcomes. While this would be the primary coefficient of interest, I also examine how agreement might affect the outcomes (e.g., are there differences between high competency in both X and Y versus low competency in both X and Y?) as well as possible curvature of these lines.

Additionally, if either the line of agreement or incongruence is significant, polynomial regression would demonstrate that there are effects above and beyond main effects of either competency on commitment, satisfaction, and performance. In other words, if there is an interactive effect, then the absolute effect of high competency in taskwork on performance in this area (i.e., Lucy is good at raising funds individually and thus solicits individually) is shaped by her teamwork competency. In this way, this methodological approach helps provide empirical evidence that there is meaningful variance explained by *both* the absolute level of proficiency in a competency and the relative level of proficiency in a competency compared to other competencies.

STUDY 3 RESULTS

The descriptive statistics and correlations for Study 3 are provided in Table 13.

Tests of Main Effects Hypotheses

To test Hypothesis 1 and 2, I examined the polynomial regression and response surface plots to understand the relationship between agreement and discrepancy of competencies on my outcomes. A significant line of incongruence supports my hypotheses. For Hypothesis 1a and 1b, the line of incongruence was significant and positive for both the focal domain satisfaction ($B = .86, p < .001$) and comparison domain satisfaction ($B = -.57, p < .01$). I plotted the response surfaces for the focal domain in Figure 7 and for the comparison domain in Figure 8. Thus, Hypothesis 1a and 1b were supported. While absolute perceptions of taskwork were important for taskwork satisfaction, the relative comparisons between taskwork and teamwork competency also affected taskwork satisfaction. Additionally, absolute perceptions of teamwork were important for teamwork satisfaction, the relative comparisons between taskwork and teamwork competency also affected taskwork satisfaction.

For Hypothesis 2a and 2b, the line of incongruence was significant for individual solicitations ($B = 1.18, p < .05$), but not for joint solicitations ($B = .55, p = .082$). Figure 9 provides the response surface plot for individual solicitations. Thus, Hypothesis 2a was supported, but Hypothesis 2b was not. While absolute perceptions of taskwork were important for taskwork performance, the relative comparisons between taskwork and teamwork competency also affected taskwork performance. However, this did occur for teamwork performance.

Thus, when taskwork was better than teamwork in a relative sense and perceptions of taskwork were positive, then this was even more positive in terms of performance and satisfaction. When taskwork was worse than teamwork in a relative sense and perceptions of

taskwork were negative, then this was even more negative in terms of performance and satisfaction. These effects were paralleled in the comparison domain for satisfaction, but not for performance.

Tests of Moderation Hypotheses

Hypotheses 3-8 concerned the moderating effects of social comparisons, importance of the focal dimension to the individual, and the importance of the focal dimension to the group. In Hypothesis 3, I predicted that perceived importance to the group would moderate the positive relationship between the valence of the comparison and satisfaction in the focal domain (3a) and the negative relationship between the valence of the comparison and satisfaction in the comparison domain (3b). The interaction was not significant in the focal ($B = -.04, p > .05$) or the comparison domain ($B = .11, p > .05$). Thus, Hypothesis 3a and 3b were not supported.

Hypotheses 4 predicted the same pattern of an interaction, but with performance as the outcome. Again, the interaction on the comparison domain was not significant ($B = -.02, p > .05$), but the interaction on the focal domain performance was significant ($B = -1.00, p < .05$). This interaction is plotted in Figure 10. However, as shown in this figure and contrary to the direction of my hypothesized interaction, I found that the relationship between dimensional comparison valence was positive when the focal domain was low in importance to the group (simple slope = $1.912, p < .05$), but non-significant when the focal domain was high in importance to the group (simple slope = $-.399, p > .05$). Thus, for performance in the focal domain, dimensional comparisons have stronger effects on performance when the importance of the focal domain to the group is low than when importance to the group is high. Yet, there was no significant difference amongst individuals who saw this dimension as low or high in importance to the group for satisfaction with either competency.

Hypothesis 5a predicted that the positive relationship between the valence of dimensional comparisons and focal domain satisfaction would be moderated by the perceived importance of the focal domain to the individual, while Hypothesis 5b predicted the negative relationship between the valence of the dimensional comparison and focal domain satisfaction would also be moderated by this individual importance. Hypotheses 6a and 6b predicted the same relationships, but for performance as the outcome. For satisfaction as an outcome, the interactions on the focal domain satisfaction ($B = -.09, p > .05$) and comparison domain satisfaction ($B = .15, p > .05$) were not significant. Thus, Hypotheses 5a and 5b were not supported.

For performance as an outcome, the interaction on the comparison domain performance was not significant ($B = -.06, p > .05$), but the interaction on the focal domain performance was significant ($B = -.95, p < .05$). This interaction is plotted in Figure 11. As shown in this figure and consistent with the direction of my hypothesized interaction, I found that the relationship between dimensional comparison valence was significant and positive when the focal domain was low in importance to the individual (simple slope = 1.649, $p < .05$), but not significant when the focal domain was high in importance to the individual (simple slope = $-.407, p > .05$). Thus, for performance in the focal domain, dimensional comparisons have stronger effects on performance when the importance of the focal domain to the individual is low than when importance to the individual is high. Yet, there was no significant difference amongst individuals who placed a low or high importance on the domain for satisfaction with either competency.

Finally, I predicted that social comparison valence would moderate the positive relationship between dimensional comparison valence and satisfaction (Hypothesis 7a) and performance (Hypothesis 8a) in the focal domain. I also predicted that social comparison valence

would moderate the negative relationship between dimensional comparison valence and satisfaction (Hypothesis 7b) and performance (Hypothesis 8b) in the comparison domain. Social comparisons moderated the effect of dimensional comparison valence on satisfaction in the focal domain ($B = .58, p < .05$) and in the comparison domain ($B = .68, p < .05$). These interactions are plotted in Figures 12 and 13, respectively. As shown in Figure 12, I found that the relationship between dimensional comparison valence and satisfaction in taskwork was significant and positive when the social comparison valence was downward (simple slope = .667, $p < .05$), but not significant when the social comparison valence was upward (simple slope = -.027, $p > .05$). Similarly, I found that the relationship between dimensional comparison valence and satisfaction in teamwork was significant and positive when the social comparison valence was upward (simple slope = -.733, $p < .05$), but not significant when the social comparison valence was downward (simple slope = -.078, $p > .05$). Thus, Hypotheses 7a and 7b were supported. When individuals engage in downward social comparisons, it enhances the positive effect of favorable dimensional comparisons and mitigates the negative effect of unfavorable dimensional comparisons on domain-specific satisfaction.

However, neither interaction of social comparison and dimensional comparison on the performance outcomes were significant in individual solicitations ($B = -.37, p < .05$) or joint solicitations ($B = .68, p > .05$). Thus, Hypotheses 8a and 8b were not supported. While social comparisons influence the effect of dimensional comparisons on satisfaction toward each domain, they do not change the relationship between dimensional comparisons and actual performance.

Tests of Mediation and Moderated Mediation

I evaluated mediation proposed in Hypothesis 9 and 10 using bias-corrected bootstrapping create a 95% confidence interval around the indirect effect with 1,000 replications (Preacher et al., 2007). Hypothesis 9a predicted that commitment in the focal domain mediates the relationship between dimensional comparisons and satisfaction in the focal domain, and Hypothesis 9b predicted that commitment in the comparison domain mediates the relationship between dimensional comparison valence and satisfaction in the comparison domain. Figure 14 provides the estimates for satisfaction as an outcome. The 95% confidence interval around the indirect effect did not include zero for the effect of dimensional comparison valence on focal domain satisfaction via focal domain commitment ($IE = .12$, 95% $CI = [.029, .722]$) or for the effect of dimensional comparison valence on comparison domain satisfaction via comparison domain commitment ($IE = -.13$, 95% $CI = [-.276, -.020]$). Thus, Hypothesis 9a and 9b were supported. Therefore, one reason that the dimensional comparison process affects domain-specific satisfaction is due to the differential commitments that individuals make in each area.

Similarly, Hypothesis 10a and 10b predicted that commitment to the focal and comparison domains would mediate the relationship between dimensional comparison valence and performance in the respective domains. Results for performance as an outcome are depicted in Figure 15. Again, the 95% confidence interval around the indirect effect did not include zero for the effect of dimensional comparison valence on focal domain performance via focal domain commitment ($IE = .13$, 95% $CI = [.016, .380]$) or for the effect of dimensional comparison valence on comparison domain performance via comparison domain commitment ($IE = -.09$, 95% $CI = [-.266, -.006]$). Thus, Hypothesis 10a and 10b were supported. Again, one reason that

the dimensional comparison process affects performance in a particular area is due to the differential commitments that individuals make in each area.

Finally, I tested the hypothesized moderated mediation in Hypotheses 11 and 12 using a bias-corrected bootstrapped 95% confidence interval around Hayes's (2015) index of moderated mediation with 1,000 replications. Hypothesis 11 predicted that social comparison valence would moderate the indirect effect of dimensional comparisons on focal domain satisfaction (11a) and comparison domain satisfaction (11b). The 95% confidence interval around the index of moderated mediation included zero for both focal domain satisfaction as an outcome (Index = .09, 95% CI = [-.15, .32]) and comparison domain satisfaction as an outcome (Index = .14, 95% CI = [-.06, .36]). Thus, Hypothesis 11 was not supported. Figure 16 provides the estimates for this model. As with Study 2, unfavorable dimensional comparisons were not offset by favorable social comparisons in either domain via commitment to each domain.

Hypothesis 12 predicted that the importance of the taskwork dimension to the group moderate the indirect effect of dimensional comparisons on focal domain satisfaction (12a) and comparison domain satisfaction (12b). As with Hypothesis 11, the 95% confidence interval around the index of moderation included zero for both the focal domain (Index = .09, 95% CI = [-.15, .32]) and comparison domain satisfaction (Index = .14, 95% CI = [-.06, .36]). Thus, Hypothesis 12 was not supported. Estimates for this model can be found in Figure 17. Therefore, the importance to the group does not influence the relationships between the dimensional comparison process, commitment to each domain, and the resulting satisfaction.

A summary of the supported and unsupported hypotheses across my three studies can be found in Table 14.

Study 3 Supplemental Analyses

As described above, I asked approximately half ($n = 47$) of the participants to reflect on their ratings. The other half ($n = 52$) did not engage in this reflection task. I explored if there were any significant differences in outcomes for individuals who explicitly engaged in reflection on the comparison versus those who did not. Using one-way ANOVAs, I did not find any significant differences in taskwork satisfaction ($F = .90, df = 1, p > .10$), teamwork satisfaction ($F = .15, df = 1, p > .10$), taskwork commitment ($F = .22, df = 1, p > .10$), teamwork commitment ($F = .504, df = 1, p > .10$), individual solicitations ($F = .320, df = 1, p > .10$), or joint solicitations ($F = .087, df = 1, p > .10$) for those who engaged in these explicit comparisons versus those who did not. Thus, there was not any significant difference between individuals who explicitly engage in a dimensional comparison process versus those who implicitly experience it.

I also tested interactions of social comparison valence, individual importance of the focal domain, group importance of the focal domain, and the exploratory condition on my commitment, satisfaction, and performance outcomes. I did not find significant interactions, except for the interaction of the exploratory condition with individual importance ($B = -.64, p < .05$) and group importance of the focal domain ($B = -1.10, p < .01$) on focal domain performance (i.e., individual solicitations). I have plotted these in Figures 18 and 19. Those that held a high importance of the dimension to the group or to the individual and *engaged in an explicit reflection* had lower performance than those that saw the dimension as unimportant. On the other hand, individuals who held a high importance to the dimension to the group or to the individual and *did not engage in an explicit reflection* had higher performance than those that saw the dimension as unimportant. Thus, in terms of performance, engaging in an explicit dimensional comparison reflection seems to boost performance of individuals who see the domain as

unimportant, while diminishing performance of individuals who see the domain as important, compared to those who do not engage in such a reflection.

Next, I included measures of emotions that were mentioned as mechanisms for self-focused contrastive social comparisons (Smith, 2000). Thus, I explored if positive and negative emotions mediate the effects of dimensional comparisons on commitment, and through commitment, to satisfaction. Results of this serial mediation can be found in Figures 20 and 21. The 95% confidence interval around the serial indirect effect of dimensional comparison valence on taskwork satisfaction through positive affect toward taskwork and commitment to taskwork did include zero (IE = .007, 95% CI = [-.010, .044]). However, the serial indirect effect of dimensional comparison valence on teamwork satisfaction through positive affect and commitment to teamwork competencies did not include zero (IE = -.055, 95% CI = [-.129, -.013]). Both confidence intervals around the serial indirect effects through negative affect included zero for taskwork satisfaction (IE = .014, 95% CI = [-.015, .064]) and teamwork satisfaction (IE = -.010, 95% CI = [-.047, .006]). Thus, there is some evidence that dimensional comparisons prompt positive feelings in the comparison domain when the comparison is favorable for this domain, which affects the commitment that individuals make in the comparison domain and their subsequent satisfaction with this domain. Yet, per findings in this study, this underlying affective process does not occur for positive affect in the focal domain or through prompting negative affect.

Finally, my hypotheses posit a moderation effect of social comparisons on dimensional comparisons, and I examined how social comparisons change the nature of dimensional comparisons. However, dimensional comparisons may instead shape the effect of social comparisons on commitment, satisfaction, and performance. Thus, I replicated moderated

mediation analyses, with dimensional comparisons as a moderator and social comparisons as the independent variable on satisfaction and performance. I did not find a significant index of moderated mediation for taskwork satisfaction (through taskwork commitment; Index = .09, 95% CI = [-.09, .34]), individual solicitations (through taskwork commitment; Index = .09, 95% CI = [-.15, .32]), teamwork satisfaction (through teamwork commitment; Index = .10, 95% CI = [-.06, .47]), or joint solicitations (through teamwork commitment; Index = .01, 95% CI = [-.02, .38]). Therefore, this lends support to the notion that these findings are driven by the dimensional comparison process, rather than through the social comparison process.

To summarize these supplemental analyses, explicitly reflecting on dimensional comparisons did not have a different effect than those who made dimensional comparisons implicitly. However, engaging in a reflection seems to result in higher performance for individuals who see the domain as unimportant to the group, while it results in lower performance for individuals who see the domain as important to the group. I also found limited support for affective mechanisms underlying the dimensional comparison process, such that dimensional comparisons prompt positive affect in the comparison domain when this comparison is favorable, which alters the investments individuals make in this domain and their subsequent evaluative judgements in these domains. Finally, I demonstrated that these effects do not hold for social comparisons, with dimensional comparisons as a moderator. Thus, variance in domain-specific commitment, satisfaction, and performance is better explained through the dimensional comparison process, rather than a social comparison process.

GENERAL DISCUSSION

In this dissertation, I sought to accomplish three tasks: translating dimensional comparison theory to organizational behavior, investigating how this theory affects important outcomes in organizational behavior, and introducing methods that could be replicated in other studies of dimensional comparison theory. In three studies with varied methods that included a vignette experiment, a case study experiment, and a field study with two different pre-tested measures of dimensional comparisons, I completed these three tasks.

In terms of theory, I differentiated dimensional comparison theory from other organizational behavior concepts and theories. Indeed, relative comparisons are present in many of the well-developed, historied organizational behavior literatures, such as identity and justice. Moreover, existing work in core self-evaluations, multiple identities, domain-specific self-esteem, multiple goal setting, and job performance provides support for and underscores the importance of applying this multidimensional lens. I argued that dimensional comparisons could be represented as comparisons across competency areas at work, which is more malleable than the way that organizational behavior conceptualizes “abilities” or “character strengths.” However, I theorized that alternative conceptualizations of the “domains” of comparison are possible. I expand upon these alternative conceptualizations below in explaining future directions for this work.

In terms of outcomes, the most consistent effect across the three studies was the positive relationship between dimensional comparison valence and satisfaction in the focal domain (H1a). Therefore, individuals who see themselves as better in the focal domain hold higher evaluative judgments in this domain. Further, in Study 3, I found support for a positive relationship between dimensional comparisons and performance in the focal domain (H2a). In Studies 1 and 3, I also

found a negative relationship between dimensional comparison valence and satisfaction in the *comparison* domain (H1b), which suggests that these comparisons could affect outcomes in both domains of comparison. Individuals who see themselves as better in the comparison domain hold higher evaluative judgments in this domain. Thus, these findings suggest that we cannot consider one competency in a vacuum – our evaluative judgements and our achievement are shaped by perceptions of our abilities in one domain, but they are also affected by comparisons across competency areas.

In addition, I hypothesized three levers that shape the dimensional comparison process: social comparisons in the focal domain, importance of the focal domain to the individual, and importance of the focal domain to the group. I evaluated the effects of social comparisons across the three studies and had mixed results. In Studies 1 and 3, I found that social comparisons did indeed moderate the relationship between dimensional comparisons and satisfaction in the focal domain (H7a), but the dimensional comparison process only affected comparison domain satisfaction in Study 3 (H7b). Thus, favorable social comparisons mitigate the negative effects of unfavorable dimensional comparisons. I did not find moderation effects on performance (H8a & H8b). The inconsistent findings around the moderation of social comparison were interesting and unexpected given the existing research that suggests social comparison effects are stronger than dimensional comparison effects (Strickhouser & Zell, 2015; Zell & Strickhouser, 2020) and the positive correlations between the social comparison variable and the outcomes I explored. Thus, this study lends support to the idea that social and dimensional comparisons may exert independent rather than interdependent effects (Möller & Marsh, 2013).

I also tested moderation effects of importance of the focal domain to the individual and to the group in Study 3, with limited support. I did find these operated in the same direction, such

that a high importance “neutralizes” the effect of dimensional comparisons. In other words, consistent with work on contingent self-esteem (Ferris et al., 2009b; Ferris et al., 2015; Ferris et al., 2010), the relative performance feedback information is only influential for those who do not see this area as a priority. Those who hold a high importance continue to achieve in these areas, whether this is importance is determined by the group or the individual.

Finally, I tested whether investment in the domain, operationalized as commitment, mediates the relationship between the dimensional comparison process and achievement or satisfaction in each domain. In Studies 1 and 3, I found support for commitment as a mediator between the dimensional comparison process and satisfaction and performance in the focal domain. In Study 3, I also found that commitment to the comparison domain served as a mediator between dimensional comparisons and satisfaction in the comparison domain. Thus, individuals have differential achievement and satisfaction in each area resulting from dimensional comparisons due to the psychological bonds that they make in each area. While I selected to operationalize investment as commitment because of its multidimensional conceptualization, divergence conceptually from identity, and the availability of a target-free measure of commitment, “investment” in each domain could be represented in many different ways. Future research could vary the operationalizations of investment to understand if these results hold when “investment” is represented as time, money, resources, or effort.

It was surprising that Study 2 was inconsistent with many of the findings in Studies 1 and 3. Indeed, the only hypothesis supported in Study 2 was the main effect of dimensional comparisons on satisfaction in the focal domain. This could be attributed to three limitations in the data: the immediacy of the feedback, the nature of the sample, and the believability of the false feedback. Study 2 included a two-day time lag, such that individuals received feedback two

days after they completed the case study. Thus, the feedback may not have been as salient for individuals (or participants even might not have remembered the task) due to lag between the activity and the feedback. Additionally, Study 2 was conducted with an online sample, who may not have been as engaged in the task or have felt that project management skills were relevant to their work. Finally, individuals may not have internalized or agreed with this false feedback, even if they recalled it. Thus, future research could repeat the study with a shorter time lag (i.e., 1 hour or 30 minutes), in a sample where project management skills may be more common (e.g., a business undergraduate sample), and exemplary responses are provided.

I tested three different methods for the theoretical investigation of dimensional comparisons. First, and consistent with many experimental methods in education psychology, my Studies 1 and 2 provided individuals with manipulated false feedback that explicitly compared the two dimensions for participants (i.e., “Your performance in project management was **WORSE** than your teamwork ratings”). Second, I piloted a measure in Study 3 that asked participants to report on their proficiencies in each domain and represented the comparison implicitly through my selection of analytical tool – polynomial regression. Finally, and perhaps most familiar to organizational researchers, I piloted a measure in Study 3 that asked participants explicitly to report on their agreement of how one domain compared to the other. Indeed, it is striking that I still found consistent support for my hypotheses even though my methods and analytical tools varied across the three studies. My aim is that the methods here can be easily replicated and extended to study dimensional comparisons in many different literatures and contexts.

Theoretical Implications

Bacharach (1989) stated that “the primary goal of a theory is to answer the questions of how, when, and why” (p. 498). In this investigation, I answered *how* dimensional comparisons are linked to outcomes of interest in organizational behavior: domain-specific performance and satisfaction. I also offered an explanation as to *why* this occurs – through a process of investment and divestment to each domain, operationalized here as the psychological commitment bonds that individuals hold in each area. Finally, I speculated on *when* these effects might be different – when individuals make social comparisons in conjunction with dimensional comparisons and when the domain is important to the group and/or to the individual. Thus, the primary theoretical contribution of this work is that I have fulfilled my goal of building theory around the process of dimensional comparisons at work.

Yet, this work has important implications beyond introducing a new theory to the field. This research suggests that absolute and relative *external* self-evaluations in a dimension cannot be considered in isolation – individuals also use relative *internal* information on other dimensions to determine how they invest in certain competency areas, which impacts how they feel about certain competency areas and achieve in these areas. Left to their own devices, this research suggests that individuals tend to invest in areas they are relatively better off in and divest from areas they are relatively worse off in. For competencies that are equally distributed in the job role (i.e., a 50/50 split), this means that individuals will irrationally neglect areas that they perceive they are not good at, develop a greater commitment to areas they perceive they are good at, which impacts their achievement and satisfaction in those areas. The polynomial regressions in Study 3 in particular displayed how researchers are leaving variance on the table when only assessing one dimension – there were differences in satisfaction and performance for individuals

who have dissimilarity in their competency areas. Thus, researchers need to consider not just external comparison information, but how individuals engage in internal comparisons as well to fully grasp between-person differences in performance and satisfaction in a particular area.

Additionally, this work highlights and corrects a missed opportunity in organizational behavior to integrate internal comparison theories into our literatures (Möller & Marsh, 2013). While the explanatory power of external social comparisons for organizational behavior is unquestionable, internal comparisons and, in particular, internal dimensional comparisons, have been neglected in our field despite their clear utility in explaining phenomena in educational and social psychology. Temporal comparisons have been shown to be beneficial in the performance evaluation process (Chun et al., 2018) and in understanding behavioral reactions to status threats (Reh et al., 2018). These empirical investigations coupled with the findings here suggest that internal comparisons may be useful and important in explaining phenomena in organizational behavior. This investigation provides a theoretical and methodological foundation for scholars interested in internal dimensional comparisons to test and extend this theory in the work domain.

Indeed, another important contribution of this work is translating dimensional comparison theory with methods familiar to organizational behavior scholars. I have provided a foundation for future research to blossom in this area. I described one way to conceptualize “dimensions” of comparison at work, demonstrated what effect these comparisons have at work, and tested my hypotheses using common methods in the field. With a sense of how dimensional comparisons could be studied and why it is important to study them, further empirical research that incorporates these comparison theories will follow.

Finally, I have also contributed to conversations surrounding dimensional comparisons occurring in educational and social psychology. While scholars have started to question the

strength of social, temporal, and dimensional comparisons in how one evaluates and performs in a particular area, findings around the interaction of social and dimensional comparisons are mixed (Möller & Köller, 2001; Strickhouser & Zell, 2015; Wolff et al., 2018; Zell & Strickhouser, 2020). I explicitly hypothesized the interaction of these two comparisons, but, similar to other studies, I found inconsistent moderation effects across the three studies. This inconsistency may indicate the presence of a dispositional or situational moderator – perhaps these interactions only occur for particular people or in particular situations, such as individuals who hold low core self-evaluations or in interdependent work. Additionally, I piloted measures for dimensional comparisons that can be used with polynomial regression techniques to model the comparison implicitly. Dimensional comparisons are theorized to occur as long as feedback is present on both dimensions. Thus, this analytical approach can be used for dimensions that may not be obviously compared for individuals, such as between two dissimilar domains.

Practical Implications

This work has important implications for how managers provide performance and coaching feedback. The findings here suggest that if individuals compare across competency areas at work (e.g., Lucy is better at her engineering competency than her teamwork competency), then they are likely to invest in areas they are better off in and divest from areas that they are worse off in. However, this work also outlines some practical solutions. Managers can “neutralize” the effect of dimensional comparisons through highlighting the importance of the focal domain either to the group or to the individual. Further, the exploratory reflection condition suggests that engaging in reflection can aid in performance when comparisons are favorable (i.e., downward dimensional comparisons). Thus, in performance evaluations, managers looking to incentivize more effort on a relatively worse off area may highlight how

this dimension favorably compares to another dimension or how important this dimension is to the individual or group.

Another important implication of this work surrounds how managers may adapt feedback for different team members. Managers who take a “one-size-fits-all” approach to coaching feedback neglect how differences in the structure of self-evaluations affect individual performance and satisfaction. This work suggests that individuals are sensitive to how dimensions compare to each other, and managers who fail to understand these distinctions may provide feedback that only reinforces divergence across equally valued competency areas.

Limitations

Though I varied methods, there are a number of limitations to the inferences here due to the methods employed. First, because I did not examine the similarity of the dimensions as a moderating factor, there is an unstated assumption that individuals see these two dimensions as separate rather than reinforcing. Dimensional comparison theory predicts that effects of dimensional comparisons are stronger when domains are more similar (Möller & Marsh, 2013) and research within dimensional comparison theory has supported that similarity of subjects does have an effect on subsequent self-concepts and outcomes of the comparison of those self-concepts (Wolff et al., 2020). However, while contrast effects among dissimilar domains are strong and significant, the cross-domain effects of similar domains are less clear (Möller et al., 2020). The participant’s perception of the similarity of the domains can change these effects (Helm et al., 2016; Möller et al., 2006; Wolff et al., 2020), but a failure to find an assimilation effect meta-analytically may suggest that there is little to no spillover of positive (or negative) self-concepts among similar subject domains in children. Despite weak or non-significant assimilation effects for similar domains in educational psychology, I found effects on satisfaction

and performance for dimensional comparisons, even when the two dimensions were positively correlated in Study 3. As with children, this could suggest that contrast effects (rather than assimilation effects) may be present even when the domains are similar in adult working contexts.

Next, the presence of a counterstereotypical example of “Lucy the NASA Engineer” may have influenced the direction of results in Study 1. “Aerospace Engineer” is male-dominated job role, as only 14.3% of aerospace engineers in 2018 were female (*American Community Survey*, 2019; Koch et al., 2015), and “Lucy” is a female name. Therefore, participants who “put themselves in Lucy’s shoes” in Study 1 may have experienced stereotype threat provided the content of the competencies described. Indeed, compared to men, women are stereotyped to be more communal (Abele, 2003; Ellemers, 2018; Rudman & Glick, 1999) and altruistic citizenship behaviors are expected rather than optional for women (Heilman & Chen, 2005). Given that one of the competencies described was “teamwork,” which could be construed to be more communal in nature, individuals who were provided a downward comparison in Study 1 (i.e., Lucy’s engineering competency was BETTER than her teamwork competency) may have responded less strongly to satisfaction and commitment items as this may be counterstereotypical for Lucy. Thus, the lack of significant differences between the lateral and downward comparison conditions could also be explained by stereotype violations, such that the positive comparison was outweighed by a backlash against counterstereotypical traits. Although there is not a way to account for this in the data currently, future research should explore if these effects hold for “Luke the NASA Engineer” as well.

Finally, while I did include a *positive* absolute feedback condition for exploratory purposes, I did not include a *negative* absolute feedback condition. In Study 1 and Study 2,

positive absolute feedback had similar effects on focal and comparison domain satisfaction as overall positive or neutral relative feedback (i.e., downward dimensional/downward social, lateral dimensional/lateral social). However, I did not test to see if absolute negative feedback has similar effects to relative negative feedback. Importantly, the absolute positive feedback condition was significantly different from the conditions with contrasting relative feedback (i.e., upward social/downward dimensional). Thus, it would be interesting to observe how absolute negative feedback would also differ from these contrasting domains. Future research could include this as an exploratory condition.

Future Directions

This dissertation provided the foundation for scholars to extend this work beyond the context and conceptualization discussed here. In the following sections, I delineate some opportunities for future research in this area, though this is certainly a non-exhaustive list. I begin with a discussion of exploring boundary conditions then turn to a discussion on alternative conceptualizations of “dimensions.”

Boundary Conditions of Dimensional Comparison Effects

This dissertation explored three different “levers” that alter the effects of dimensional comparison. However, embedded in the research here are a few key assumptions that could be investigated as potential boundaries of the applicability of this theory to the work context. First, I assume throughout that the distribution of the competency areas is the same. In making this assumption, the investment in one area and divestment from the other represents an irrational decision. If these two areas are equal parts of the job role, they should be investing equally in each area. However, for many jobs, the distribution of competencies is not equal. For example, if Lucy were a surgeon and two competencies required for her job are her surgical competency

(90%) and her bedside manner competency (10%), and Lucy is worse at surgery than at her bedside manner (i.e., she makes an upward dimensional comparison), then it would be irrational to invest more in her bedside manner as this is not a large percentage of her job. Thus, a future study could explore how these distributions of competency areas impact the dimensional comparison process. I would expect that these would operate similarly to the way that importance served as a “neutralizing” factor in Study 3 for performance – domains that are a high percentage of the job will be invested in and prioritized regardless of the dimensional comparison process.

Similarly, for parsimony, I only explored two competencies at a time, yet it is certainly conceivable that individuals have more than two competencies required for the job. For example, perhaps Lucy the NASA engineer in a supervisory role must consider her teamwork, engineering, and leadership competencies. Again, the distribution of these competencies is a key factor in the dimensional comparison. However, it is also plausible that as competencies increase in number, the dimensional comparison process becomes more complex and less salient. Similar to self-complexity (Linville, 1985, 1987), when individuals have fewer self-aspects to draw on, it amplifies the spillover from one area to another. In other words, individuals with more competencies required for their job are less likely to be affected by the dimensional comparison process, whether this information is favorable or unfavorable for certain dimensions. Thus, future work could explore how introducing a higher number of competencies affects the dimensional comparison process.

Another interesting avenue for future research surrounds the situational factors within which the dimensional comparison process occurs. One has been discussed already – the similarity of the two domains is a moderating factor that has been demonstrated to affect the

dimensional comparison process in children, and it perhaps plays a role here in the discrepant findings across the studies. In Study 1 & 2, I explicitly told participants that these two domains were separate. In Study 3, these domains were assumed to be different, as the organization defined them as separate and had distinct key performance indicators tied to each competency area. Yet, some respondents commented in the exploratory reflection condition that they did not see a difference between the skills required for each competency. Thus, future research should explore how the similarity of the domain shapes these relationships – while assimilation effects were not found in children, they could exist in the adult working context.

Another situation that is likely to have an effect on dimensional comparisons is the resources available for investment. A key assumption underlying the theory, and, as a result, the theoretical conclusions here, is that individuals have finite resources – whether conceptualized as time, effort, money, energy, or psychological bonds. As they expend resources in one area, it comes at the expense of devoting these resources to another area. Thus, I see the multidimensional self as zero-sum – an investment in one domain means a divestment in another. Indeed, given the work on work/non-work job crafting (De Bloom et al., 2020; Demerouti et al., 2020), adjustments in the work domain have consequences in the non-work domain. However, it would be interesting to explore how there may be resources that help alleviate the demands of dimensional comparisons. For example, per the job demands-resources model (Bakker & Demerouti, 2007) individuals may leverage certain resources (e.g., support, feedback, autonomy, self-affirmation) that could buffer unfavorable comparisons.

Finally, it is likely that individual differences play a role in the dimensional comparison process. I find the most interesting potential moderating individual difference to be trait goal orientation. Trait goal orientation is related to performance and one's ability to self-regulate

(Payne et al., 2007) and can be broken into a 2 X 2 framework when considered with self-regulatory tendencies (Elliot & McGregor, 2001). Individuals can be focused on 1) developing competencies and mastering them (mastery-approach) 2) not learning new competencies or mastering them (mastery-avoidance), 3) demonstrating competence to others and earning positive judgements (performance-approach) or 4) avoiding demonstrating incompetence to others and negative judgements (performance-avoidance) (Elliot & McGregor, 2001; Noordzij et al., 2013). It is interesting to consider these orientations in the context of the interaction of social and dimensional comparisons. For instance, individuals with mastery avoidance orientation, who are more focused on intrapersonal terms, may be particularly reactive to upward internal dimensional comparisons, while individuals with mastery approach orientations may be particularly reactive to downward internal dimensional comparisons. On the other hand, individuals with performance avoidance orientations, who are more focused on interpersonal terms, may be particularly reactive to upward external social comparisons, while individuals with performance approach orientations may be particularly reactive to downward external social comparisons. Future research could consider the interactions of these orientations with the investments that individuals make in response to dimensional and social comparison information.

Alternative Conceptualizations of “Dimensions”

The most interesting extensions of this dissertation are those that involve comparison processes that occur across different conceptualizations of the “domains” of comparison – the same competency across multiple groups, across the work/non-work domain, and across different facets of a construct. While in this dissertation, I have conceived of the domains of comparison across multiple competency areas, we could also consider how individuals compare the *same* competency across separate groups or contexts. Individuals are often a part of multiple

task groups, a part of task and non-task groups (e.g., ERGs), and have work and non-work contexts to consider. In other words, one competency for an individual does not exist at work in a vacuum – one's perception of a competency in one particular group may be shaped by other groups and contexts. For example, Lucy may be a member of two task groups at work (her engineering group and a cross-departmental product development group), a women's employee resource group, a cycling group, a parent-teacher association, and her family. She may display teamwork in all of those groups, and the way that she conceives of her teamwork abilities in her engineering group is shaped by her perceptions of teamwork abilities in her other work and non-work groups. Thus, future work could consider how individuals compare single competencies across work and non-work groups and how that influences their perceptions and behaviors within one particular group.

Additionally, we might conceive of comparisons across different facets of certain multidimensional constructs. In education, Helm et al. (2017) examined dimensional comparisons of agency and communion perceptions among high schoolers. There are many multidimensional constructs that could follow a dimensional comparison process. Leaders may engage in transformational or transactional leadership behaviors due to their underlying comparisons of competencies in each area – if leaders perceive they are better at transactional approaches than transformational approaches, they may engage in more transactional than transformational leadership behaviors.

Due to an underlying dimensional comparison process, individuals may utilize different emotional regulation strategies – displaying felt emotion, deep acting, or surface acting – that also differs by valence of the emotion. For example, perhaps Lucy is good at naturally displaying negative emotion, than she is at deep acting negative emotions. In contexts where negative

emotions are required, Lucy may then select to display natural emotions than to invest in my emotional regulation skills. Finally, dimensional comparisons may be present in how individuals consider how they achieve rank in a group. For example, Lucy may be better at achieving status than at achieving power. Thus, in social situations, she may strive more for and invest more in achieving high status than high power. Dimensional comparison processes may explain phenomena surrounding many multidimensional concepts within organizational behavior

CONCLUSION

The primary goal of this dissertation was to introduce dimensional comparison theory to organizational behavior and explore implications of this theory for adults at work. I reviewed the history and key tenants of dimensional comparison theory, comparing and contrasting it with similar concepts in organizational behavior. I then theorized how this process may affect outcomes of interest to practitioners and scholars: domain-specific commitment, satisfaction, and performance. I also speculated on how social comparisons and the importance of the dimension to the individual and to the group influenced these relationships.

I investigated my hypotheses through diverse methods that are familiar to and could be replicated by organizational scholars. I did find that dimensional comparisons prompt individuals to invest in areas they are relatively better off in and divest from areas they are relatively worse off in, which impacts their satisfaction and performance in these areas. I also found support for these relationships being particularly critical for individuals who see the domain as lower in importance – the dimensional comparison process “neutralizes” when individuals place a high emphasis on the domain, or they perceive the group places a high emphasis on the domain. Finally, the nature of the interaction between social and dimensional comparisons is not completely clear from this investigation – in some cases, they exerted independent effects and in others they exerted interdependent effects. Future research should continue to explore these interactions and investigate factors that might explain why these are interdependent in some contexts and independent in others.

As social comparison theory has been influential in the field of organizational behavior, I expect dimensional comparison theory will be similarly impactful in explaining the tradeoffs that

individuals make in their everyday lives, where they are “good at this, but not at that,” and the cognitions, emotions, behaviors, and attitudes resulting from these comparisons.

APPENDICES

APPENDIX A

Tables and Figures

Table 1*Descriptive statistics and correlations among key variables (Study 1)*

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)
1. Dimensional comparison condition	.96	.92					
2. Social comparison condition	.94	.76	.02				
3. Engineering commitment	4.14	.93	.34*	.37*			
4. Teamwork commitment	3.85	.99	-.15*	.18*	.32*		
5. Engineering task satisfaction	3.81	1.18	.43*	.47*	.72*	.17*	
6. Teamwork satisfaction	3.59	1.20	-.22*	.20*	.18*	.72*	.23*

Note. n = 418. Dimensional comparison condition coded 0 = upward, 1 = lateral, 2 = downward; social comparison condition coded 0 = upward, 1 = lateral, 2 = downward. Exploratory absolute feedback condition was not included in the correlation table.

* $p < .05$

Table 2

Means and standard errors across conditions for commitment in focal and comparison domains (Study 1)

	Engineering Commitment	Teamwork Commitment	Engineering Satisfaction	Teamwork Satisfaction
Upward Dimensional/ Upward Social Comparison	3.19 ^a (.09)	3.69 ^a (.11)	2.41 ^a (.10)	3.33 ^a (.12)
Upward Dimensional/ Lateral Social Comparison	3.82 ^b (.10)	4.04 ^b (.12)	3.25 ^b (.11)	3.99 ^b (.13)
Upward Dimensional/ Downward Social comparison	4.32 ^c (.11)	3.96 ^{a,b} (.13)	4.01 ^c (.11)	3.81 ^b (.14)
Lateral Dimensional/ Lateral Social Comparison	4.69 ^d (.10)	4.55 ^c (.11)	4.59 ^d (.11)	4.56 ^c (.13)
Downward Dimensional/ Upward Social Comparison	4.07 ^b (.10)	3.21 ^d (.12)	3.53 ^b (.10)	2.67 ^d (.13)
Downward Dimensional/ Lateral Social Comparison	4.52 ^{c,d} (.11)	3.67 ^a (.13)	4.60 ^d (.10)	3.33 ^a (.14)
Downward Dimensional/ Downward Social Comparison	4.66 ^d (.11)	3.83 ^{a,b} (.13)	4.70 ^d (.11)	3.39 ^a (.14)
Absolute feedback	4.79 ^d (.09)	4.53 ^c (.11)	4.73 ^d (.10)	4.43 ^c (.13)

Note. Significant differences ($p < .05$) between conditions are denoted with opposite lettering, while non-significant differences are denoted with the same lettering. Standard errors reported in parentheses.

Table 3*Descriptive statistics and correlations among key variables (Study 2)*

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)
1. Dimensional comparison condition	1.00	.92					
2. Social comparison condition	1.01	.75	.00				
3. Project management commitment	3.85	.90	.12*	.10*			
4. Teamwork commitment	3.90	.90	.01	.05	.61*		
5. Project management satisfaction	3.58	1.05	.23*	.23*	.52*	.30*	
6. Teamwork satisfaction	3.64	1.03	.08	.12*	.33*	.50*	.52*

Note. n = 445. Dimensional comparison condition coded 0 = upward, 1 = lateral, 2 = downward; social comparison condition coded 0 = upward, 1 = lateral, 2 = downward. Exploratory absolute feedback condition was not included in these analyses.

* $p < .05$

Table 4

Means and standard errors across conditions for commitment in focal and comparison domains (Study 2)

	Project Management Commitment	Teamwork Commitment	Project Management Satisfaction	Teamwork Satisfaction
Upward Dimensional/ Upward Social Comparison	3.50 ^a (.12)	3.80 ^a (.13)	2.98 ^a (.13)	3.42 ^a (.14)
Upward Dimensional/ Lateral Social Comparison	3.66 ^{a,b} (.12)	3.96 ^{a,b} (.13)	3.10 ^{a,b} (.13)	3.65 ^{a,b} (.14)
Upward Dimensional/ Downward Social comparison	3.77 ^{a,b} (.13)	3.90 ^{a,b} (.13)	3.45 ^{b,c,d} (.14)	3.76 ^{a,b} (.14)
Lateral Dimensional/ Lateral Social Comparison	3.94 ^{b,c,d} (.11)	3.89 ^{a,b} (.11)	3.81 ^d (.11)	3.70 ^{a,b} (.12)
Downward Dimensional/ Upward Social Comparison	3.67 ^{a,b} (.12)	3.69 ^a (.13)	3.31 ^{a,b,c} (.13)	3.39 ^a (.14)
Downward Dimensional/ Lateral Social Comparison	3.94 ^{b,c,d} (.12)	4.01 ^b (.12)	3.77 ^d (.12)	3.69 ^{a,b} (.13)
Downward Dimensional/ Downward Social Comparison	4.08 ^{c,d} (.11)	3.95 ^{a,b} (.11)	4.15 ^e (.11)	3.91 ^{b,c} (.12)
Absolute feedback	4.17 ^d (.10)	4.18 ^b (.10)	4.25 ^e (.11)	4.27 ^c (.11)

Note. Significant differences ($p < .05$) between conditions are denoted with opposite lettering, while non-significant differences are denoted with the same lettering. Standard errors reported in parentheses.

Table 5

Results of the Item Sort for Measure A

Item	Upward Dimensional Comparison Scale					Downward Dimensional Comparison Scale				
	Proportion of Substantive Agreement	Upward Assignments	Downward Assignments	Neither Assignments	Substantive Validity Coefficient	Proportion of Substantive Agreement	Upward Assignments	Downward Assignments	Neither Assignments	Substantive Validity Coefficient
I often think about how much better (worse) I am doing in Dimension A than Dimension B	0.58	31	58	11	0.27	0.58	58	26	15	0.32
I compare my better-off (worse-off) performance in Dimension A to my worse-off (better-off) performance in Dimension B	0.5	33	50	17	0.17	0.56	56	29	15	0.29
I feel as though my performance in Dimension A is better (worse) than my performance in Dimension B	0.65	27	65	8	0.38	0.67	67	20	12	0.36
I pay a lot of attention to how my performance in Dimension A is better (worse) than my performance in Dimension B	0.64	20	64	16	0.44	0.57	57	23	20	0.44
I consider how my situation in Dimension A is more positive (negative) than my situation in Dimension B	0.57	29	57	14	0.28	0.57	57	24	18	0.33
When I think about my abilities in Dimension A, I automatically compare how these abilities are better (worse) than my abilities in Dimension B	0.58	25	57	17	0.33	0.56	56	21	22	0.35
I reflect on how much more (less) accomplished I am in Dimension A compared to Dimension B	0.51	26	51	23	0.25	0.54	54	23	23	0.33
When I think of how I did in Dimension A, I compare this to how poorly (well) I did in Dimension B	0.63	24	62	13	0.39	0.42	42	25	33	0.21

Table 5 (cont'd)

Item	Upward Dimensional Comparison Scale					Downward Dimensional Comparison Scale				
	Proportion of Substantive Agreement	Upward Assignments	Downward Assignments	Neither Assignments	Substantive Validity Coefficient	Proportion of Substantive Agreement	Upward Assignments	Downward Assignments	Neither Assignments	Substantive Validity Coefficient
I often think about how I am not particularly good at Dimension B (A) compared to Dimension A (B)	0.48	27	48	25	0.21	0.61	61	25	14	0.17
I compare how well I am doing in Dimension A to how poorly (well) I am doing in Dimension B in my work	0.51	26	51	23	0.25	0.48	48	20	31	0.3
Nobody is perfect, but I am just not as good at Dimension B (A) as I am at Dimension A (B)^a	0.48	30	48	22	0.18	0.59	59	21	19	0.27
Compared to how well I do in Dimension A (B), Dimension B (A) just is not my thing^a	0.41	25	40	34	0.07	0.55	55	23	22	0.36
I usually do not think about how well I am doing in Dimension A compared to how poorly (well) I am doing in Dimension B (reverse-scored)^a	0.48	31	48	21	0.17	0.47	47	19	33	0.22
I evaluate my progress on Dimension A by comparing it to how much worse-off (better-off) I am in Dimension B	0.59	22	59	19	0.37	0.5	50	28	22	0.19
I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am not as good at (which I am good at)	0.55	25	55	20	0.30	0.55	55	21	23	0.27
When assessing my achievement in Dimension A, I think of how much better (worse) I am at Dimension A than Dimension B	0.53	25	53	22	0.28	0.54	54	22	24	0.31

Table 5 (cont'd)

Item	Upward Dimensional Comparison Scale					Downward Dimensional Comparison Scale				
	Proportion of Substantive Agreement	Upward Assignments	Downward Assignments	Neither Assignments	Substantive Validity Coefficient	Proportion of Substantive Agreement	Upward Assignments	Downward Assignments	Neither Assignments	Substantive Validity Coefficient
I tend to compare my abilities in Dimension A to how much worse (better) my abilities are in Dimension B	0.51	29	51	20	0.22	0.47	47	30	22	0.24
I think about how much worse (better) my abilities are in Dimension B compared to Dimension A	0.58	20	58	22	0.38	0.5	50	28	22	0.19
When I think about my abilities in Dimension A, I think about how bad (good) I am at Dimension B	0.53	24	53	23	0.29	0.45	45	26	28	0.22
I find myself thinking about how poorly (well) I perform in Dimension B when I think about my performance in Dimension A	0.57	28	57	15	0.29	0.47	47	24	29	0.16

Note. Bolded items were dropped from subsequent analyses.

* $p < .05$

Table 6

Results of the Item Sort for Measure B

Item	Proportion of Substantive Agreement	“Applies” Assignments	“Does Not Apply” Assignments	Substantive Validity Coefficient
I am very good in Dimension A	0.81	81	19	0.7
My knowledge, skills, and abilities in Dimension A are of high quality	0.89	89	11	0.76
I would rate myself very highly in the knowledge, skills, and abilities related to Dimension A	0.87	87	13	0.62
I am highly accomplished in Dimension A	0.75	75	25	0.25
I am often disappointed by my lack of knowledge, skills, and abilities in Dimension A (R)	0.5	50	50	-0.06
I believe my knowledge, skills, and abilities are deficient in Dimension A (R)	0.44	44	56	0.19
If I were to grade myself on Dimension A, I would receive high scores	0.75	75	25	0.53
The quality of my efforts in Dimension A are top notch	0.78	78	22	0.6
I am particularly good at Dimension A	0.82	82	18	0.6
My situation in Dimension A is very positive	0.78	78	22	0.78

Note. Bolded items were dropped from subsequent analyses. * $p < .05$

Table 7

Exploratory Factor Analysis: One-Factor Solution for Measure A

Item	Downward Items		Upward Items	
	Factor 1	Factor 2	Factor 1	Factor 2
I often think about how much better (worse) I am doing in Dimension A than Dimension B	0.13		0.76*	
I feel as though my performance in Dimension A is better (worse) than my performance in Dimension B	-0.13		0.66*	
I pay a lot of attention to how my performance in Dimension A is better (worse) than my performance in Dimension B	0.22*		0.73*	
I consider how my situation in Dimension A is more positive (negative) than my situation in Dimension B	0.21*		0.75*	
When I think about my abilities in Dimension A, I automatically compare how these abilities are better (worse) than my abilities in Dimension B	0.49*		0.82*	
I reflect on how much more (less) accomplished I am in Dimension A compared to Dimension B	0.24*		0.80*	
When I think of how I did in Dimension A, I compare this to how poorly (well) I did in Dimension B	0.53*		0.76*	
I compare how well I am doing in Dimension A to how poorly (well) I am doing in Dimension B in my work	0.52*		0.71*	
I evaluate my progress on Dimension A by comparing it to how much worse-off (better-off) I am in Dimension B	0.67*		0.78*	
I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am not as good at (which I am good at)	0.49*		0.73*	
When assessing my achievement in Dimension A, I think of how much better (worse) I am at Dimension A than Dimension B	0.46*		0.84*	

Table 7 (cont'd)

Item	Downward Items		Upward Items	
	Factor 1	Factor 2	Factor 1	Factor 2
I tend to compare my abilities in Dimension A to how much worse (better) my abilities are in Dimension B	0.52*		0.64*	
I think about how much worse (better) my abilities are in Dimension B compared to Dimension A	0.44*		0.80*	
When I think about my abilities in Dimension A, I think about how bad (good) I am at Dimension B	0.50*		0.77*	

Note. Bolded items were dropped from subsequent analyses.

* $p < .05$

Table 8

Exploratory Factor Analysis: Two-Factor Solution for Measure A

Item	Downward Items		Upward Items	
	Factor 1	Factor 2	Factor 1	Factor 2
I often think about how much better (worse) I am doing in Dimension A than Dimension B	0.62*	-0.24*	0.21*	0.662*
I feel as though my performance in Dimension A is better (worse) than my performance in Dimension B	0.63*	-0.51*	-0.08	0.727*
I pay a lot of attention to how my performance in Dimension A is better (worse) than my performance in Dimension B	0.69*	-0.18*	0.07	0.71*
I consider how my situation in Dimension A is more positive (negative) than my situation in Dimension B	0.77*	-0.24*	0.03	0.75*
When I think about my abilities in Dimension A, I automatically compare how these abilities are better (worse) than my abilities in Dimension B	0.74*	0.08	0.11	0.79*
I reflect on how much more (less) accomplished I am in Dimension A compared to Dimension B	0.79*	-0.21*	-0.02	0.85*
When I think of how I did in Dimension A, I compare this to how poorly (well) I did in Dimension B	0.80*	0.09	-0.01	0.79*
I compare how well I am doing in Dimension A to how poorly (well) I am doing in Dimension B in my work	0.74*	0.12*	0.10	0.67*
I evaluate my progress on Dimension A by comparing it to how much worse-off (better-off) I am in Dimension B	0.59*	0.36*	0.07	0.77*

Table 8 (cont'd)

Item	Downward Items		Upward Items	
	Factor 1	Factor 2	Factor 1	Factor 2
I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am not as good at (which I am good at)	0.73*	0.09	-0.03	0.78*
When assessing my achievement in Dimension A, I think of how much better (worse) I am at Dimension A than Dimension B	0.85*	-0.01	0.06	0.84*
I tend to compare my abilities in Dimension A to how much worse (better) my abilities are in Dimension B	0.81*	0.08	0.50*	0.37*
I think about how much worse (better) my abilities are in Dimension B compared to Dimension A	0.80*	-0.01	-0.08	0.89*
When I think about my abilities in Dimension A, I think about how bad (good) I am at Dimension B	0.78*	0.07	0.00	0.81*

Note. Bolded items were dropped from subsequent analyses. * $p < .05$

Table 9**Exploratory Factor Analysis: One-Factor Solution for Measure B**

Item	Dimension A Items		Dimension B Items	
	Factor 1	Factor 2	Factor 1	Factor 2
I am very good in Dimension A(B)	0.07		0.89*	
My knowledge, skills, and abilities in Dimension A(B) are of high quality	0.08		0.91*	
I would rate myself very highly in the knowledge, skills, and abilities related to Dimension A(B)	0.09		0.86*	
I am highly accomplished in Dimension A(B)	0.13		0.85*	
I believe my knowledge, skills, and abilities are deficient in Dimension A(B) (R)	-0.23*		-0.21*	
If I were to grade myself on Dimension A(B), I would receive high scores	0.18*		0.89*	
The quality of my efforts in Dimension A(B) are top notch	0.15*		0.83*	
I am particularly good at Dimension A(B)	0.12		0.90*	
My situation in Dimension A(B) is very positive	0.19*		0.88*	

Note. Bolded items were dropped from subsequent analyses. * $p < .05$

Table 10**Exploratory Factor Analysis: Two-Factor Solution for Measure B**

Item	Dimension A Items		Dimension B Items	
	Factor 1	Factor 2	Factor 1	Factor 2
I am very good in Dimension A(B)	0.89*	-0.05	-0.05	0.90*
My knowledge, skills, and abilities in Dimension A(B) are of high quality	0.91*	-0.05	-0.04	0.92*
I would rate myself very highly in the knowledge, skills, and abilities related to Dimension A(B)	0.86*	-0.04	-0.01	0.86*
I am highly accomplished in Dimension A(B)	0.78*	0.02	0.02	0.85*
I believe my knowledge, skills, and abilities are deficient in Dimension A(B) (R)	-0.11	-0.22*	-0.07	-0.20*
If I were to grade myself on Dimension A(B), I would receive high scores	0.81*	0.06	0.07	0.88*
The quality of my efforts in Dimension A(B) are top notch	0.72*	0.05	0.03	0.83*
I am particularly good at Dimension A(B)	0.83*	0.00	-0.05	0.91*
My situation in Dimension A(B) is very positive	0.74*	0.09	0.03	0.87*

Note. Bolded items were dropped from subsequent analyses. * $p < .05$

Table 11

Results of the Confirmatory Factor Analysis for Measure A

Item	Downward Factor	Upward Factor
<i>Downward Dimensional Comparison</i>		
When I think about my abilities in Dimension A, I automatically compare how these abilities are better than my abilities in Dimension B	.65*	
When I think of how I did in Dimension A, I compare this to how poorly I did in Dimension B	.81*	
I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am not as good at	.85*	
When assessing my achievement in Dimension A, I think of how much better I am at Dimension A than Dimension B	.82*	
I think about how much worse my abilities are in Dimension B compared to Dimension A	.91*	
When I think about my abilities in Dimension A, I think about how bad I am at Dimension B	.87*	
<i>Upward Dimensional Comparison</i>		
When I think about my abilities in Dimension A, I automatically compare how these abilities are worse than my abilities in Dimension B		.75*
When I think of how I did in Dimension A, I compare this to how well I did in Dimension B		.68*
I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am good at		.79*
When assessing my achievement in Dimension A, I think of how much worse I am at Dimension A than Dimension B		.77*
I think about how much better my abilities are in Dimension B compared to Dimension A		.85*
When I think about my abilities in Dimension A, I think about how good I am at Dimension B		.80*

* $p < .05$

Table 12

Results of the Confirmatory Factor Analysis for Measure B

Item	Dimension A	Dimension B
<i>Dimension A Proficiency</i>		
I am very good in Dimension A	.92*	
My knowledge, skills, and abilities in Dimension A are of high quality	.88*	
I would rate myself very highly in the knowledge, skills, and abilities related to Dimension A	.87*	
I am highly accomplished in Dimension A	.88*	
If I were to grade myself on Dimension A, I would receive high scores	.91*	
The quality of my efforts in Dimension A are top notch	.83*	
I am particularly good at Dimension A	.92*	
My situation in Dimension A is very positive	.85*	
<i>Dimension B Proficiency</i>		
I am very good in Dimension B		.89*
My knowledge, skills, and abilities in Dimension B are of high quality		.87*
I would rate myself very highly in the knowledge, skills, and abilities related to Dimension B		.90*
I am highly accomplished in Dimension B		.92*
If I were to grade myself on Dimension B, I would receive high scores		.93*
The quality of my efforts in Dimension B are top notch		.88*
I am particularly good at Dimension B		.92*
My situation in Dimension B is very positive		.92*

* $p < .05$

Table 13*Descriptive statistics and correlations among key variables (Study 3)*

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Dimensional comparison (Measure A)	2.71	.25													
2. Taskwork competency (Measure B)	4.43	.57	.03												
3. Teamwork competency (Measure B)	4.32	.61	-.29*	.43*											
4. Taskwork commitment	4.67	.47	.16*	.55*	.23*										
5. Teamwork commitment	4.47	.62	-.16*	.20*	.54*	.39*									
6. Taskwork satisfaction (t+1)	4.60	.66	.24*	.58*	.10	.39*	.20*								
7. Teamwork satisfaction (t+1)	4.43	.62	-.18	.23*	.55*	.07	.47*	.38*							
8. Taskwork solicitation performance (t+1)	1.98	1.63	.15	.32*	.11	.20	.06	.19	.03						
9. Teamwork solicitation performance (t+1)	1.19	1.13	-.13	.24*	.14	.05	.20	.19	.20	.08					
10. Taskwork visit performance (t+1)	7.68	5.77	-.11	.32*	.12	.05	.07	.29*	.21*	.49*	.10				
11. Teamwork visit performance (t+1)	1.98	2.01	-.13	.07	.10	-.00	.09	.11	.18	-.17	.37*	.16			
12. Social comparison valence	3.61	.60	-.20*	-.14*	.11	-.15*	.06	-.17	.11	-.16	-.04	-.01	.13		
13. Importance of focal dimension to the group	2.74	1.18	-.05	.08	.01	.04	.07	.17	.04	-.03	-.02	-.02	-.09	-.00	
14. Importance of focal dimension to the individual	2.57	1.08	-.04	.06	-.01	.08	.06	.17	.15	-.12	-.01	-.06	-.06	.06	.78*

Note. N = 210 * $p < .05$

Table 14*Summary of tested and supported hypotheses across all three studies*

Hypotheses	Study 1	Study 2	Study 3
Hypothesis 1a: The valence of the dimensional comparison (where downward comparisons are positively valenced and upward comparisons are negatively valenced) is a) positively related to satisfaction in the focal domain	Supported	Supported	Supported
Hypothesis 1b: The valence of the dimensional comparison (where downward comparisons are positively valenced and upward comparisons are negatively valenced) is negatively related to satisfaction in the comparison domain.	Supported	Not supported	Supported
Hypothesis 2a: Valence of the dimensional comparison (where downward comparisons are positively valenced and upward comparisons are negatively valenced) is a) positively related to performance in the focal domain	Not tested	Not tested	Supported
Hypothesis 2b: Valence of the dimensional comparison (where downward comparisons are positively valenced and upward comparisons are negatively valenced) is negatively related to performance in the comparison domain.	Not tested	Not tested	Not supported
Hypothesis 3a: The positive relationship between the valence of dimensional comparisons and satisfaction in the focal domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is more positive when the focal domain is high (versus low) in importance to the group.	Not tested	Not tested	Not supported
Hypothesis 3b: The negative relationship between the valence of dimensional comparisons and satisfaction in the comparison domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is less negative when the focal domain is low (versus high) in importance to the group.	Not tested	Not tested	Not supported
Hypothesis 4a: The positive relationship between the valence of dimensional comparisons and performance in the focal domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is more positive when the focal domain is high (versus low) in importance to the group.	Not tested	Not tested	Supported

Table 14 (cont'd)

Hypotheses	Study 1	Study 2	Study 3
Hypothesis 4b: The negative relationship between the valence of dimensional comparisons and performance in the comparison domain is moderated by the perceived importance of the focal domain to the group, such that the relationship is less negative when the focal domain is low (versus high) in importance to the group.	Not tested	Not tested	Not supported
Hypothesis 5a: The positive relationship between the valence of dimensional comparisons and satisfaction in the focal domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is more positive when the focal domain is low (versus high) in importance to the individual.	Not tested	Not tested	Not supported
Hypothesis 5b: The negative relationship between the valence of dimensional comparisons and satisfaction in the comparison domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is less negative when the focal domain is high (versus low) in importance to the individual.	Not tested	Not tested	Not supported
Hypothesis 6a: The positive relationship between the valence of dimensional comparisons and performance in the focal domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is more positive when the focal domain is low (versus high) in importance to the individual.	Not tested	Not tested	Supported
Hypothesis 6b: The negative relationship between the valence of dimensional comparisons and performance in the comparison domain is moderated by the perceived importance of the focal domain to the individual, such that the relationship is less negative when the focal domain is high (versus low) in importance to the individual.	Not tested	Not tested	Not supported
Hypothesis 7a: The positive relationship between the dimensional comparison valence and satisfaction in the focal domain is moderated by social comparison valence in the focal domain, such that the relationship is more positive when social comparison valence is more downward than upward.	Supported	Not supported	Supported

Table 14 (cont'd)

Hypotheses	Study 1	Study 2	Study 3
Hypothesis 7b: The negative relationship between the dimensional comparison valence and satisfaction in the comparison domain is moderated by social comparison valence in the focal domain, such that the relationship is less negative when social comparison valence is more downward than upward.	Not supported	Not supported	Supported
Hypothesis 8a: The positive relationship between the dimensional comparison valence and performance in the focal domain is moderated by social comparison valence in the focal domain, such that the relationship is more positive when social comparison valence is more downward than upward.	Not tested	Not tested	Not supported
Hypothesis 8b: The negative relationship between the dimensional comparison valence and performance in the comparison domain is moderated by social comparison valence in the focal domain, such that the relationship is less negative when social comparison valence is more downward than upward.	Not tested	Not tested	Not supported
Hypothesis 9a: Commitment in the focal domain mediates the positive relationship between valence of the dimensional comparisons and satisfaction in the focal domain.	Supported	Not supported	Supported
Hypothesis 9b: Commitment in the comparison domain mediates the negative relationship between valence of the dimensional comparisons and satisfaction in the comparison domain.	Not supported	Not supported	Supported
Hypothesis 10a: Commitment in the focal domain mediates the positive relationship between valence of the dimensional comparisons and performance in the focal domain.	Not tested	Not tested	Supported
Hypothesis 10b: Commitment in the comparison domain mediate the negative relationship between valence of the dimensional comparisons and performance in the comparison domain.	Not tested	Not tested	Supported
Hypothesis 11a: Social comparison valence in the focal domain will moderate the indirect effect of the valence of dimensional comparisons and task satisfaction via commitment in the focal dimension, such that the indirect effect is positive and strongest when social comparison valence is downward (vs upward).	Not supported	Not supported	Not supported

Table 14 (cont'd)

Hypotheses	Study 1	Study 2	Study 3
Hypothesis 11b: Social comparison valence in the focal domain will moderate the indirect effect of the valence of dimensional comparisons and group satisfaction via commitment to the comparison dimension, such that the indirect effect is negative and weaker when social comparison valence is downward (vs upward).	Not supported	Not supported	Not supported
Hypothesis 12a: The importance of the focal dimension to the group will moderate the indirect effect of the valence of dimensional comparisons and task satisfaction via commitment to the focal dimension, such that the indirect effect is positive and strongest when the importance of the focal dimension to the group is higher (versus lower).	Not tested	Not tested	Not supported
Hypothesis 12b: The importance of the focal dimension to the group will moderate the indirect effect of the valence of dimensional comparisons and group satisfaction via commitment in the comparison dimension, such that the indirect effect is negative and weaker when the importance of the focal dimension to the group is higher (versus lower).	Not tested	Not tested	Not supported

Figure 1

Effect of dimensional comparison valence on engineering satisfaction (Study 1)

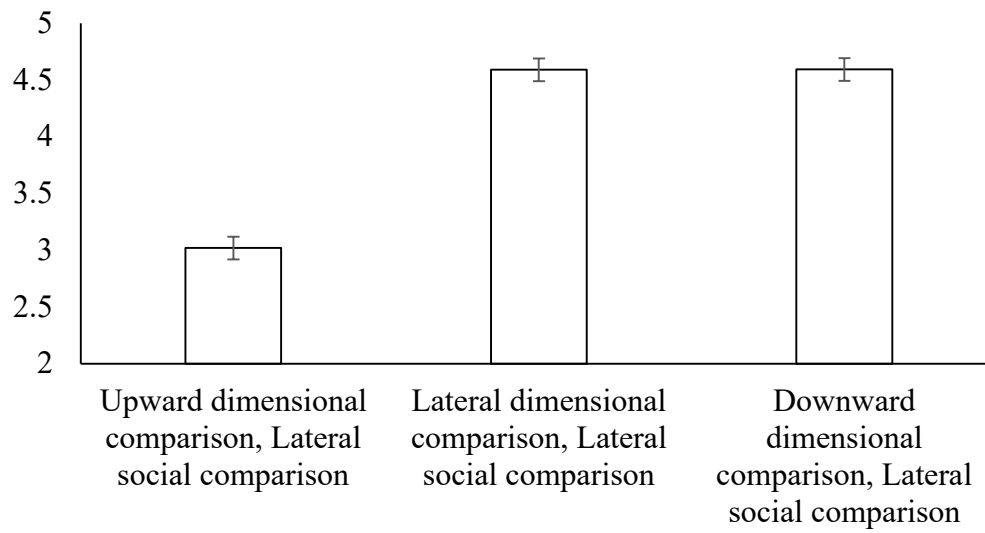


Figure 2

Effect of dimensional comparison valence on teamwork satisfaction (Study 1)

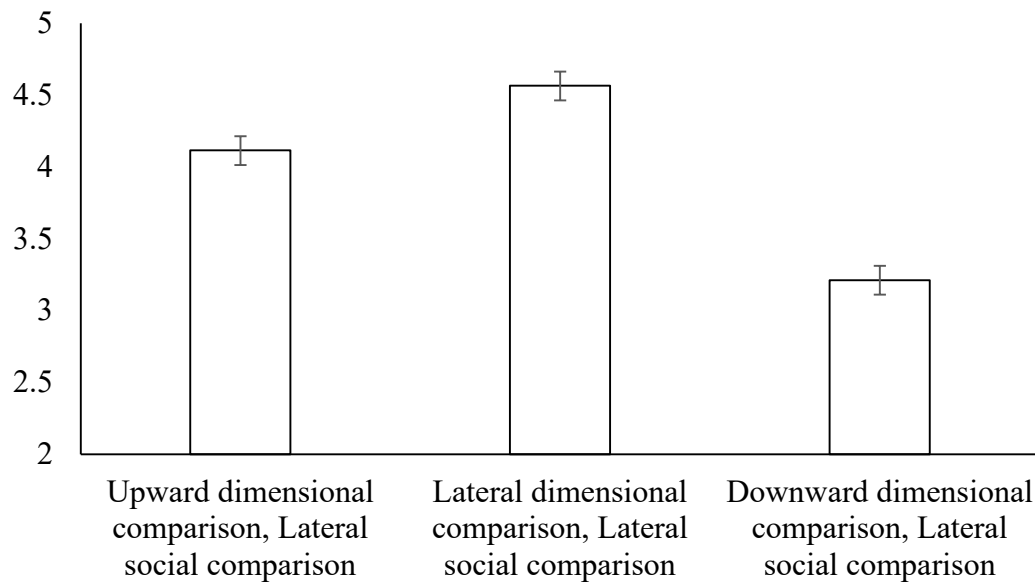


Figure 3

Plot of dimensional comparison and social comparison valence on engineering satisfaction (Study 1)

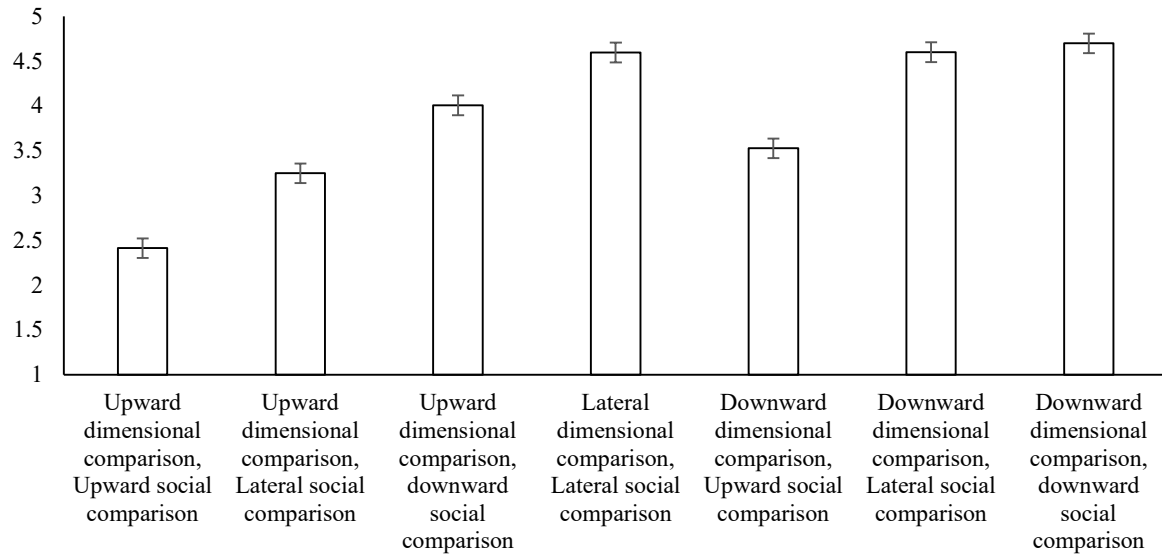


Figure 4

Effect of dimensional comparison valence on project management satisfaction (Study 2)

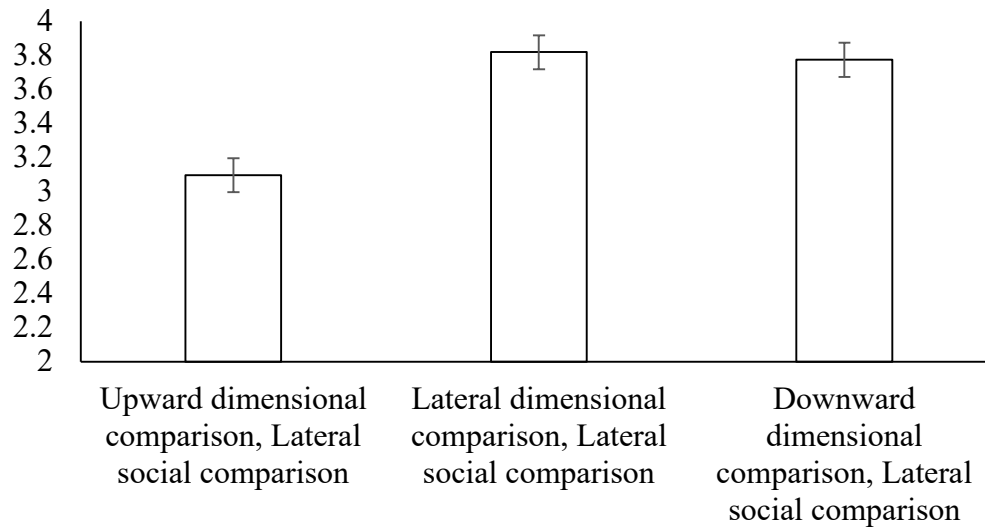


Figure 5

Exploratory Factor Analysis: Measure A Scree Plot

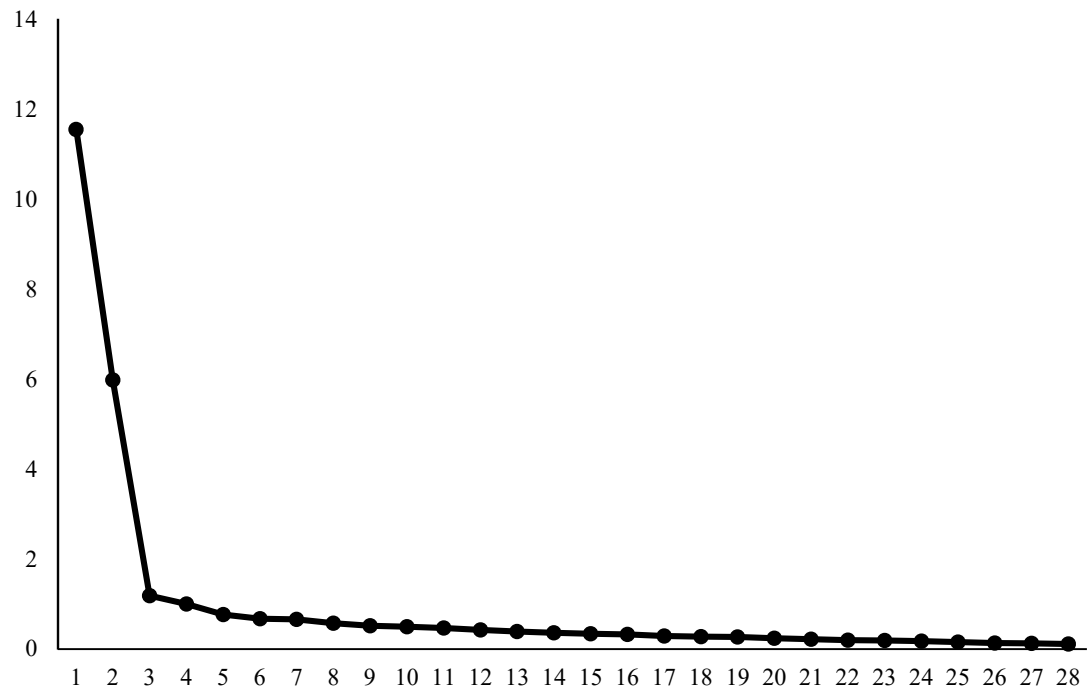


Figure 6

Exploratory Factor Analysis: Measure B Scree Plot

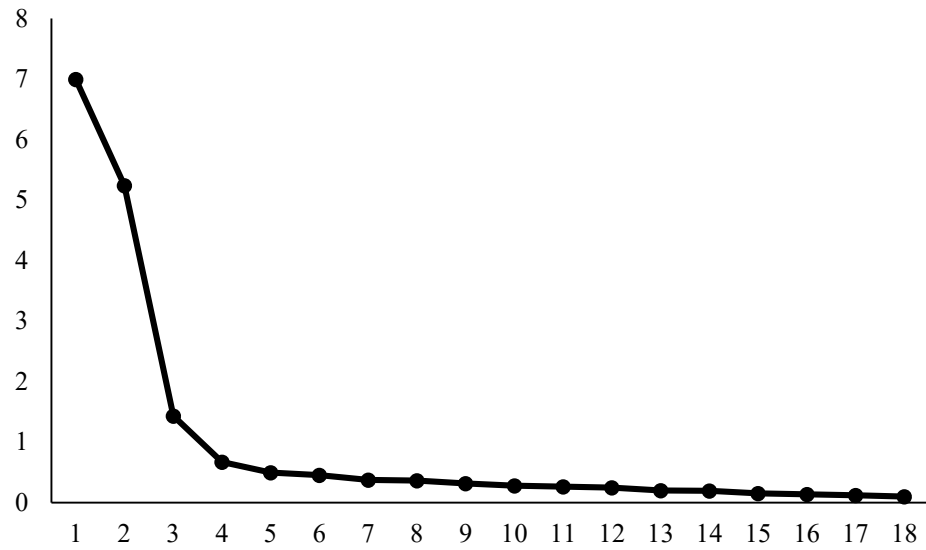


Figure 7

Response surface plot for taskwork satisfaction (t) (Measure B - Study 3)

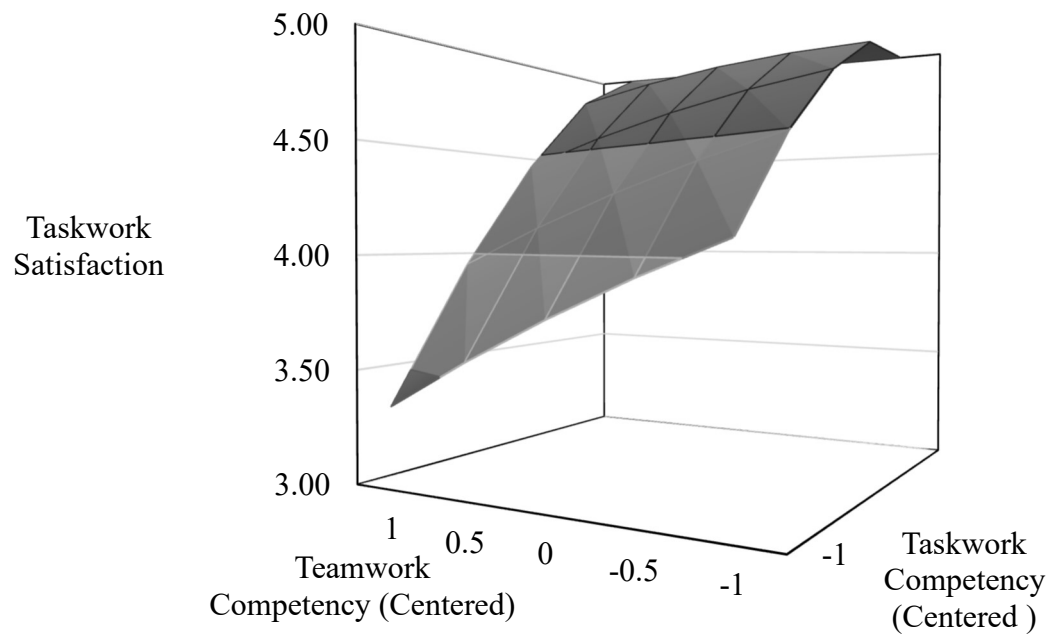


Figure 8

Response surface plot for teamwork satisfaction (t) (Measure B - Study 3)

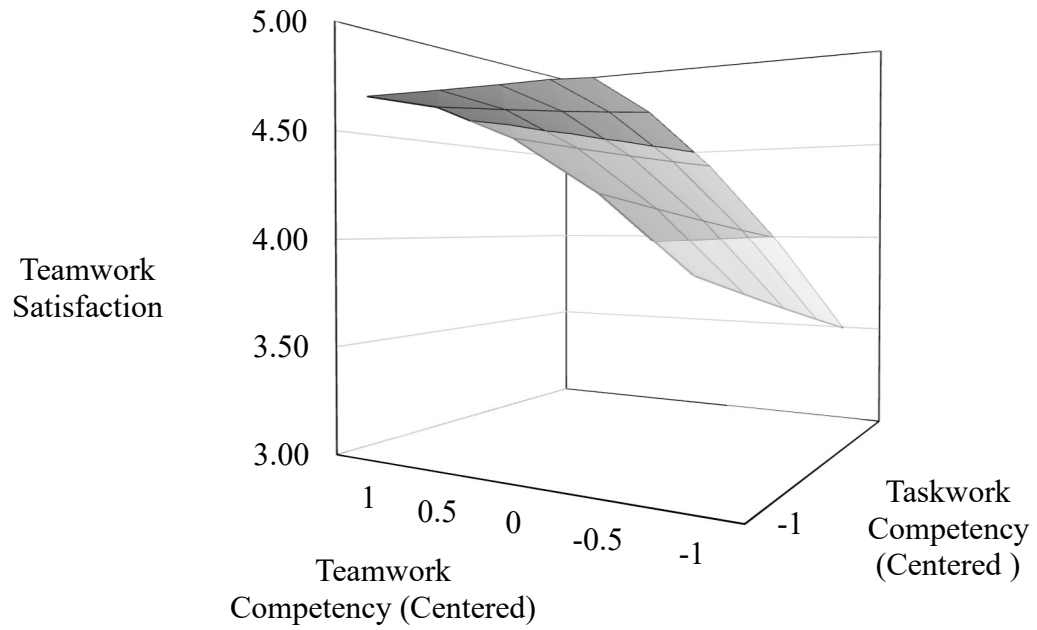


Figure 9

Response surface plot for individual solicitation performance (t) (Measure B - Study 3)

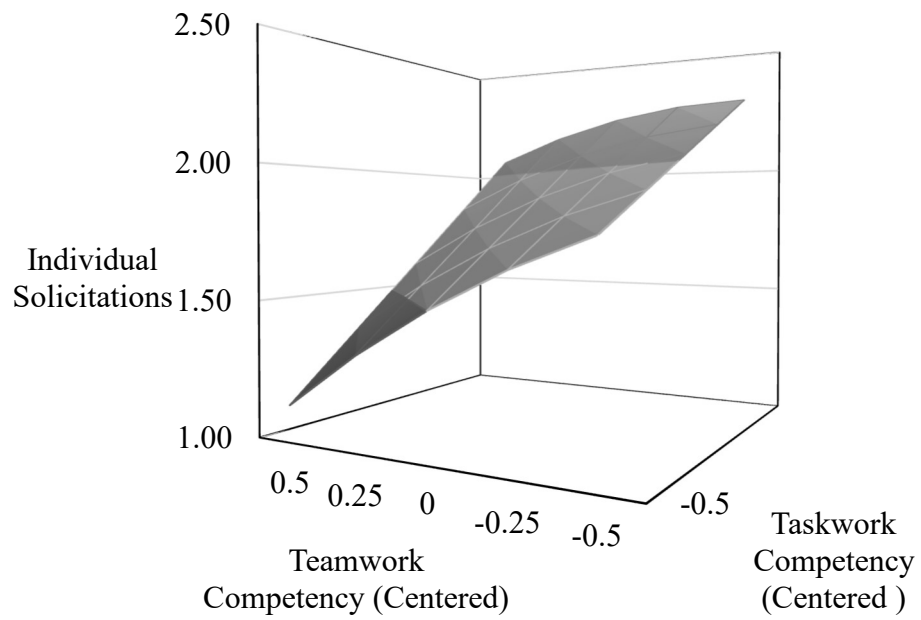


Figure 10

Interaction of dimensional comparison valence and importance of focal dimension to the group on individual solicitations ($t+1$) (Measure A - Study 3)

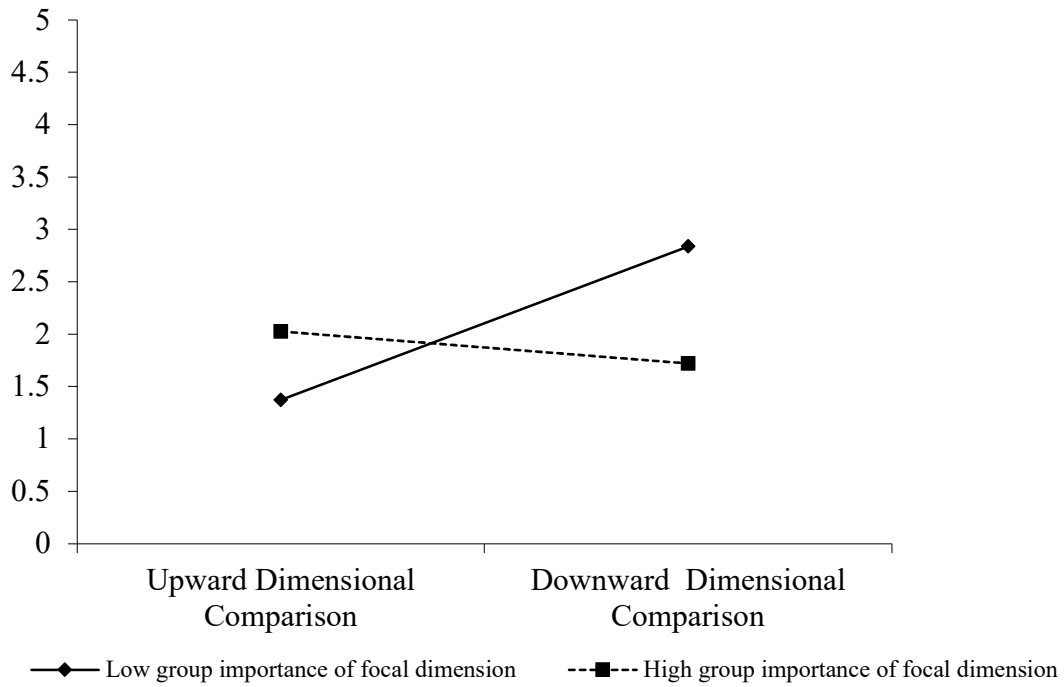


Figure 11

Interaction of dimensional comparison valence and importance of focal dimension to the individual on individual solicitations ($t+1$) (Measure A - Study 3)

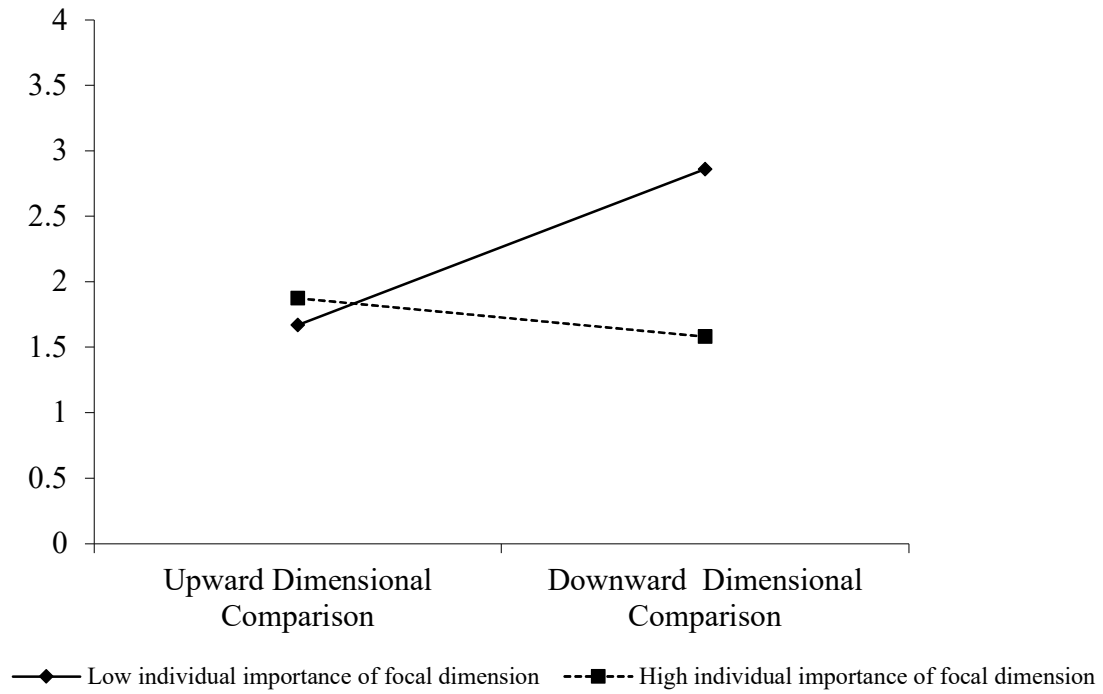


Figure 12

Interaction of dimensional comparison valence and social comparison valence on taskwork satisfaction ($t+1$) (Measure A - Study 3)

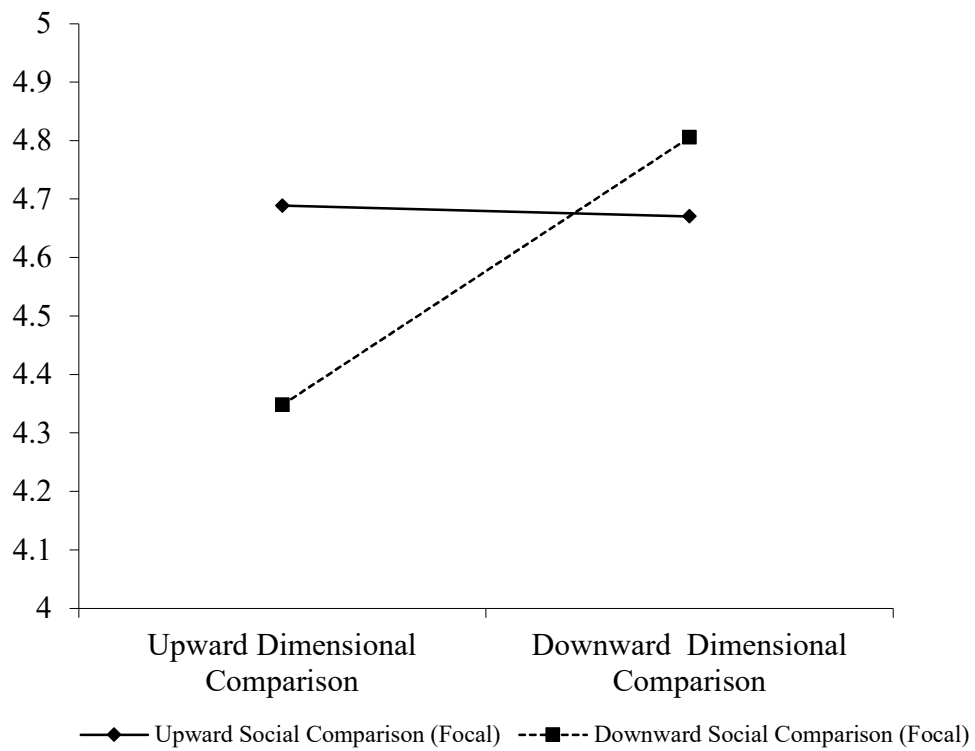


Figure 13

Interaction of dimensional comparison valence and social comparison valence on teamwork satisfaction ($t+1$) (Measure A - Study 3)

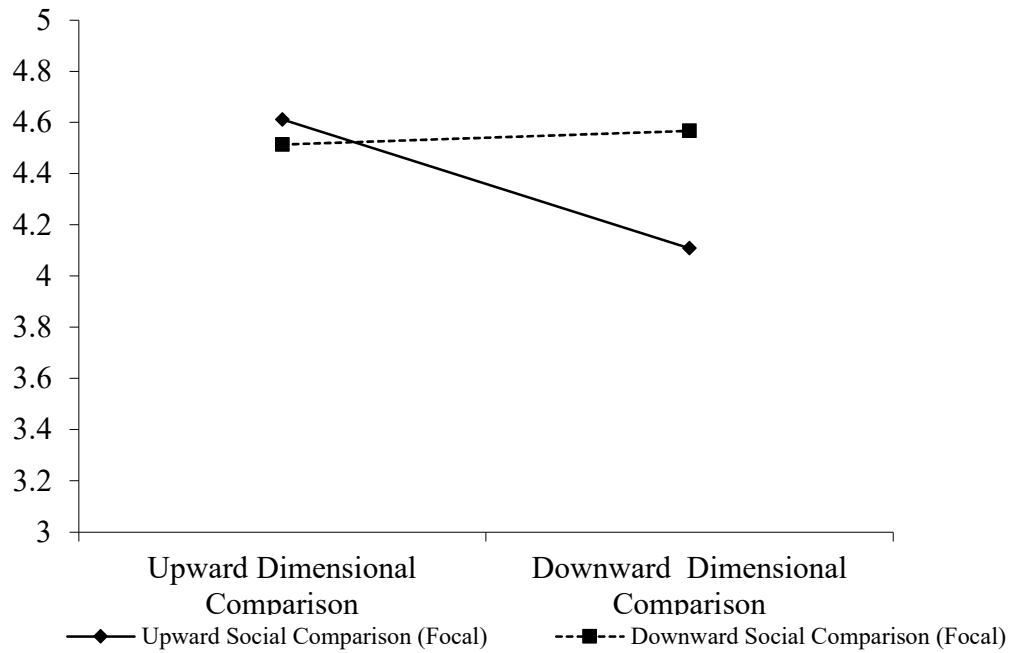
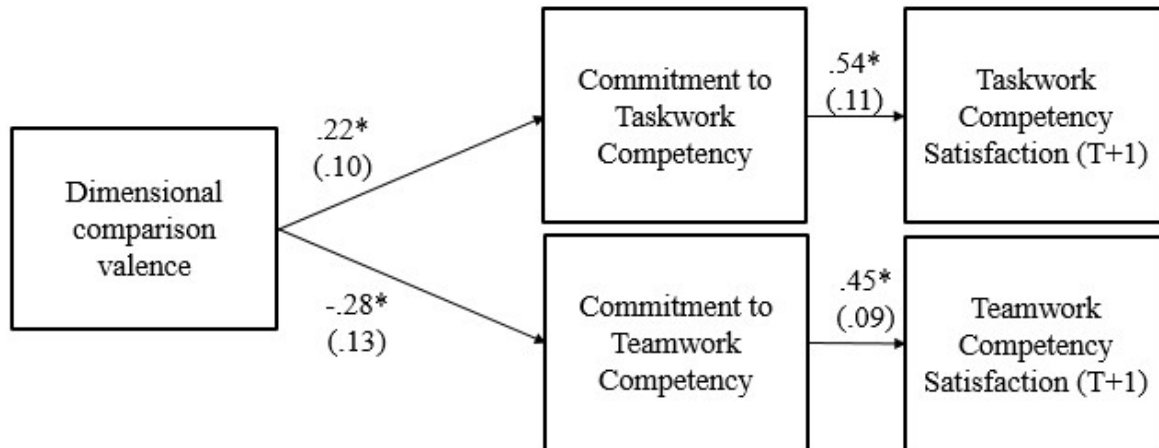


Figure 14

The effect of dimensional comparison valence on domain-specific satisfaction (t+1) via domain-specific commitment (Measure B - Study 3)



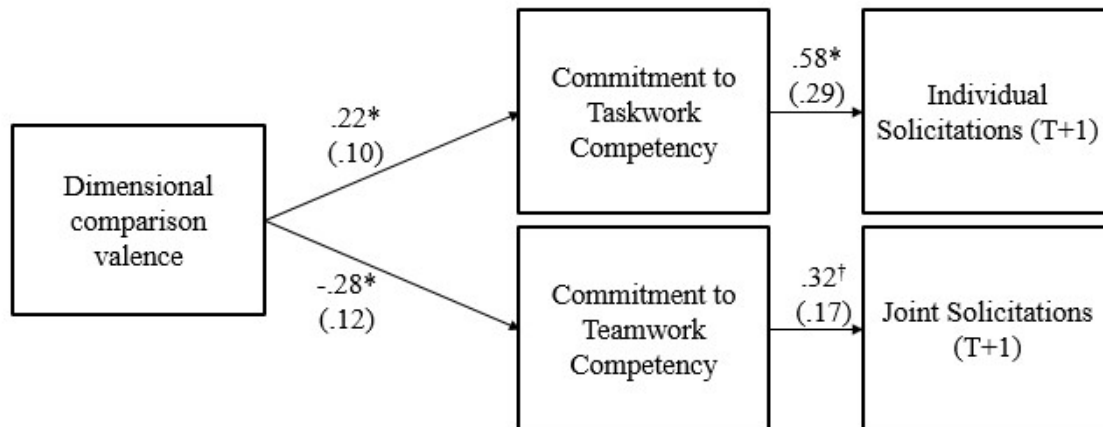
Note. $N = 210$. The direct effect of dimensional comparison valence on taskwork competency satisfaction was not significant ($B = .242$, $p > .05$) and the direct effect of dimensional comparison valence on teamwork competency satisfaction was not significant ($B = -.189$, $p > .05$).

* $p < .05$

† $p < .10$

Figure 15

The effect of dimensional comparison valence on domain-specific performance (t+1) via domain-specific commitment (Measure B - Study 3)



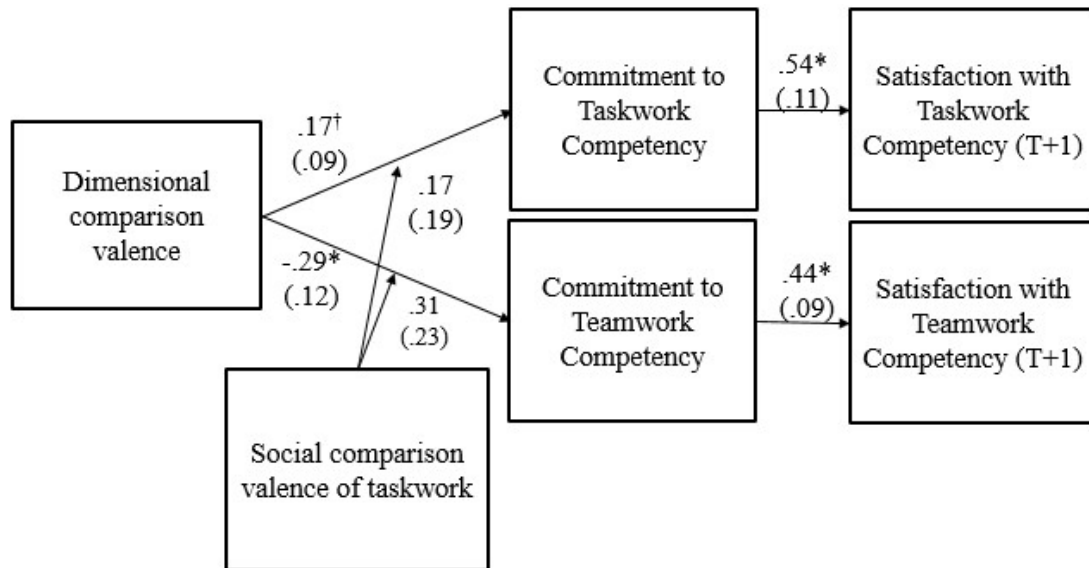
Note. $N = 210$. The direct effect of dimensional comparison valence on taskwork competency satisfaction was not significant ($B = .43$, $p > .05$) and the direct effect of dimensional comparison valence on teamwork competency satisfaction was not significant ($B = -.26$, $p > .05$).

* $p < .05$

† $p < .10$

Figure 16

The interactive effect of dimensional comparison valence and social comparison valence on domain-specific satisfaction (t+1) via domain-specific commitment (Measure B - Study 3)



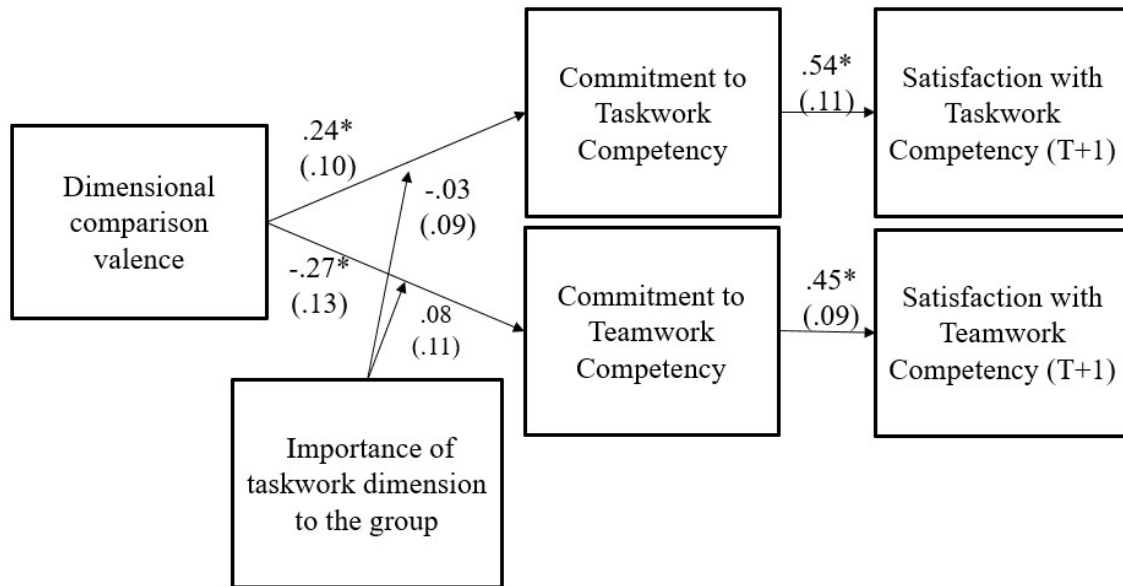
Note. $N = 205$. The direct effect of dimensional comparison valence on taskwork competency satisfaction was not significant ($B = .24, p > .10$) and the direct effect of dimensional comparison valence on teamwork competency satisfaction was significant ($B = -.20, p > .10$). Additionally, the effect of social comparison valence on commitment to taskwork ($B = -.09, p > .10$) and on commitment to teamwork ($B = .05, p > .10$) were not significant.

* $p < .05$

$^{\dagger} p < .10$

Figure 17

The interactive effect of dimensional comparison valence and importance of the taskwork dimension to the group on domain-specific satisfaction ($t+1$) via domain-specific commitment (Measure B - Study 3)



Note. $N = 205$. The direct effect of dimensional comparison valence on taskwork competency satisfaction was not significant ($B = .24, p > .10$) and the direct effect of dimensional comparison valence on teamwork competency satisfaction was significant ($B = -.19, p > .10$). Additionally, the effect of importance of the taskwork dimension to the group on commitment to taskwork ($B = .02, p > .10$) and on commitment to teamwork ($B = .04, p > .10$) were not significant.

* $p < .05$

† $p < .10$

Figure 18

Interaction of dimensional comparison condition and individual importance of focal domain on individual solicitations ($t+1$) (Study 3 Supplemental Condition)

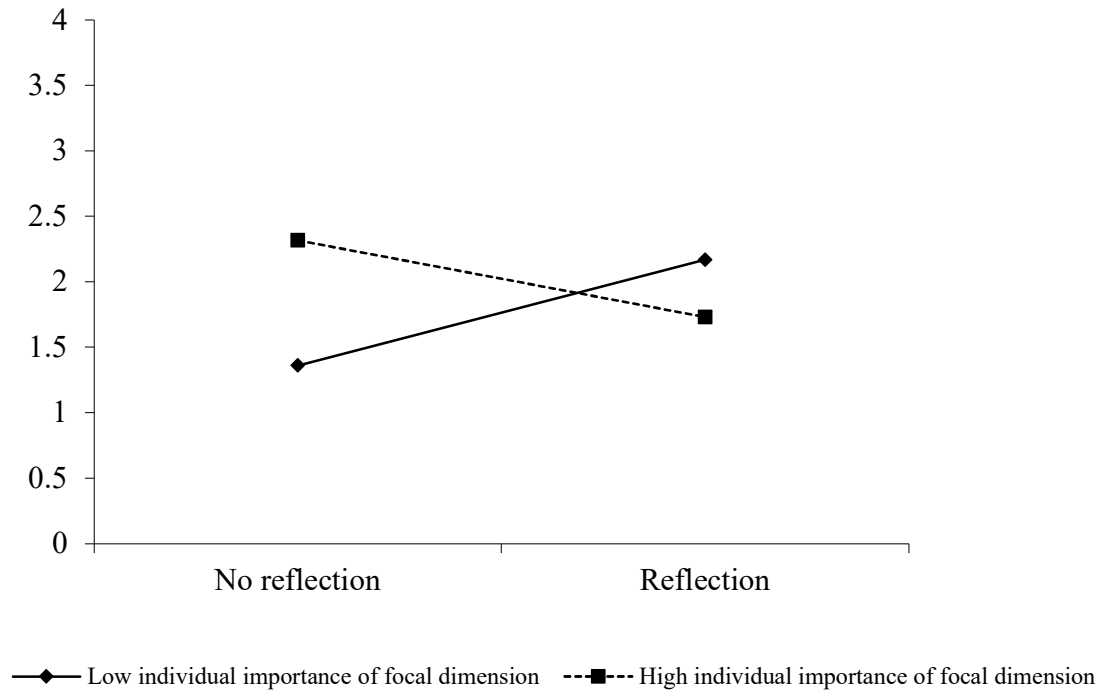


Figure 19

Interaction of dimensional comparison condition and individual importance of focal domain on individual solicitations ($t+1$) (Study 3 Supplemental Condition)

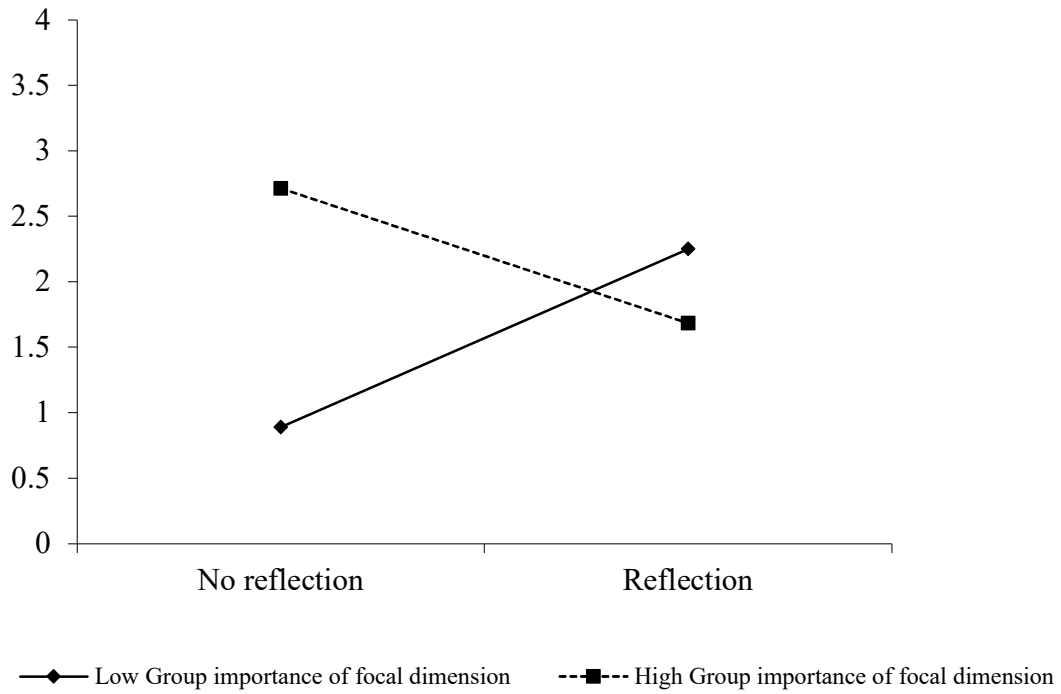
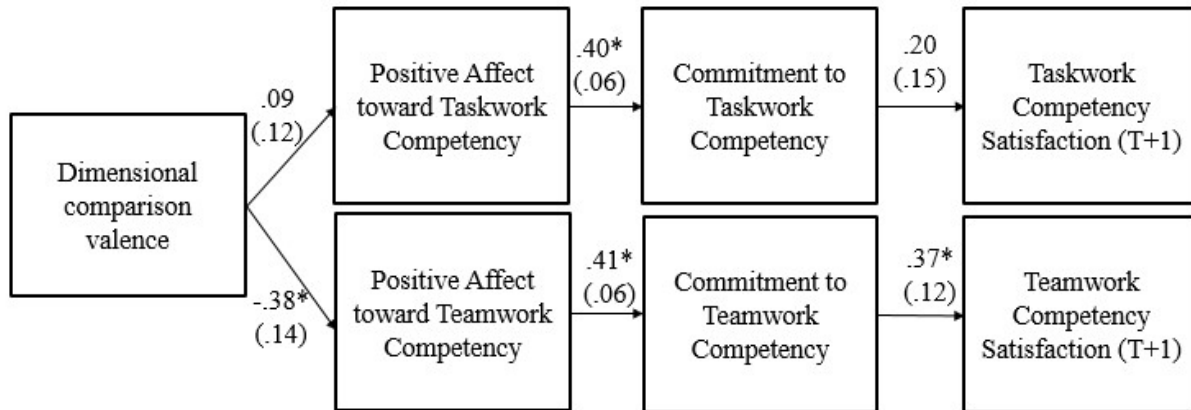


Figure 20

Serial mediation of dimensional comparison valence to positive affect, commitment, and satisfaction (t+1) in each domain (Study 3 Supplemental Analysis)



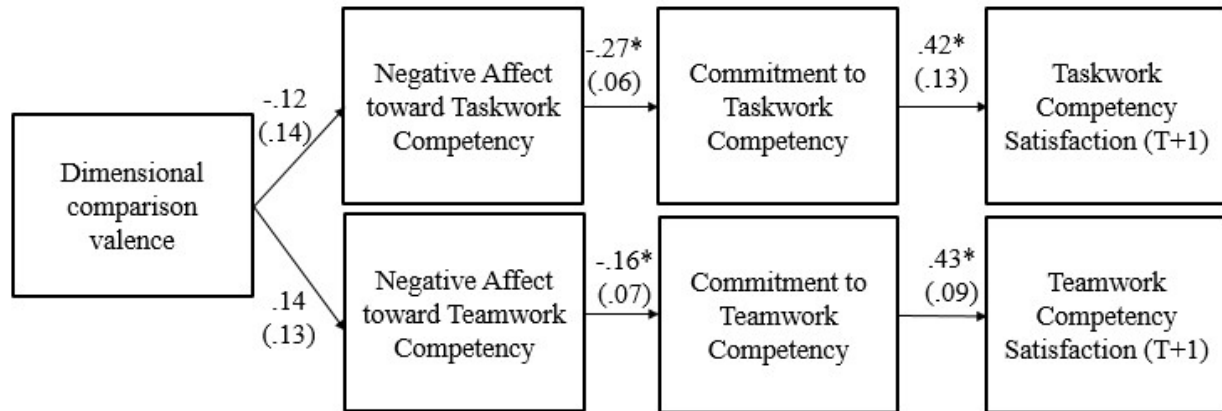
Note. $N = 210$. The direct effect of dimensional comparison valence on taskwork competency commitment was significant ($B = .242, p > .05$), but satisfaction was not significant ($B = .242, p > .05$) and the direct effect of dimensional comparison valence on teamwork competency satisfaction was significant ($B = -.189, p > .05$).

* $p < .05$

† $p < .10$

Figure 21

Serial mediation of dimensional comparison valence to positive affect, commitment, and satisfaction (t+1) in each domain (Study 3 Supplemental Analysis)



Note. $N = 210$. The direct effect of dimensional comparison valence on taskwork competency commitment was significant ($B = .19, p < .05$), but satisfaction was not significant ($B = .23, p > .05$). The direct effect of dimensional comparison valence on teamwork competency commitment was significant ($B = -.26, p < .05$), but satisfaction was not significant ($B = -.20, p > .05$). Finally, the direct effect of negative affect on taskwork competency was significant ($B = -.25, p < .05$) as was the direct effect of negative affect on teamwork competency ($B = -.17, p < .05$).

* $p < .05$

† $p < .10$

APPENDIX B

Study Materials

Study 1 Materials & Measures

Today, you will be reading a story about Lucy, the NASA rocket engineer. You will then answer a series of questions that ask you to imagine how you would feel if you were in Lucy's shoes.

Lucy is a NASA engineer. She is a part of a larger team that is working together to build a rocket to Mars for NASA. Lucy's job responsibilities are split 50/50. Half of her job role is based on her engineering abilities, ensuring that her piece of the rocket, the wing, is engineered according to physicist specifications. The other half of her job is based on her teamwork abilities, working with other members of the NASA engineering team to ensure that her rocket wing works well with the other parts of the rocket.

To be successful at her job, Lucy needs to excel in **both** areas. If she doesn't engineer the rocket wing according to specifications, then she has failed in her engineering role as the rocket wing may not function on its own. If she doesn't work with the other engineers to ensure her wing works well with the rest of the rocket, then she has failed in her engineering role as the rocket wing may not fit with other parts of the rocket.

- Condition 1 (downward dimensional, downward social):
 - Lucy's engineering abilities are **BETTER** than her teamwork skills.
 - Lucy's engineering abilities are **BETTER** than her coworkers' engineering abilities.
- Condition 2 (downward dimensional, upward social):
 - Lucy's engineering abilities are **BETTER** than her teamwork skills.
 - Lucy's engineering abilities are **WORSE** than her coworkers' engineering abilities.
- Condition 3 (lateral dimensional, lateral social):
 - Lucy's engineering abilities are **SIMILAR TO** as her teamwork skills.
 - Lucy's engineering abilities are **SIMILAR TO** her coworkers' engineering abilities.
- Condition 4 (upward dimensional, downward social):
 - Lucy's engineering abilities are **WORSE** than her teamwork skills.
 - Lucy's engineering abilities are **BETTER** than her coworkers' engineering abilities.
- Condition 5 (upward dimensional, upward social):
 - Lucy's engineering abilities are **WORSE** than her teamwork skills.
 - Lucy's engineering abilities are **WORSE** than her coworkers' engineering abilities.
- Condition 6 (upward dimensional, lateral social):
 - Lucy's engineering abilities are **WORSE** than her teamwork skills.
 - Lucy's engineering abilities are **SIMILAR TO** her coworkers' engineering abilities.
- Condition 7 (downward dimensional, lateral social):
 - Lucy's engineering abilities are **BETTER** than her teamwork skills.

- Lucy's engineering abilities are **SIMILAR TO** her coworkers' engineering abilities.
- Condition 8 (absolute performance):
 - Lucy's engineering abilities exceed expectations.

Please rate the items below, as if you were Lucy.

Commitment to abilities in each dimension (Klein et al., 2014)

Please rate the extent to which these statements would apply, as if you were in Lucy's shoes. (1 = not at all to 5 = extremely).

- Engineering commitment:
 - How committed would you be to your engineering skills?
 - To what extent would you care about your engineering skills?
 - How dedicated would you be to your engineering abilities?
 - To what extent would you choose to be committed to your engineering abilities?
- Teamwork commitment:
 - How committed would you be to your teamwork skills?
 - To what extent would you care about your teamwork skills?
 - How dedicated would you be to your teamwork abilities?
 - To what extent would you choose to be committed to your teamwork skills?

Satisfaction (Brayfield & Rothe, 1951)

- I would feel fairly satisfied with my engineering abilities.
- I would feel enthusiastic about my engineering abilities.
- I would find real enjoyment in my engineering abilities.

- I would feel fairly satisfied with my teamwork abilities.
- I would feel enthusiastic about my teamwork abilities.
- I would find real enjoyment in my teamwork abilities.

If you were Lucy, how well would the items below describe how you felt about your engineering abilities?

- Depression
- Shame
- Pride
- Inspired
- Happy
- Excited
- Enthusiastic
- Calm
- Relaxed

- Anxious
- Concerned
- Sad
- Disappointed
- Angry

If you were Lucy, how well would the items below describe how you felt about your teamwork abilities?

- Depression
- Shame
- Pride
- Inspired
- Happy
- Excited
- Enthusiastic
- Calm
- Relaxed
- Anxious
- Concerned
- Sad
- Disappointed
- Angry

If you were Lucy, what is the likelihood that you would invest the following resources to each of these areas?

- Time
- Effort
- Energy
- Mental resources

Engineering abilities (1 = not at all, 7 = extremely likely)

Teamwork abilities (1 = not at all, 7 = extremely likely)

Why?

Manipulation Check

How did Lucy's engineering abilities compare to her teamwork abilities?

- Better

- Worse
- About the same

How did Lucy's engineering abilities compare to her teammates' engineering abilities?

- Better
- Worse
- About the same

Study 2 Materials & Measures

Today, you will be providing a response to a case study related to working on a drug development team at MedSpace, a major pharmaceutical company, as the project manager for their new immunotherapy drug, PollenBGone. This drug helps to reduce or completely stop allergic reactions through exposure to the allergen. Compared to other drugs on the market that take 3-5 years of immunotherapy to be effective, PollenBGone's proprietary technology only takes 6 months to reach full efficacy.

In this case study, we will be assessing your performance in the case **equally** on two competency areas, project management and teamwork. In two days, we will provide the results of these ratings, and the top 20 individuals will receive a \$20 bonus.

Your project management competency reflects how feasible, cost-effective, and efficient your solution to the case is **(50% of your total score)**.

Your teamwork competency reflects how collaborative your solution is to the different members of the group, your ability to find compromises amidst conflict on the team, and your ability to effectively communicate your proposed solution **(50% of your total score)**.

Your team includes four other members:

- The scientific lead for the project, Debbie Newhouse. Debbie is charged with managing all the scientific research related to the development of the drug.
- The communication lead for the project, Frank Lancet. Lancet is charged with marketing and media relations for PollenBGone.
- The testing lead, Matthew Reynolds. His role is to ensure that the drug is fully tested according to FDA standards and managing the FDA approval process.
- The supply chain lead, Susan Lafferty. Susan is responsible for setting up and managing the manufacturing and distribution channels for PollenBGone.

With PollenBGone now entering Phase 3 efficacy trials, it is now at a critical point in the development. It has been effective in early-stage safety trials with hundreds of individuals, but it is now time for it to expand to thousands of people and include a placebo test to get a better sense of rarer side effects and confirm findings from earlier efficacy tests. But your team faces a number of difficulties in deciding how to proceed with the Phase 3 trials.

Recruitment of clinical trial participants:

Matthew and Frank want to recruit clinical trial participants from primary care physicians, arguing that the team should be targeting individuals suffering from mild, seasonal allergies. Debbie favors recruiting participants from hospitals and allergy specialists, reasoning that the team should be targeting individuals with more serious allergic reactions. In the most recent team meeting, Debbie and Matthew had an emotional, heated exchange about the recruitment issue. You overheard Debbie complaining about Matthew's confrontational tone to her friend in the breakroom yesterday.

Manufacturing on-shore or off-shore:

Susan wants to outsource production to a producer in China, where manufacturing the drug would be more cost-effective than in the United States. Frank prefers to maintain operations onshore in the United States to bolster PR efforts.

Timeline for the roll-out:

After Phase 3 clinical trials are completed, the team is responsible for the full-scale roll-out of the drug across the United States. The team has not come to a consensus around what pieces should move first, particularly around communication. Frank wishes to start advertising the drug as soon as possible, even before Phase 3 results come in, and Susan desires to start talking to suppliers to negotiate mass manufacturing prices. But Matthew and Debbie are asking to keep the project under wraps from the press until the drug receives full FDA approval and the drug patent is finalized.

How would you resolve the conflicts around timeline, manufacturing, and participant recruitment as well as the personal conflicts on the team? What would be your proposal for how the team should move forward with these issues?

Again, your response will be scored equally based on your project management abilities (50%) and your teamwork skills (50%).

Self-evaluation in each dimension (Zell & Strickhouser, 2020)

For project management skills, rate your agreement with the following statements (1 = strongly disagree to 7 = strongly agree):

- I am very good in my performance on this dimension.
- I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.

For your teamwork skills, rate your agreement with the following statements:

- I am very good in my performance on this dimension.
 - I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.
-

Welcome back! As a refresher, you answered a case study that asked you to help to resolve conflicts around issues on a project team. We assessed equally both competencies in your response, both for project management (50%) and teamwork (50%). To incentivize participation, we will offer ten prizes of \$20 to the participants who achieve the highest ratings. Please see below for the high-level results of your case.

Dimensional/social comparison valence:

- Condition 1 (downward dimensional, downward social):

- Your performance in project management was **BETTER** than your teamwork ratings.
- Your performance in project management was **BETTER** than the average rating on this task.
- Condition 2 (downward dimensional, upward social):
 - Your performance in project management was **BETTER** than your teamwork ratings.
 - Your performance in project management was **WORSE** than the average rating on this task.
- Condition 3 (lateral dimensional, lateral social):
 - Your performance in project management was **SIMILAR TO** as your teamwork ratings.
 - Your performance in project management was **SIMILAR TO** the average rating on this task.
- Condition 4 (upward dimensional, downward social):
 - Your performance in project management was **WORSE** than your teamwork ratings.
 - Your performance in project management was **BETTER** than the average rating on this task.
- Condition 5 (upward dimensional, upward social):
 - Your performance in project management was **WORSE** than your teamwork ratings.
 - Your performance in project management was **WORSE** than the average rating on this task.
- Condition 6 (upward dimensional, lateral social):
 - Your performance in project management was **WORSE** than your teamwork ratings.
 - Your performance in project management was **SIMILAR TO** the average rating on this task.
- Condition 7 (downward dimensional, lateral social):
 - Your performance in project management was **BETTER** than your teamwork ratings.
 - Your performance in project management was **SIMILAR TO** the average rating on this task.
- Condition 8 (absolute performance):
 - Your performance in project management exceeded expectations.

Self-evaluation in each dimension (Zell & Strickhouser, 2020)

For project management skills, rate your agreement with the following statements (1 = strongly disagree to 7 = strongly agree):

- I am very good in my performance on this dimension.
- I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.

For your teamwork skills, rate your agreement with the following statements:

- I am very good in my performance on this dimension.
- I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.

Commitment to abilities in each dimension (Klein et al., 2014)

Please rate the extent to which these statements apply to you. (1 = not at all to 5 = extremely).

- Project management skill commitment:
 - How committed are you to your project management skills?
 - To what extent do you care about your project management skills?
 - How dedicated are you to your project management skills?
 - To what extent have you chosen to be committed to your project management skills?
- Teamwork skill commitment:
 - How committed are you to your teamwork skills?
 - To what extent do you care about your teamwork skills?
 - How dedicated are you to your teamwork skills?
 - To what extent have you chosen to be committed your teamwork skills?

Satisfaction (Brayfield & Rothe, 1951)

- I feel fairly satisfied with my project management skills.
- I feel enthusiastic about my project management skills.
- I find real enjoyment in my project management skills.

Satisfaction with teamwork

- I feel fairly satisfied with my teamwork skills.
- I feel enthusiastic about my teamwork skills.
- I find real enjoyment in my teamwork skills.

Manipulation Check:

Please rate your agreement with the following statements (1 = strongly disagree; 7 = strongly agree).

- My project management skills were better than my teamwork skills
- My project management skills were better than others' project management skills
- My project management skills were worse than my teamwork skills
- My project management skills were worse than others' project management skills
- My project management skills were about the same as my teamwork skills
- My project management skills were about the same as others' project management skills

Suspicion check: Did anything strike you as odd about this study? If so, please explain below.

Demographics: gender, ethnicity, age, job title, supervisor status.

(Debrief) Thank you for your participation in this survey! This research was concerned with how people compare across peers and ability sets.

In this experiment, we told you that your tasks were rated by others. In actuality, these ratings were not conducted, and this information was manipulated by the researchers. Thus, all participants will be eligible for \$20 bonus, and we will select these winners randomly. This part of the procedure was necessary to ensure that all participants had the same experience in the study. Additionally, the purpose of the study was disguised because, if participants knew the hypotheses, they might behave in ways that confirm those hypotheses. So, the purpose of the study was to understand how individuals react to different performance comparisons at work. Now that you understand the true nature of our study, we would like to give you the chance to refuse the use of your data for our research purposes. If you decline to let us use your data, you will still receive full compensation just as you would if we use your data in our analysis. Participating in the study is entirely voluntary. However, now that the study is complete, we hope you allow us to retain your de-identified data for our research purposes.

Your participation in this study has been extremely helpful. If you have any questions about this study or would like to withdraw your data from analysis, please contact Becca Mitchell, mitch616@msu.edu.

Study 3 Dimensional Comparison Valence Item Generation

Measure A:

At work, most people compare their abilities or skills from time to time with other abilities or skills. For example, a football player might compare their throwing game (50% of the job) to their running game (the other 50% of the job) and a runner might compare their speed (50% of the job) to their endurance (the other 50% of the job). There is nothing “good” or “bad” about this type of comparison. We would like to find out how often you compare your abilities to each other and the nature of these comparisons. To do that, we would like to ask you to indicate your agreement with the items below.

For the purposes of this study, think of two dimensions that constitute 50% of your job. Please keep these two areas in mind as you complete the survey.

Please describe Dimension A:

Please describe Dimension B:

Downward valence

1. I often think about how much better I am doing in Dimension A than Dimension B^b
2. I compare my better-off performance in Dimension A to my worse-off performance in Dimension B^a
3. I feel as though my performance in Dimension A is better than my performance in Dimension B^b
4. I pay a lot of attention to how my performance in Dimension A is better than my performance in Dimension B^b.
5. I consider how my situation in Dimension A is more positive than my situation in Dimension B.^b
6. When I think about my abilities in Dimension A, I automatically compare how these abilities are better than my abilities in Dimension B.
7. I reflect on how much more accomplished I am in Dimension A compared to Dimension B
8. When I think of how I did in Dimension A, I compare this to how poorly I did in Dimension B.
9. I often think about how I am not particularly good at Dimension B compared to Dimension A^a
10. I compare how well I am doing in Dimension A to how poorly I am doing in Dimension B in my work.^b
11. Nobody is perfect, but I am just not as good at Dimension B as I am at Dimension A.^a
12. Compared to how well I do in Dimension A, Dimension B just is not my thing.^a
13. I usually do not think about how well I am doing in Dimension A compared to how poorly I am doing in Dimension B (reverse-scored)^a
14. I evaluate my progress on Dimension A by comparing it to how much worse-off I am in Dimension B

15. I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am not as good at.
16. When assessing my achievement in Dimension A, I think of how much better I am at Dimension A than Dimension B.
17. I tend to compare my abilities in Dimension A to how much worse my abilities are in Dimension B^b
18. I think about how much worse my abilities are in Dimension B compared to Dimension A.
19. When I think about my abilities in Dimension A, I think about how bad I am at Dimension B.
20. I find myself thinking about how poorly I perform in Dimension B when I think about my performance in Dimension A. ^a

Upward valence

1. I often think about how much worse I am doing in Dimension A than Dimension B^b
2. I compare my worse-off performance in Dimension A to my better-off performance in Dimension B ^a
3. I feel as though my performance in Dimension A is worse than my performance in Dimension B^b
4. I pay a lot of attention to how my performance in Dimension A is worse than my performance in Dimension B. ^b
5. I consider how my situation in Dimension A is more negative than my situation in Dimension B. ^b
6. When I think about my abilities in Dimension A, I automatically compare how these abilities are worse than my abilities in Dimension B.
7. I reflect on how much less accomplished I am in Dimension A compared to dimension B
8. When I think of how I did in Dimension A, I compare this to how well I did in Dimension B.
9. I often think about how I am not particularly good at Dimension A compared to Dimension B ^a
10. I compare how I am doing in Dimension A to how well I am doing in Dimension B in my work. ^b
11. Nobody is perfect, but I am just not as good at Dimension A as I am at Dimension B. ^a
12. Compared to Dimension B, Dimension A just is not my thing. ^a
13. I usually do not think about how I am doing in Dimension A compared to how well I am doing in Dimension B (reverse-scored) ^a
14. I evaluate my progress on Dimension A by comparing it to how much better-off I am in Dimension B ^b
15. I base my assessment of my performance in Dimension A in how it compares to Dimension B, which I am good at.
16. When assessing my achievement in Dimension A, I think of how much worse I am at Dimension A than Dimension B.
17. I tend to compare my abilities in Dimension A to how much worse my abilities are in Dimension B ^b

18. I think about how much better my abilities are in Dimension B compared to Dimension A.
19. When I think about my abilities in Dimension A, I think about how good I am at Dimension B.
20. I find myself thinking about how well I perform in Dimension B when I think about my performance in Dimension A. ^a

Measure B:

At work, most people compare their abilities or skills from time to time with other abilities or skills. For example, a football player might compare their throwing game (50% of the job) to their running game (the other 50% of the job) and a runner might compare their speed (50% of the job) to their endurance (the other 50% of the job). There is nothing “good” or “bad” about this type of comparison. We would like to find out how often you compare your abilities to each other and the nature of these comparisons. To do that, we would like to ask you to indicate your agreement with the items below.

For the purposes of this study, think of two dimensions that constitute 50% of your job. Please keep these two areas in mind as you complete the survey.

Please describe Dimension A:

Please describe Dimension B:

1. I am very good in Dimension A.
2. My knowledge, skills, and abilities in Dimension A are of high quality.
3. I would rate myself very highly in the knowledge, skills, and abilities related to Dimension A.
4. I am highly accomplished in Dimension A
5. I am often disappointed by my lack of knowledge, skills, and abilities in Dimension A (R)^a
6. I believe my knowledge, skills, and abilities are deficient in Dimension A (R)^b
7. If I were to grade myself on Dimension A, I would receive high scores.
8. The quality of my efforts in Dimension A are top notch.
9. I am particularly good at Dimension A.
10. My situation in Dimension A is very positive.
11. I am very good in Dimension B.
12. My knowledge, skills, and abilities in Dimension B are of high quality.
13. I would rate myself very highly in the knowledge, skills, and abilities related to Dimension B.
14. I am highly accomplished in Dimension B.
15. I am often disappointed by my lack of knowledge, skills, and abilities in Dimension B (R)^a
16. I believe my knowledge, skills, and abilities are deficient in Dimension B (R)^b
17. If I were to grade myself on Dimension B, I would receive high scores.
18. The quality of my efforts in Dimension B are top notch.
19. I am particularly good at Dimension B.

20. My situation in Dimension B is very positive.

^a Items removed in the item sort

^b Items removed following the EFA

Study 3 – Timepoint 1-3 Surveys

At work, most people compare their abilities or skills from time to time with other abilities or skills. For example, a football player might compare their throwing game (50% of the job) to their running game (the other 50% of the job) and a runner might compare their speed (50% of the job) to their endurance (the other 50% of the job). There is nothing “good” or “bad” about this type of comparison. We would like to find out how often you compare your abilities to each other and the nature of these comparisons. To do that, we would like to ask you to indicate your agreement with the items below.

For the purposes of this survey, we have identified two areas that are necessary in which a gift officer should perform well to an equal degree (50/50).

Dimension A: your ability to build relationships with donors

Dimension B: your ability to collaborate with others in your unit and/or across the University

Please keep these two areas in mind as you complete the survey.

For your individual soliciting abilities, rate your agreement with the following statements (1 = strongly disagree to 7 = strongly agree) **THIS MONTH**. (Self-evaluation in each dimension; Zell & Strickhouser, 2020)

- I am very good in my performance on this dimension.
- I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.

For your team solicitation abilities, rate your agreement with the following statements:

- I am very good in my performance on this dimension.
- I would rate myself very highly in the knowledge, skills, and abilities related to this dimension.

Control condition: no further information provided

Dimensional comparison condition:

1. Reflecting on how you rated each competency, how do your proficiencies in these competencies compare? Are they similar or different? Which is higher or lower?
2. What thoughts do you have regarding this comparison?
3. How does this comparison make you feel?

Social comparison valence (adapted from Gibbons & Buunk, 1998). 1 = strongly disagree 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, 5 = strongly agree.

- Upward
 - I compared how I did with others, who are better than me in obtaining solicitations as an individual.

- I paid a lot of attention to how I did things compared to how others did things, who are better at obtaining solicitations as an individual, than I am.
- If I wanted to find out how well I did at obtaining solicitations as an individual., I compared what I did with individuals who are better than me.
- I compared myself with others, who are better than I at obtaining solicitations as an individual, with respect to what I have accomplished.
- Downward
 - I compared how I did with others, who are worse than me in in obtaining solicitations as an individual.
 - I paid a lot of attention to how I did things compared to how others did things, who are worse at obtaining solicitations as an individual than I am.
 - If I wanted to find out how well I did at obtaining solicitations as an individual, I compare what I did with individuals who are worse than me.
 - I compared myself with others, who are worse than I am at obtaining solicitations as an individual, with respect to what I have accomplished.

Commitment to each dimension (Klein et al., 2014)

Please rate the extent to which these statements apply to you.
(1 = not at all to 5 = extremely).

- Individual solicitation commitment:
 - How committed are you to your individual solicitations?
 - To what extent do you care about your individual solicitations?
 - How dedicated are you to your individual solicitations?
 - To what extent have you chosen to be committed to your individual solicitations?
- Joint solicitation commitment:
 - How committed are you to work done for your joint solicitations?
 - To what extent do you care about work done for your joint solicitations?
 - How dedicated are you to work done for your joint solicitations?
 - To what extent have you chosen to be committed to work done for your joint solicitations?
 -

Satisfaction (Brayfield & Rothe, 1951)

- I feel fairly satisfied with my individual solicitations.
- I feel enthusiastic about my individual solicitations.
- I find real enjoyment in my individual solicitations.

Satisfaction with group

- I feel fairly satisfied with my joint solicitations.
- I feel enthusiastic about my joint solicitations.
- I find real enjoyment in my joint solicitations.

Performance:

Please provide the number of individual solicitations you made this month:

Please provide the number of joint/assisted solicitations you made this month:

Timepoint 1 ONLY

Please rate how important the behaviors are below to *your workgroup*. 1 = not important at all and 5 = extremely important. (Adapted from Williams and Anderson (1991) in-role behavior items)

- Individuals completing tasks that only benefit themselves.
- Individuals meeting only individual performance targets.
- Individuals engaging in activities that will only directly affect their personal performance.

Please rate how important the behaviors are below to *you*. 1 = not important at all and 5 = extremely important. (Adapted from Williams and Anderson (1991) in-role behavior items)

- Individuals completing tasks that only benefit themselves.
- Individuals meeting only individual performance targets.
- Individuals engaging in activities that will only directly affect their personal performance.

Demographics: gender, ethnicity, age, job title, supervisor status, organizational unit.

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