

Point-Counterpoint **General and specific measures in organizational behavior research: Considerations, examples, and recommendations for researchers**

TIMOTHY A. JUDGE<sup>1\*</sup> AND JOHN D. KAMMEYER-MUELLER<sup>2</sup>

<sup>1</sup>*Mendoza College of Business, University of Notre Dame, Notre Dame, Indiana, U.S.A.*

<sup>2</sup>*Warrington College of Business, University of Florida, Gainesville, Florida, U.S.A.*

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**Summary**

Deliberation over and relative preference for general or specific (broad or narrow) constructs has long been an important issue in organizational behavior research. In this article, we provide a review of this general issue and some specific recommendations for researchers. We begin by discussing whether the general versus specific issue is an important debate and by discussing other underlying issues (the role of researcher preferences, distinction between reflective and formative indicators, and distinction between constructs and measures of constructs). Building on Chen's (this issue) analysis of core self-evaluations, we first discuss how the general-specific debate has progressed in core self-evaluations research. We then discuss three other important areas in which this debate has played out: intelligence, five-factor model of personality, and job attitudes. Finally, we offer a framework to help guide decisions about whether to utilize general measures, specific measures, or both and conclude by providing recommendations for the use of general and specific measures in organizational behavior research. Copyright © 2011 John Wiley & Sons, Ltd.

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The relative merits of general and specific measures of psychological constructs have long interested researchers in organizational behavior and many other allied fields. Indeed, situating constructs and measures along a generality-specificity continuum, or the so-called bandwidth-fidelity paradox (Cronbach & Gleser, 1965; Hogan & Roberts, 1996; John, Hampson, & Goldberg, 1991; Ones & Viswesvaran, 1996), figures prominently in the earliest discussions of many psychological constructs. These concerns include sensations (Titchener, 1910), memory (Russell, 1921; Tulving, 1972), perception (Tinker, 1938), intellect (Spearman, 1927), personality (Allport & Odbert, 1936; Kelley, 1927), and emotion (Duffy, 1941). Even more than a half century ago, the broad versus specific debate caused Cronbach (1957) to label psychologists as either splitters, those who seek to make fine distinctions among psychological constructs by splitting them into constituent elements, or lumpers, those who seek to aggregate constructs by combining narrow constructs into broader ones.

Although such labels have their appeals—as do arguments in favor of either broad or narrow measures—it is surely the case that the answer to the question of whether to use a general or specific approach depends on theory (the specificity of one construct would often depend on the specificity of other constructs in a model), evidence (general constructs may work better for some types of characteristics; specific ones may work better for others), and whether a hierarchical representation is viable. Because of its underlying complexity, we believe that the answer

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\*Correspondence to: Timothy A. Judge, Mendoza College of Business, University of Notre Dame, Notre Dame, Indiana, U.S.A.  
E-mail: tjudge@nd.edu

to this question—are general or specific measures more useful to organizational behavior?—is often ambiguous and never unanimous. However, we also believe that considerable practical guidance can be offered to researchers.

Building on Chen's (this issue) article, we endeavor to offer some assistance to researchers concerned with generality—specificity (or broadness—narrowness) issues in their research. Toward that objective, we begin with a brief discussion of the merits of this question and consider several other prefatory issues. We then discuss core self-evaluations research as one central area in which the general—specific issue has been considered, along with three other areas (intelligence, five-factor model of personality, and job attitudes). Finally, we offer a decisional framework that poses and addresses questions facing researchers interested in properly situating organizational behavior constructs in terms of generality—specificity.

## General and Specific: Prefatory Issues

Although it is perhaps coy to answer a question with a question, at this juncture, there are other important questions to ask first. We start by considering whether this is even a productive debate. We then consider some underlying issues that place this debate in its proper context.

### *A productive debate?*

Is it productive to recurrently (perhaps even incessantly) debate the relative merits of general versus specific measures? Obviously, by preparing and submitting this article, we would answer this question affirmatively. We social scientists do not sufficiently attend to construct validity issues (Meehl, 2004; Schimmack, 2010; Schwab, 1980), and multidimensional and hierarchical constructs are especially challenging (Wong, Law, & Huang, 2008). Only by clarifying the relationship of constructs to measures, and among measures at different levels of generality, can our understanding of complex phenomena advance (Lubinski, 2004).

We are less confident, however, that the ways in which we typically or characteristically address the question are productive. Too often, dichotomous lines are drawn where one argues *either* for general (broad) or for specific (narrow). In our reading of the literatures in which these debates have taken place, rarely is it the case in which a general measure does not have something to offer in terms of predictive validity. By the same token, it is also rare in which specific measures have no relevance to a certain criterion across all contexts. The right question is not whether general or specific measures are superior across the board but rather when, where, and under which conditions is each approach the most useful toward understanding organizational behavior.

### *Underlying issues which inform (and complicate) debate?*

First, researchers have their preferences, which are often best revealed by the topics they choose to investigate. We are no exception. For the most part, we favor general constructs. However, we are often surprised when fellow researchers note that we oppose specific measures or constructs. Not only do we feel that is not a valid inference about us, but, as we will note, we have also investigated specific or lower-order constructs in our own research on core self-evaluations. To some degree, false battle lines are drawn by context-specific researchers who argue against generalized or broad constructs or researchers who study general constructs arguing against the relevance of specific ones. Personal preferences are natural, but we all should strive to address these matters on the basis of theory and empirical evidence rather than ideology or personal predilection.

Second, underlying any discussion of psychological constructs is an important but often unnoted distinction between constructs and measures of the constructs. Lubinski (2004) noted that it is important “to distinguish between

constructs and their measurement vehicles” (p. 99). Schimmack (2010) noted, “Measures assume a life of their own and implicitly become the construct” (p. 243). Why is this distinction important here? The failure to distinguish measures from the constructs they are presumed to represent may cause confounding. A measure given a unique label may instead merely serve as another measure of an existing construct or may merely reflect a more general construct. This evokes Kelley’s (1927) *jangle fallacy*: “the use of two separate words or expressions covering in fact the same basic situation, but sounding different, as though they were in truth different” (p. 64). This does not mean, of course, that something new is never discovered nor that specific measures always merely indicate something broader. Sometimes what is new, what is epiphenomenal, or what is a mere indicator or a useful stand-alone measure of a valid construct is not clear. Surely, though, scientific understanding is advanced through consideration of these issues even if the ultimate answers rest in the eye of the beholder.

A third and final relevant underlying issue is the distinction between reflective or formative variables. This is often confusing territory, made more so by various labels being used for the terms (reflective or superordinate versus formative, aggregate, or composite). Some researchers beseech others to be clear about the nature of their constructs (Bagozzi, 2007; Edwards & Bagozzi, 2000; Howell, Breivik, & Wilcox, 2007), and of course that is good advice. However, often the same construct can serve different purposes. Is it inappropriate to assume that a construct is formative and then to compute an overall measure of the construct by adding together specific dimensional scores? Obviously, as many general constructs are operationalized through a composite of more specific dimensions, this is an issue that bears on the general–specific debate.

Most constructs used by psychologists are reflective (Howell et al., 2007), and because in a latent conceptualization the causal arrow runs from the underlying construct to the indicators, and because those indicators are presumed to be interrelated, reflective constructs have special relevance to the general–specific debate. If measures are uncorrelated, as may be the case with formative models, then although there may be a more general, relevant construct in theory, the only meaning of the general construct is that it is comprised of the specific elements (e.g., total compensation is composed of salary, bonuses, and benefits).

## Core Self-evaluations and Three Other Examples of the Generality–Specificity Debate

To illustrate how the general versus specific debate plays out, and to provide a basis to understand our suggested process, we discuss four areas in psychology and organizational behavior where this debate has taken place. First, we discuss core self-evaluations. Then, we discuss three other areas where a debate has taken place: intelligence, five-factor model of personality, and job attitudes.

### *Core self-evaluations*

Judge, Locke, and Durham (1997) introduced a broad trait—core self-evaluations—that is less a new trait than an integration of more commonly studied, narrower traits. According to Judge et al., core self-evaluations is a broad construct representing the fundamental evaluations that people make about themselves and their functioning in their environment. Individuals with positive core self-evaluations appraise themselves in a consistently positive manner across situations; such individuals see themselves as capable, worthy, and in control of their lives. According to Judge et al. (1997) and Judge, Locke, Durham, and Kluger (1998), the concept of core self-evaluations is indicated by four (or more) widely studied traits: self-esteem, locus of control, neuroticism (or emotional stability), and generalized self-efficacy. Judge, Erez, Bono, and Thoresen (2002) have presented evidence that the first three of these traits are the most widely studied in psychology. As these authors note, however, very little research had examined the commonalities and overlap among these traits.

Research has consistently shown that the four core traits are substantially interrelated. For example, in the meta-analysis of Judge, Erez, et al. (2002), the average correlation among the traits was .64, which is as high as the correlations among alternative measures of the Big Five traits. Moreover, factor analyses—using both exploratory and confirmatory methods—have consistently shown that the four core traits load on a common factor (Erez & Judge, 2001; Judge et al., 1998; Judge, Bono, & Locke, 2000). Moreover, in predicting various criteria, it appears that the individual core traits show similar correlations with many criteria, including job satisfaction and job performance (Judge & Bono, 2001).

We see core self-evaluations as a hierarchical latent construct. It is this latent view of one's capability and efficacy in life that causes individual core trait measures to be correlated. Thus, it is conceptualized as a reflective construct with scale scores on the subtraits serving as effect indicators. Some have critiqued this perspective on core self-evaluations, proposing that it is more appropriate to consider core self-evaluations as a formative construct that arises as a result of causally independent measures of self-esteem, generalized self-efficacy, locus of control, and emotional stability (Johnson, Rosen, & Levy, 2008). All hierarchical constructs are subject to definitional debates as to whether they are formative or reflective, so the discussion that follows is pertinent to constructs other than core self-evaluations.

The testing of formative versus reflective indicators is a complex undertaking and involves several philosophical assumptions in addition to statistical considerations. The chief philosophical differentiation is between a realist position (i.e., constructs actually exist) for reflective constructs and a constructivist position (i.e., constructs are the result of measurement and operationalization) for formative constructs (Borsboom, Mellenbergh, & van Heerden, 2003). In the arena of core self-evaluations, the chief theoretical argument in favor of reflective measures has been the consistent realist (or objectivist) perspective that posits core self-evaluations are real entities that contribute to one's standing on a variety of traits and are not constructed on the basis of the measures that make up the subtraits (Judge et al., 1997). The chief theoretical argument in favor of formative measures has been the possible differences between the cognitively oriented, uniquely human subtraits (like generalized self-efficacy and locus of control) and the more affective and subconscious subtrait of emotional stability (Johnson et al., 2008). The possible separability of affect and cognition has long been debated, with many researchers suggesting that although the structures may differ, in operation they are inseparable (Adolphs & Damasio, 2001). Moreover, research has noted that self-esteem is a significant predictor of subsequent neurotic symptoms (Orth, Robins, Trzesniewski, Maes, & Schmitt, 2009) and that dispositional neuroticism is a significant predictor of general self-esteem (Watson, Suls, & Haig, 2002). In other words, the evidence appears to suggest that the core traits are interactive with one another, which makes separating them into cognitive and affective bases theoretically problematic.

The chief statistical argument in favor of reflective measures of core self-evaluations is the tendency of factor analytic methods to identify a single latent construct that relates all four measures to one another and the good fit indices from a hierarchical representation of the traits, as noted previously. The chief statistical argument for formative measures is that the correlations across the constructs with the higher-order core self-evaluations construct are not uniform, and therefore not all subtraits are equivalent measures of the same underlying construct (MacKenzie, Podsakoff, & Jarvis, 2005). Research suggests that the factor loading of locus of control diminishes considerably when statistical or methodological corrections for common method variance are employed (Johnson, Rosen, & Djurdjevic, 2010), whereas the correlations for generalized self-efficacy and self-esteem are considerably stronger regardless of measurement method.

However, if core self-evaluations are the result of these specific evaluations, rather than the cause of these evaluations, interpretational ambiguities arise that are rather endemic to formative models. Namely, the constructs developed by formative models by their nature are purely measurement driven and do not necessarily reflect any underlying construct. Moreover, the identification of the formative construct is in part based on its correlation with outcome measures. Because of this, the interpretation of the construct will vary on the basis of the relationship between the construct and outcomes in any particular sample. Edwards and Bagozzi (2000, p. 159) noted, "Unstable associations between formative measures and constructs not only create difficulties for establishing causality but also obscure the meaning of these constructs because their interpretation depends on the dependent variables included in a given model." Thus, a formative interpretation of core self-evaluations does little to empirically

clarify the meaning of the construct and, indeed, may significantly impede the progress of theoretical development in the future.

Moreover, with reflective measures, it is possible to examine how parameters linking the facets to the higher-order construct change when new constructs are added to the model. This is not possible with formative measures because there is no baseline measurement model (Anderson & Gerbing, 1988) to be tested. If the contribution of new constructs to core self-evaluations is to be estimated (Johnson et al., 2008), then it becomes necessary to use reflective models to test to the correspondence of the new specification to hypotheses and to statistically compare results with prior studies. Such tests are not sensible if a formative model is employed.

Despite support for the core self-evaluations construct, this does not mean that the individual core traits have nothing useful to offer. As noted by Judge, Erez, et al. (2002, p. 706), “it is not our contention that researchers should abandon study of self-esteem, neuroticism, locus of control, or generalized self-efficacy as isolated traits. Our results suggest that there is some variance unique to each of these traits.” Indeed, empirical evidence suggests that, in some situations, individual core traits are important. Kammeyer-Mueller, Judge, and Scott (2009) found that emotional stability was significantly related to stress and to coping with stress and that in some cases emotional stability may be more important than the broad core self-evaluations trait. These authors concluded, “Researchers need to take the unique influence of emotional stability into account when discussing the stress process” (p. 188). Thus, as with general mental ability and the Big Five traits, the presence of broad factors does not deny the possible importance of specific facets that indicate the broad factors, and indeed there is evidence that in some cases the specific-factor variance is important.

However, this view of core self-evaluations as a higher-order construct that leads to correlations among the trait measures does not mean that for all purposes the individual core traits are interchangeable as far as predicting certain criteria are concerned. We certainly do not object to researchers studying the individual core traits. Indeed, we have done so ourselves (e.g., Judge & Erez, 2007; Kammeyer-Mueller et al., 2009; Kammeyer-Mueller, Judge, & Piccolo, 2008). There most certainly is specific-factor variance attributable to each of the core traits, and there are situations in which that variance is meaningfully and uniquely related to a criterion of interest. What we do suggest, however, is that, wherever possible, researchers take the potential “core” into account. That way, we can better understand when the general trait works best and when the specific core traits work best. As with other general–specific debates, this can be performed affirmatively (justifying empirically or conceptually the merits of one’s choice without necessarily diminishing the general merits of other possible choices). As the reader will see, this same advice applies to each of the hierarchical constructs we review in the succeeding sections (as well as others): intelligence, Big Five personality traits, and job attitudes.

## *Intelligence*

The study of intelligence is as old as psychology itself. The idea that specific mental abilities covary to indicate a general factor is also a long-standing concept (Spearman, 1904) and one that has amassed an impressive array of empirical support (Kanazawa, 2004). This general factor—termed general intelligence (or *g*), cognitive ability, or general mental ability—has proven itself to be a valid predictor of many important applied criteria, including job performance (Schmidt & Hunter, 1998), career success (Ng, Eby, Sorensen, & Feldman, 2005), leadership (Judge, Colbert, & Ilies, 2004), team effectiveness (LePine, Hollenbeck, Ilgen, & Hedlund, 1997), creativity (Kuncel, Hezlett, & Ones, 2004), and counterproductive behavior (Dilchert, Ones, Davis, & Rostow, 2007). General mental ability is implicated in consequential non-work outcomes as well, including marital stability (Deary et al., 2005), successful adaptation (Cosmides & Tooby, 2002), health (Batty & Deary, 2004), and longevity (Gottfredson, 1997; Gottfredson & Deary, 2004). Even before much of the current knowledge was cumulated, Cronbach (1970) went so far as to conclude, “The general mental test stands today as the most important technical contribution to the practical guidance of human affairs” (p. 197).

Some researchers have compared the predictive validity of general mental ability with specific abilities in predicting job performance (Olea & Ree, 1994; Ree, Earles, & Teachout, 1994), training success (Ree & Earles, 1991), and other

criteria (Lubinski, 2004). In general, this research shows that general mental ability predicts these criteria relatively strongly and, once a general intelligence factor is controlled, specific abilities afford little incremental validity.

Although this evidence invariably confirms the importance of general mental ability, it does not disconfirm the validity of specific abilities to the degree that some might assume (Gottfredson, 2003). As Lubinski (2009) noted, "Specific abilities add value to forecasts based on general cognitive ability in multiple real-world settings" (p. 351). Recently, Lang, Kersting, Hülshager, and Lang (2010), in meta-analyzing studies utilizing a German cognitive abilities measure, investigated the relative importance of general and specific cognitive abilities. Using traditional variance decompositions, they found that general mental ability explained far more variance in performance than did the specific abilities. Lang et al. (2010), however, favored a statistical approach not often used, especially outside organizational research methods—dominance analysis and relative importance weights—and analyses with these methods produced results casting specific abilities in a more favorable light.

Moreover, other evidence suggests the importance of specific abilities to a complete understanding of intelligence. First, research continues to show gender differences in specific cognitive abilities but not overall general mental ability, with women scoring higher on verbal ability and men higher on quantitative ability measures (Calvin, Fernandes, Smith, Visscher, & Deary, 2010). Second, behavioral genetics research suggests that although there is a strong genetic source of general mental abilities, specific abilities are heritable even accounting for general mental ability (Pedersen, Plomin, & McClearn, 1994). In sum, there is no serious question about the degree to which general mental ability is a construct that is indicated by specific ability measures, nor is there serious argument that general mental ability is irrelevant to many spheres of life. Neither of these momentous findings, though, denies the potential relevance and importance of specific abilities toward understanding the construct of intelligence or toward the prediction of important organizational and other applied behavior.

### *Big Five personality traits*

Like general mental ability, the Big Five traits (extraversion, agreeableness, conscientiousness, emotional stability, and openness) have proven themselves useful in predicting many applied criteria, including job performance (especially conscientiousness; Barrick & Mount, 1991), leadership (especially extraversion; Judge, Bono, Ilies, & Gerhardt, 2002), work motivation (especially conscientiousness and emotional stability; Judge & Ilies, 2002), job satisfaction (especially extraversion and emotional stability; Judge, Heller, & Mount, 2002), creativity (especially openness; Feist, 1998), career success (especially emotional stability and extraversion; Ng et al., 2005), and deviant or counterproductive work behavior (especially conscientiousness, agreeableness, and emotional stability; Berry, Ones, & Sackett, 2007; Salgado, 2002).

The Big Five has been criticized on several grounds, including the assertion that the validities are unimpressive (Morgeson et al., 2007; Murphy & Dzieweczynski, 2005; Schmitt, 2004) or that the traits are too broad (Hough & Oswald, 2008; Paunonen & Ashton, 2001; Paunonen & Jackson, 2000; Tett, Steele, & Beauregard, 2003). Although numerous meta-analyses have linked the Big Five traits to job performance (Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001; Hurtz & Donovan, 2000; Schmidt & Hunter, 1998; Tett, Jackson, & Rothstein, 1991), we are aware of only one quantitative review that investigated the validity of lower-order traits (although there are several primary studies that have addressed the issue empirically [e.g., Hastings & O'Neill, 2009; Paunonen & Ashton, 2001]).

Dudley, Orvis, Lebiecki, and Cortina (2006) investigated the relative contributions of narrower facets or indicators of conscientiousness, controlling for the broad measure, to the prediction of job performance. On the basis of available meta-analytic data, Dudley et al. found that two narrow traits—dependability and cautiousness—predicted performance controlling for the broad conscientiousness measure. Because Dudley et al. confined their study to only one of the Big Five traits (conscientiousness) and only a single criterion (job performance), further study is needed. More evidence is needed to compare the relative validity of the broad Big Five traits with narrower facets. However, their results do suggest that when theory proposes that a specific facet is more relevant to the outcome of interest

than a broad measure, researchers should focus on these facets. Future research might profitably utilize the DeYoung, Quilty, and Peterson (2007) typology of Big Five facets or some other relevant framework.

### *Job attitudes*

Job attitudes research has variously considered different facet or global measures of constructs like job satisfaction and organizational commitment. Several specific, facet-oriented scales of job attitudes exist. For example, the job descriptive index (JDI; Smith, Kendall, & Hulin, 1969) assesses satisfaction with the subcomponents of work, supervision, coworkers, pay, and promotions; the Job Satisfaction Survey (Spector, 1985) measures the original five JDI dimensions plus dimensions reflecting benefits, contingent rewards, operating procedures, and communication; and the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England, & Lofquist, 1967) assesses 20 distinct facets of job satisfaction. Organizational commitment has also been subdivided into affective, normative, and continuance components (Allen & Meyer, 1990).

Global scales achieve a broad measure of job attitudes by deliberately being open ended about the components of job satisfaction being measured. For example, the emotion-centered faces scale (Kunin, 1955) instructs participants to rate which face “looks like he (sic) feels” without specifying which dimensions of the job give rise to these feelings. Similarly, Ironson, Smith, Brannick, Gibson, and Paul (1989) noted that broad measures of job satisfaction typically ask respondents to describe how they feel about their jobs most of the time, without a specific reference to job characteristics. At the extreme, Harrison, Newman, and Roth (2006) specified a hierarchical model that posited a general “job attitudes” construct that represented the overlap between satisfaction and commitment.

As with other cases, the appropriate level of analysis depends very much on the question researchers are seeking to answer. Questions regarding specific practices or specific levels of analysis (e.g., commitment to the supervisor, work group, or organization—Meyer, Becker, & Vandenberghe, 2004) require specific measures. Questions about aggregated feelings require broader measures. In their discussion, Ironson et al. (1989) also noted that overall scales are often not equivalent to a summation of the subdimensions of a multi-facet scale (i.e., their job-in-general scale is not equivalent to a summation of the facets of the JDI). They propose that global scales are more appropriate for global theories than linear combinations of subdimensions of subscales. This is because measurement of subdimensions as a composite measure of a broader construct may omit areas that are more or less relevant to some individuals’ sense of overall satisfaction, the frame of reference for facets may differ from the frame of reference for a global scale, and summation of facets fails to account for idiosyncratic differences in combining components to arrive at a general sentiment.

## **General and Specific: A Decisional Framework**

The decision about what constructs and measures should be included in a study is always a complex one. Considering similar constructs at different levels of generality/specificity complicates that decision even further. In hopes of assisting researchers in making such decisions, in the succeeding sections, we provide four central guiding questions, the answers to which go a long way toward answering the general–specific question. Table 1 provides the questions, accompanied by justification for why the question is important and a recommendation for researchers based on how the question is answered.

### *Is the theory context-specific or context-general?*

The context of a theory is the set of environmental and situational constraints that are expected to apply to the relationships among constructs. There are models and theories that are developed to generalize across contexts

Table 1. Questions, explanations, and recommendations for general and specific measures in organizational behavior research.

Question	Explanation	Recommendation
1. Is the theory context-specific or context-general?	In context-specific theorizing, often narrow and very precise instrumentation is required; in such cases, broad generalizations, and therefore broad constructs, may be ill suited	The more context-specific the theory is, the more appropriate specific variables become; context-specific theories often operate in very limited or delicate milieu—in such cases, narrow variables may be required
2. Is the criterion general or specific?	Construct correspondence suggests that predictors and criteria should correspond in terms of generality–specificity	Theoretically and often empirically, specific criteria favor specific predictors, and general criteria favor general predictors
3. Are both a broad factor and the specific factors co-considered?	Broad constructs may causally link narrow constructs so their omission is generally inappropriate	To determine which component of variance is operating, independent measures of both general and specific constructs should be included
4. Is a hierarchical representation of the constructs feasible?	Most broad psychological constructs are indicated by a lower-order structure; the most complete understanding of a construct—and its usefulness—is often only revealed by considering its hierarchical structure	Although not feasible in all research, where possible and appropriate, both the broad construct and the lower-order dimensions which indicate the broad construct should be included and modeled

regardless of the situation (e.g., transformational leadership is expected to be manifested across a variety of environments and situations). Other models and theories are built upon specific situations (e.g., theory of reasoned action focuses on motivations for a specific task and not on being motivated in general). To test theories like transformational leadership, we would look at behavior broadly across a variety of projects and work assignments, whereas to test the theory of reasoned action, we would employ measures that refer to motivation for a specific action. Other theories may be considered mid-range theories that may have specific and general features (e.g., goal-setting theory). In the same way that the punishment should fit the crime, the construct should fit the theory. Granular, specific theories meant to suit a particular context will need more specific constructs and measures than will molar, general theories meant to generalize across contexts. As noted by Carr, Schmidt, Ford, and DeShon (2003), “The breadth of the criterion one is interested in predicting should dictate the appropriate breadth of the predictor construct” (p. 605).

For example, Judge, Jackson, Shaw, Scott, and Rich (2007) showed that the relative predictive power of general motivational traits (e.g., general mental ability, the Big Five traits) and motivational states (self-efficacy, goal-setting motivation) depended on the specificity of the context. Aggregated across contexts, the general traits were more important. Within particular contexts, the motivational states become important. One way to interpret these results is to support the importance of broad motivational traits. However, the results also support the importance of the narrower motivational states—when studied in their narrower, appropriate context.

### *Is the criterion general or specific?*

As noted by Hulin and colleagues (Hulin, 1991; Hulin, Roznowski, & Hachiya, 1985) with respect to job attitudes and Epstein (1979) with respect to personality, to optimally advance scientific understanding and to achieve maximum empirical prediction, psychological constructs need to correspond in terms of their generality–specificity. It makes little sense to use a broad construct to predict a very specific or time-dependent organizational behavior (e.g., whether an employee intends to be absent on a particular day), and it makes as little sense to use a specific measure of a predictor to predict a general behavior. For example, measures of general mental ability are likely to be predictive of overall task performance (which is itself a hierarchical latent construct made up of performance on multiple types of tasks), but a measure of mathematical ability is likely to add incrementally in the prediction



of a highly quantitatively oriented task. This example shows that if there are multiple subcomponents in a construct on the criterion side, a predictor with multiple subcomponents should be employed. If, on the other hand, the criterion is unidimensional, a unidimensional predictor is likely to be more predictive.

### *Are both a broad factor and the specific factors co-considered?*

Given that many of the most important psychological constructs vary in their generality, including core self-evaluations and the other constructs we have reviewed here, more comparative evidence is needed. To compare, of course, one needs to include both general and specific measures and to partition covariance accordingly. Gustafsson (2002) has argued that ascertaining which component of variance is operating requires measuring both general and specific constructs. Researchers who are interested in examining specific factors should consider the possibility that a general predictor might be equally or more capable of predicting an outcome, and researchers who are interested in examining broad factors should consider the possibility that a specific predictor might also be more appropriate for a given outcome. As an example, one might include multiple measures of both an underlying job satisfaction construct (e.g., satisfaction with supervisors, peers, coworkers, and work itself) and a dispositional predictor (e.g., core self-evaluations subtraits) in a single study. This allows researchers to investigate whether some subtraits are more predictive of the specific subdimensions than others (e.g., is generalized self-efficacy more relevant for task performance or is self-esteem more relevant for social relationships?) after taking the general trait into account. One could also match general factors to one another to estimate the relationship between job satisfaction and core self-evaluations after taking the specific subtraits into account (i.e., do the subtraits incrementally predict aggregate job satisfaction after taking the higher-order core self-evaluations trait into account). With both broad and specific measures available in a single study, it becomes feasible to test the appropriate level of generality empirically.

### *Is a hierarchical representation of the constructs feasible?*

For nearly all psychological constructs, a hierarchical model does the best job of capturing their complexity and completeness. Many general constructs are dependent on specific constructs (many were revealed by the associations among the specific indicators), and a hierarchical model appropriately elevates debate from dichotomies of “lumping” versus “splitting.” Although, as we have noted, researchers have predilections for general or for specific constructs, an integration of these approaches views a construct hierarchically and thus integratively.

Testing such hierarchical constructs is not easy. Often the general factor explaining the relationships among the indicators or dimensions is measured only by extracting the shared variance among those dimensions. Because this general factor is, by design, often highly correlated with the dimensions themselves, this makes it challenging to isolate unique variance. Moreover, some reject testing multidimensional constructs philosophically, on the grounds that they are conceptually ambiguous or confounded. Others argue that when specific dimensional measures are used in isolation and generate significant results, inferences about the operative construct are equivocal (Lubinski, 2004). As noted by Edwards (2000, p. 145), “The multidimensional construct debate presents a dilemma for OB researchers who want the breadth and comprehensiveness of multidimensional constructs and the clarity and precision of the dimensions that constitute the construct. These apparently conflicting objectives cannot be achieved if a researcher adopts one side of the debate.”

Yet, as noted by Edwards (2000), not only does taking ideological positions keep dichotomous thinking alive but also it is not necessary as many issues are empirically testable. For latent variables, this is often best accomplished by specifying a second-order factor model where the broad second-order construct is indicated by first-order dimensions, and the first-order dimensions are indicated by items or item parcels. If a second-order model is properly specified and an adequate structure is achieved, there are various ways of comparing the relative validity of the broad

factor and the dimensions that indicate it (Edwards, 2000). We would submit that there are likely criteria and settings in which the broader construct is supported, criteria and settings for which lower-order dimensions are supported, and criteria and settings in which each are important. The only means of determining these “when” and “where” questions is through proper model specification and empirical testing. Arguments alone—or one-sided data—are unlikely to persuade anyone but those already convinced of the researchers’ point of view.

## Conclusions and Recommendations

Reviewing the literature on general and specific constructs inevitably leads one to a conclusion that there is no good answer to the question “should one measure general or specific constructs?” A more appropriate question is “*when* should one measure general constructs and *when* should one measure specific constructs?” As we have shown, there are substantive differences between general and specific constructs, and the appropriate level of abstraction is likely to vary on the basis of the question being asked. Researchers who ask context-specific questions with specific criteria should choose to measure highly specific constructs. Conversely, researchers who ask context-general questions with general criteria should measure general constructs. Regardless of whether the theory is general or specific in nature, researchers should always consider the possibility that a narrow or broad representation of their constructs might also yield informative results and attempt to fit narrow constructs into hierarchical relationships with broader constructs when appropriate.

Considering the specific case of CSE, the research we have reviewed clearly shows that in some instances, when predicting broad outcomes like overall job performance and job satisfaction, the general factor performs well and may be considered a more parsimonious representation of the role of several personality traits in predicting these outcomes. However, our review also demonstrates that in some cases, specific subfactors of CSE are uniquely predictive of certain work outcomes. Researchers wishing to support a purely “lumper” perspective on CSE will be able to demonstrate the validity of their approach by continuing to emphasize broad outcomes and focusing on shared variance among traits. Researchers wishing to support a purely “splitter” perspective on CSE will be able to demonstrate the validity of their approach by emphasizing theoretical subtlety and narrow outcomes. Researchers, however, who wish to advance beyond this sort of dichotomous thinking will focus on the possibility that traits are arranged hierarchically with the use of broad or narrow traits when appropriate to the research question at hand.

## Author biographies

**Timothy A. Judge** is the Franklin D. Schurz Professor Management, Mendoza College of Business, University of Notre Dame. Judge received his PhD from the University of Illinois at Urbana-Champaign in 1990. Before entering the doctoral program at Illinois, he was a manager with Kohl’s Department stores in Wisconsin and Illinois. Previously, he has been a member of the faculties of Cornell University, the University of Iowa and, most recently, the University of Florida. Judge’s research interests are in the areas of personality and individual differences, leadership, moods and emotions, and attitudes.

**John D. Kammeyer-Mueller** is an Associate Professor of Management at the Warrington College of Business, University of Florida. John received his PhD from the University of Minnesota. John’s research interests are in the areas of personality and individual differences, work attitudes, applied research methodology, organizational socialization, and careers.

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