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# Core Work Evaluation: The Viability of A Higher-Order Work Attitude Construct

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## Abstract

A great deal of research examining work attitudes has shown that they are related to important employee behaviors. Most of this research has parsed attitudes into ever more refined assessments of specific features of the work environment. Although this research has yielded valuable insights, for practical, theoretical, and empirical reasons we argue that an examination of a more global evaluative summary of the work environment is needed. In the present study we develop, conceptualize, and provide empirical evidence for a global work attitude construct called Core Work Evaluation (CWE). The conceptual foundation for CWE is drawn from classic and modern theory on attitudes and attitude formation. To test our theoretical assertions we follow recent

recommendations for the development of higher order constructs in a series of three empirical studies. The results found that CWE: (1) explains meaningful shared variance across the more specific indicators (job satisfaction, organizational commitment, and work engagement) that is not merely the result of common method variance, (2) is distinguishable from nonevaluative features of the work environment and stable individual differences, and (3) predicts important work-related outcomes above and beyond its constituent indicators. Overall the results provided evidence of the viability of the CWE construct.

## Keywords

Job attitudes, Job satisfaction, Organizational commitment, Work engagement

## 1. Introduction

Workers make global evaluative assessments of their work environment as well as evaluations of the specific parts of their work, and such subjective assessments have been the topic of considerable empirical and theoretical scrutiny in the literature on work-related attitudes. This is due to the inherent value that these assessments have for employees and managers, both on humanistic grounds (Spector, 1997) and because of their presumed association with important employee behaviors such as absenteeism, turnover, and performance (Chang et al., 2009, Judge et al., 2001, Mathieu and Zajac, 1990, Riketta, 2002, Riketta, 2008, Saari and Judge, 2004). Perhaps the most common approach for studying these assessments is to parse them into ever more refined assessments of specific features of the work environment. This approach has yielded valuable insights and advanced our understanding of people at work. Despite this, we maintain that unless specifically prompted to consider individual features of the work environment, employees often make a more global evaluative assessment, as illustrated in the conversation above. When this global assessment is ignored and only specific features of the environment are considered, something important gets lost. This is akin to the proverbial “ignoring the forest and only seeing the trees.” Understanding individual trees is certainly important, but one cannot have a complete understanding of the ecology without recognizing that there is in fact a forest, and that forest is something more than just a collection of trees. Employees' holistic views of their work environment are just as important as their views of specific parts of it. Thus, the purpose of the present study is to examine the global evaluative assessment that employees make of their work environment, which we label core work evaluation (CWE), defined as a summary psychological evaluation of one's work environment targeting the job, organization, and work activities themselves.

Over the past several decades, some of the most common ways that the assessments workers make have been parsed in terms of attitudes toward the job (e.g., job satisfaction, see reviews by Locke, 1976, Hulin and Judge, 2003, Judge et al., 2012), the organization (e.g., organizational commitment, see reviews by Klein et al., 2009, Meyer and Allen, 1997) and the work activities (e.g., work engagement, see reviews by Bakker et al., 2011, Macey and Schneider, 2008, Shuck and Wollard, 2010). As these constructs were introduced, empirical research showed their discriminant validity from previously established work attitudes (e.g., Allen and Meyer, 1996, Hallberg and Schaufeli, 2006). However, the relationships among these work attitudes have recently become the topic of debate. For example, Harrison, Newman, and Roth (2006) have argued and provided empirical evidence that at least some of these attitudes can be fruitfully aggregated into a single global assessment. Unfortunately, as Harrison et al. (2006) point out, that study was limited to only examining job satisfaction and organizational commitment, and it did not include other attitudes such as attitudes toward the work activities themselves.

This important limitation of that study notwithstanding, Harrison et al. (2006) raise an important issue regarding the relative merits of broad aggregate constructs versus narrow specific constructs in the study of work attitudes. This issue parallels the “bandwidth versus fidelity” dilemma that has been debated in the literature on

individual difference constructs for some time (e.g., personality and cognitive ability; Cronbach & Gleser, 1957). It has been suggested that the reconciliation of such debates rests on both theoretical and empirical grounds. That is, the level of broadness claimed for any construct must be dictated by theory and, in the case of broad aggregate constructs, the viability of the aggregate construct must have been demonstrated empirically (Edwards, 2001, Judge and Kammeyer-Mueller, 2012).

It is important to note that while researchers may parse attitudes into those focused on the job, organization, and work activities, the employee behaviors that these attitudes are expected to predict cannot always be parsed this same way. This is because work situations are arranged hierarchically with work activities embedded within jobs, and jobs embedded within organizations. As a result, in making decisions about their behavior (e.g., organizational citizenship behavior and turnover), employees rely on an overall summary evaluation of their work situation (Hanisch, Hulin, & Roznowski, 1998). For example, we would expect turnover to be more consistently predicted by an overall summary evaluation than by any single work attitude. This is consistent with the classic and modern attitude theory that describes how attitudes relate each other (Fazio & Olson, 2003) and to behaviors (Ajzen & Fishbein, 1977).

In the present study we develop, conceptualize, and provide empirical evidence for a global work attitude construct referred to as core work evaluation (CWE). In so doing we address an important gap in the literature and begin to inform the debate surrounding broad versus narrow work attitudes. We conceptualize CWE as a higher-order construct that includes job satisfaction, organizational commitment and work engagement. These three attitudes were included based on theoretical considerations drawn from the classic and modern attitude theory, the fact that each is well established in the literature, and because they collectively reflect the hierarchical nature of the work situation. The inclusion of engagement in particular builds on past empirical attempts to create such a construct and fills the important gap created by its omission in earlier work.

## 2. Theoretical development and empirical evidence

In this section we begin by applying the classic and modern attitude theory and research found in the social psychology literature to the more specific domain of job attitudes. We use this theory and research to develop the CWE construct and provide a rationale for the inclusion of job satisfaction, organizational commitment, and work engagement as its constituent elements. Next we specify the nature of the higher-order construct and distinguish it from other constructs. Then we present a series of three empirical studies that follow the recent recommendations by Johnson and colleagues for the rigorous development of aggregate constructs to test our theoretical assertions (Johnson et al., 2011a, Johnson et al., 2012). In these we (1) establish CWE as a viable higher-order construct, (2) show that it is discernible from other similar constructs, and (3) demonstrate its incremental prediction to important work behaviors.

## 3. Definition and conceptual development of Core Work Evaluation

The conceptual foundation for CWE is drawn from theory on attitudes and attitude formation. Definitions of attitudes have varied over time, but the most classic definition is that attitudes are composed of affect, cognitions, and behaviors focused on an object or set of objects. This is referred to as the tripartite definition of attitudes (e.g., Ajzen and Fishbein, 1977, Allport, 1935, Brown, 1965, Eagly and Chaiken, 1993, Rosenberg and Hovland, 1960, Triandis, 1971). More recent definitions of attitudes suggest that an attitude need not contain these three elements, but rather is an evaluative mental state or evaluative summary of an object or set of objects (Albarracín et al., 2005, Fazio, 1995). Attitudes may be based on or expressed as affect, cognition, or behavior, but the attitude itself is discernable from these (Weiss, 2002). This is sometimes referred to as the neotripartite definition of attitudes (Eagly & Chaiken, 2007). This view is consistent with research in the work attitude literature that has studied affective, cognitive, and behavioral reactions to work such as job satisfaction

and organizational commitment (e.g., Brief and Weiss, 2002, Judge et al., 2012). These various reactions may have different bases or expressions, but they all imply an evaluation. Recognizing this, we conceptualize CWE as a summary psychological evaluation of the elements of the work environment.

As a summary psychological evaluation, attitudes can be jointly characterized by two dimensions, valence and intensity (Fazio et al., 2004, Pietri et al., 2013, Shook et al., 2007). Valence refers to the degree of favorableness with which the object of the attitude is regarded. It can range from unfavorable to favorable. Intensity reflects the degree of arousal associated with the object of the attitude. It can range from mild to strong arousal. When people are asked about their work situation they may respond "it's great!" This would reflect an underlying summary evaluation that has both high (positive) valence and high intensity. On the other hand, some people may respond by saying "it's awful!" which would reflect a summary evaluation that has low valence and high intensity. Still, others may express an attitude that is more ambivalent or apathetic (i.e., 'it's okay'), which may reflect a more neutral valence and low intensity. Applying these characteristics of attitudes to CWE, CWE is expected to be jointly characterized by these same two dimensions of valence and intensity. For instance, we would expect those with high CWE to report their work as being both more favorable and associated with more arousal than those with low CWE.

Another characteristic of an attitude is that it has an object or set of objects that are the target of the attitude (i.e., as opposed to a mood state which does not necessarily have a specific target object; Weiss, 2002). In the workplace there are many potential attitude-object sets. The object of CWE is the work environment. We conceptualize the work environment as including the job, the organization, and the work activities themselves. Work activities are embedded within jobs, and jobs are embedded within organizations. When performing work activities, one is doing them as part of one's job on behalf of an organization, and exposure to any one of them generally requires exposure to all three. Because of this, the experience of them can be largely inseparable for the worker. Based on classic Gestalt psychology (Heider, 1958), we argue that when stimuli are co-located in time and place they tend to be perceived as a whole and meaningful unit when being stored and retrieved from memory. This idea is supported by research that suggests that attitudes form based on current mental content (e.g., current thoughts, retrieved memories; Clore et al., 2001, Fazio, 1995). For all of these reasons, a worker's experiences of work activities as part of a job that is part of an organization become associated with each other and thus form the work environment and the object of an attitude.

The notion of a work environment is also consistent with research on the psychology of attitudes focused on the process of attitude formation. For instance, it is now generally accepted that attitudes can be activated with or without conscious awareness, and these evaluations influence other perceptions and evaluations of the environment (Fazio and Olson, 2003, Hermans et al., 2003). This literature also recognizes the attitude generalization process (Fabrigar et al., 2005, Ranganath and Nosek, 2008) whereby the evaluative summary, once activated, will generalize to the specific elements of that object.

As an overall psychological construct, CWE involves a summary psychological evaluation that is jointly characterized by two dimensions, valence and intensity, and has as its object the work environment (the job, organization, and work activities experienced by the worker). These constitutive characteristics informed our choice to include in CWE three well-known work-related attitudes that would cover our intended range of evaluative characteristics and form a complete and meaningful attitude object. Taken together, these three constituent attitudes reflect a range of both valence and intensity in reference to elements of the work environment. Regarding objects, job satisfaction targets the job, organizational commitment targets the organization, and work engagement targets the work activities. As a set, these three attitudes have a range of valence and intensity. All three components can be characterized as ranging in valence from favorable to unfavorable, but they vary in intensity. Job satisfaction for example has relatively low intensity (Warr & Inceoglu, 2012). This can be seen in the terminology commonly used in satisfaction measures, especially in the word

satisfaction itself, which is often used in questionnaire measures (e.g., Cammann, Fichman, Jenkins, & Klesh, 1983). Compared to engagement, satisfaction is a state of contentment with the job, a low energy state of pleasure or happiness. A well-known short definition of the job satisfaction construct is “a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences” (Locke, 1976, p. 1300). Locke and others have argued that it is based on need (or value) satisfaction. Many measures of job satisfaction, like the one in the present study, have items that include the word satisfaction, and English speakers should understand this by its definition; in online dictionary definitions and thesaurus synonyms, the primary and most common words we found were contentment, gratification, fulfillment, dependable, content, and true. These indicate a pleasurable but not necessarily exciting or intense feeling. To be satisfied, or in a state of being satiated, does not necessarily imply a high level of intensity.

Work engagement on the other hand is a more intensely activated state (Warr & Inceoglu, 2012). Measures of it often refer to high levels of energy and enthusiasm (e.g., Schaufeli, Bakker, & Salanova, 2006). The construct of engagement is commonly defined as consisting of vigor, dedication, and absorption in one's work; it is further described as including involvement, commitment, passion, enthusiasm, focused effort, and energy (Bakker et al., 2011, Schaufeli and Bakker, 2010). The items in the measure of engagement used in the present study included the key words and phrases “energy” “forget about time,” “strong and vigorous,” “enthusiastic,” “inspires,” “feel like going to work,” “proud,” “immersed in my work,” and “carried away.” Thus, both the conceptual and operational definitions of the construct are loaded with intensity and energy.

#### 4. The nature of the construct

Based on the theory and research presented above we conceptualize the nature of CWE as a superordinate, as opposed to an aggregate, construct. For a construct to be considered superordinate, causality needs to flow from the higher-order construct to its lower-level factors (Edwards, 2001, Edwards, 2011). This conceptualization parallels the idea of a reflective construct (as opposed to a formative construct) found in discussions of lower-order constructs (Diamantopoulos and Sigauw, 2006, Edwards and Bagozzi, 2000). We propose that CWE causes and is manifested by job satisfaction, organizational commitment, and work engagement. This is consistent with our conceptual view of CWE. CWE is an evaluative summary assessment of the work environment that generalizes to (1) the assessments that people make about their organization, (2) the job they perform on behalf of their organization, and (3) the work activities that they perform as part of their job; therefore, CWE acts as the primary cause of its constituent elements. Theoretically, this description is consistent with top-down cognitive processing of the elements of one's environment (Egeth & Yantis, 1997). From an empirical standpoint, superordinate constructs must share a large proportion of overlapping variance (Edwards, 2001, Edwards, 2011). This overlapping variance has been shown in a range of empirical studies examining the intercorrelations among these three variables. In two meta-analyses, results have demonstrated that after correcting for measurement error, job satisfaction and organizational commitment were correlated at .53 and .63 (Mathieu and Zajac, 1990, Meyer et al., 2002, respectively). Similarly, strong meta-analytic correlations were found between work engagement and job satisfaction (i.e., .53) and organizational commitment (i.e., .59) (Christian, Garza, & Slaughter, 2011). Thus, based on the conceptual nature and empirical existing evidence we contend that CWE is a superordinate construct.

In the following sections we present a series of three empirical studies aimed at testing the theoretical assertions that are presented above. We followed a set of guidelines by Johnson and colleagues (Johnson et al., 2011a, Johnson et al., 2012) for the rigorous development and substantiation of higher-order constructs. In Study 1 we examined the viability of CWE as a higher-order construct and tested whether common method variance could be ruled out as an alternative explanation. In Study 2 we empirically tested whether the proposed indicators of CWE (i.e., job satisfaction, organizational commitment, and work engagement) and other

related variables (i.e., job characteristics and core self-evaluations) met the inclusion/exclusion criteria of CWE. In the final study, Study 3, we examined the importance and relative contribution of CWE beyond its individual indicators in predicting work behaviors.

## 5. Study 1: Establishing CWE and ruling out alternative explanations

Study 1 had two objectives: (1) to empirically examine how well the measures of the three constituent elements of CWE form a single higher-order factor and (2) to rule out common method variance (CMV) as a possible alternative explanation for the relationships among the CWE indicators. A model was tested that included direct paths from CWE to its three latent indicators, job satisfaction, organizational commitment, and work engagement. In order for CWE to emerge as a higher-order construct its three indicators would need to share a large proportion of overlapping variance. A second model was then tested that applied the statistical marker variable technique to estimate the amount of shared variance that was attributable to CMV among the CWE indicators. The extent to which the shared variance was attributable to CMV could potentially threaten the structural validity of CWE, and therefore this analysis was an important step in establishing CWE as a higher-order construct.

### 5.1. Method for Study 1

#### 5.1.1. Participants and procedure

The sample for Study 1 consisted of 169 working adults who were also undergraduates in the business school at a large Midwestern university. Participants were sent an email that included a URL link directing them to an online survey. They received extra credit in exchange for their participation in the study. Of those who responded, 63% were women, 77% were Caucasian, and they had worked an average of 3 years in their current position ( $SD = 3.38$ ).

#### 5.1.2. Measures

##### 5.1.2.1. Job satisfaction

The first core work evaluation component was measured using Cammann et al.'s (1983) three-item job satisfaction scale. Example items are "I enjoy my job" and "Overall, I am satisfied with my job." Participants responded using a scale that ranged from 1 (strongly disagree) to 7 (strongly agree).

##### 5.1.2.2. Organizational commitment

The second component of CWE, organizational commitment, was measured with Mowday, Porter, and Steers's (1979) nine-item measure. Sample items include "I really care about the fate of this organization," and "I am proud to tell others that I am part of this organization." The response scale ranged from 1 (strongly disagree) to 7 (strongly agree).

##### 5.1.2.3. Work engagement

The third CWE component was measured with Schaufeli et al.'s (2006) shortened work engagement questionnaire. Example items from this nine-item measure include "At (my organization), I feel full of energy" and "I forget about time when I am working." The response scale ranged from 1 (strongly disagree) to 7 (strongly agree).

##### 5.1.2.4. Individualism

Individualism was used as a marker variable and measured with Triandis and Gelfand's (1998) shortened eight-item version of Singelis, Triandis, Bhawuk, and Gelfand's (1995) larger individualism scale. Example items include "I'd rather depend on myself than others" and "I often do my own thing." The response scale ranged from 1 (strongly disagree) to 7 (strongly agree).

## 5.2. Results and discussion for Study 1

Intercorrelations and descriptive statistics for the variables in Study 1 are shown in Table 1. Many of the analyses in Studies 1 and 2 follow the same pattern and logic, and therefore we explain them in some detail here in the first study. The first step was to create item parcels for the constructs, organizational commitment and work engagement, which is the recommended approach when using measures with a large number of items (Bandalos and Finney, 2001, Coffman and MacCallum, 2005, Williams and O'Boyle, 2008). The item-to-construct balance technique was used to form parcels, where each item's standardized factor loading from a single-factor model was examined and then the best and worst items were balanced across the parcels (Little, Cunningham, Shahar, & Widaman, 2002). For both organizational commitment and work engagement, three item parcels were formed wherein each parcel was comprised of three items. Next, we empirically tested the unidimensionality of the higher-order CWE model using structural equations modeling (SEM) with maximum likelihood estimation as implemented in Mplus 7.11 software (Muthen & Muthen, 2013). The features that needed to be considered in order to establish the presence of CWE were the fit of the higher-order model as well as the size of the factor loadings for each proposed indicator of CWE (job satisfaction, organizational commitment, and work engagement; Marsh, 1987). Based on several commonly used fit indices, the higher-order model fit the data well (chi-square = 42.37 ( $df = 24$ ), comparative fit index [CFI] = .99, Tucker Lewis index [TLI] = .99, root mean square error of approximation [RMSEA] = .07, and standardized root mean square residual [SRMR] = .03; Bentler, 1990, Tucker and Lewis, 1973, Steiger, 1990). As expected, the factor loadings across the three factors of CWE were all strong and above the .70 benchmark recommended by Johnson and colleagues (Johnson et al., 2011a, Johnson et al., 2012): job satisfaction, .85; organizational commitment, .92; and work engagement, .89; all  $p < .01$ . Thus, these factor loadings exceeded the statistical requirement needed to be considered a superordinate construct. Given this, the reliability of CWE was estimated using the composite latent variable reliability statistic (CLVR; Raykov, 1997), and results showed that CWE has high internal consistency (.85), as it exceeded the recommended cutoff (Johnson et al., 2011a, Johnson et al., 2012).

Table 1. Means, standard deviations, coefficient alphas, and correlations among the manifest variables.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Study 1											
1. Job satisfaction	5.26	1.38	(.95)								
2. Organizational commitment	4.88	1.35	.75**	(.94)							
3. Engagement	4.62	1.49	.72**	.77**	(.93)						
4. Individualism	5.11	0.74	.06	.01	.01	(.73)					
Study 2											
1. Job satisfaction	5.75	1.07	(.84)								
2. Organizational commitment	3.95	0.65	.65**	(.93)							
3. Engagement	4.27	0.86	.69**	.62**	(.93)						
4. Skill variety	5.57	1.26	.41**	.26**	.47**	(.74)					
5. Task identify	5.23	1.16	.29**	.16*	.28*	.39**	(.61)				
6. Task significance	5.64	1.18	.42**	.26**	.43**	.45**	.40**	(.73)			
7. Autonomy	5.52	1.22	.53**	.29**	.51**	.60**	.49**	.36**	(.84)		
8. Feedback	5.03	1.21	.40**	.24**	.43**	.50**	.41**	.55**	.46**	(.80)	
9. Core self-evaluations	3.82	0.50	.51**	.41**	.52**	.30**	.21**	.33**	.38**	.29*	(.82)
Study 3											
1. Job satisfaction	4.33	0.63	(.84)								
2. Organizational commitment	4.12	0.68	.77**	(.90)							
3. Engagement	5.00	0.98	.76**	.73**	(.91)						
4. CWE	4.48	0.70	.91**	.90**	.93**	(.94)					
5. OCBs	4.22	0.44	.54**	.51**	.51**	.57**	(.72)				
6. Turnover intention	2.00	0.98	-.57**	-.57**	-.50**	-.59**	-.42**	(.91)			

Note: Reliabilities are in parentheses on the diagonal.

\* $p < .05$ .

\*\* $p < .01$ .

In order to rule out the possibility that common method variance (CMV) could be an alternative explanation for these findings, which is a concern when testing higher-order constructs (see Johnson et al., 2011b, Podsakoff et al., 2012), we used the CFA marker technique by Williams, Hartman, and Cavazotte (2010). For this approach a theoretically unrelated variable or marker variable (i.e., individualism) was used and five CFA models were tested to determine whether the results of the hypothesized model were sensitive to the variance associated with sampling error in the measurement of the marker variable. Similar to the other constructs in the model with a large number of items, three item parcels were created for the individualism construct wherein two of the parcels were comprised of three items and one of the parcels was comprised of two items. In Model 1, all variables were allowed to correlate and estimate freely. In Model 2, the marker variable's parameters were fixed to the values obtained from Model 1, and the correlations between the marker variable and all other variables were forced to zero. For the third model (Method-C Model) the method factor loadings were added and constrained to be equal in size. For the fourth model (Method-U Model) the method factor loadings were freely estimated. The final model tested (Method-R Model) was identical to the fourth or third model depending on which of them provided a better fit to the data, and in our case Method-C, but the correlations between the variables were constrained to their values from the baseline model (i.e., Model 2). The comparison of Method-C or Method-U models with Method-R Model provides a statistical test of the biasing effects of the marker variable on the other variables in the model. If Method-R Model did not fit the data better than Method-C, then the relationships in the model were not significantly biased by method variance. In the present study, the results showed that the Method-R Model was not superior to the Method-C Model ( $\Delta\chi^2[1, N = 167] = 1.60, p = .21$ ) indicating that the relationships between the factors of CWE were not significantly biased by CMV (Williams et al., 2010). This provides initial evidence to rule out CMV as an alternative explanation for the CWE construct.

## 6. Study 2: Empirically testing the inclusion criteria of CWE

Study 2 had two objectives (1) to test whether the proposed indicators of CWE empirically met the theoretical inclusion criteria for the CWE construct, and (2) to test whether other related variables could be ruled out as possible CWE indicators. Indicators that met the empirical standard for inclusion were retained and used in CWE, whereas those that did not were excluded. In order for a variable to be included as an indicator of CWE it needs to be an evaluative assessment of one's work environment. The variables proposed for inclusion are job satisfaction, organizational commitment, and work engagement. The candidate variables for exclusion were core job characteristics of intrinsically motivating jobs and core self-evaluations. The five job characteristics that were examined were skill variety (i.e., degree to which a job requires the use of different skills), task identity (i.e., degree to which the job requires doing a whole piece of work), task significance (i.e., degree to which the job has an impact on the lives of others), autonomy (i.e., degree to which the job provides discretion in completing the work), and feedback (i.e., degree to which the job provides information about the effectiveness of the work; Hackman & Oldham, 1975). These job characteristics are conceptually similar to CWE such that they refer to features of the work environment. However, they are only narrowly focused on the tasks of the job, and crucially, they are more descriptive of the environment than evaluative. As a result they do not meet the theoretical inclusion criteria for CWE and thus should not fit empirically. The next variable that was empirically tested as a possible indicator of CWE was core self-evaluation. Core self-evaluation is a dispositional or trait-like variable that is an evaluation of one's self-concept (Judge, Erez, & Bono, 1998). Although both CWE and core self-evaluations are both broad in scope and evaluative in nature, CWE is more temporary and is an evaluative assessment of the work environment rather than an evaluative assessment of the person or self. Thus, core self-evaluations should be empirically distinguishable from CWE.

## 6.1. Method for Study 2

### 6.1.1. Participants and procedure

The sample for Study 2 consisted of 209 nonteaching employees working at a Midwestern university (response rate of 16%). An email was sent from the Human Resource Director that included a URL link directing participants to an online survey. Of those who responded, 74% were women and 92% were Caucasian. They had worked an average of 11 years in their current position ( $SD = 9.1$ ) and held a wide variety of jobs, including police officers, administrative assistants, and custodians.

### 6.1.2. Measures

The measures are described below, with the exception of those that were also used in Study 1. Thus, descriptions of the measures, job satisfaction, organizational commitment, and work engagement are provided in the method section of Study 1.

#### 6.1.2.1. Job characteristics (skill variety, task identity, task significance, autonomy, and feedback)

Job characteristics were measured with the *Job Diagnostic Survey* (Hackman & Oldham, 1975). Each characteristic was measured by three items rated on a scale ranging from 1 (very inaccurate) to 7 (very accurate). Example items include "The job denies me any chance to use my personal initiative or judgment in carrying out the work" and "The job gives me considerable opportunity for independence and freedom in how I do the work."

#### 6.1.2.2. Core self-evaluations

Core self-evaluations were measured with Judge, Erez, Bono, and Thoresen's (2003) *Core Self Evaluations Scale*. Example items from this twelve-item measure include "I am confident I get the success I deserve in life" and "I determine what will happen in my life." The response scale ranged from 1 (strongly disagree) to 7 (strongly agree).

## 6.2. Results and discussion for Study 2

Intercorrelations and descriptive statistics for the variables in Study 2 are shown in Table 1. First, we formed item parcels for the construct organizational commitment, work engagement, and core self-evaluations using the item-to-construct balance technique. For organizational commitment and work engagement three item parcels were created, and for core self-evaluations four item parcels were created. All item parcels were comprised of three items. Next, we tested whether the proposed indicators of CWE, job satisfaction, organizational commitment, and work engagement, empirically met the inclusion criteria. Indicators with factor loadings of .70 or above are considered to have a sufficiently high degree of overlap with the other indicators in the model, and should therefore be retained, whereas factor loadings below the cutoff should be excluded as indicators (Johnson et al., 2012). The results showed that the model fit the data moderately well ( $\chi^2 = 63.57$  ( $df = 24$ ),  $CFI = .97$ ,  $TLI = .95$ ,  $RMSEA = .09$ , and  $SRMR = .04$ ), and the three indicators of CWE all had strong factor loadings above the .70 threshold (job satisfaction, .96, organizational commitment, .79, and work engagement, .79;  $p < .01$ ). We also tested for the unidimensionality and reliability of CWE. Results showed that the CLVR was acceptable for CWE (.83; Raykov, 1997). These results provide initial evidence that the proposed indicators of CWE empirically meet the inclusion criteria.

The next step was to test whether other variables (i.e., job characteristics and core self-evaluations) empirically met the inclusion criteria as part of CWE. Each of the five job characteristics was separately added to the hypothesized model and results showed that while the proposed indicators of CWE stayed above the .70 cutoff, each of the five job characteristics fell below that threshold (task significance, .52, task identify, .46, skill variety, .53, autonomy, .64, and feedback, .52;  $p < .01$ ). When core-self evaluations were added as an indicator, it too did not meet the empirical standard for inclusion (.59,  $p < .01$ ). Thus, the results provided evidence that CWE is

empirically distinguishable from variables reflecting the work environment and enduring individual differences, and they were excluded as possible indicators of CWE.

It should be noted that although CWE is distinct from these other constructs, some theory would suggest that workers' actual working conditions and personal disposition may impact their overall evaluation of work. Therefore, we tested a model wherein job characteristics and core-self evaluations may influence one's CWE rather than being part of CWE. In order to test this, a structural model was analyzed where job characteristics and core-self evaluations were treated as predictors of CWE. For the job characteristic construct we created item parcels using the internal-consistency approach, wherein the three items measuring each of the five core job characteristics (i.e., skill variety, task identity, task significance, autonomy, and feedback) were combined to form each of the five item parcels. This is the recommended approach for creating parcels for multidimensional constructs (Little et al., 2002). The results showed that the proposed model fit the data well (chi-square = 237.39 ( $df = 113$ ), CFI = .94, TLI = .92, RMSEA = .08, & SRMR = .06), and as expected, job characteristics and core-self evaluations were significantly positively related to CWE ( $\beta = .53$  and  $.38$ ,  $p < .01$ , respectively).

## 7. Study 3: Demonstrating the incremental contribution of CWE

Study 3 had two objectives: (1) to assess the incremental importance of CWE beyond its individual indicators in predicting organizational citizenship behaviors (OCBs) and turnover intention and (2) to assess whether the relative contribution of CWE exceeds its indicators in predicting OCBs and turnover intention. To examine objective 1 a usefulness analysis was conducted (Edwards, 2001), which examined whether any of the indicators of CWE added incremental variance beyond the variance shared among them in predicting the outcomes. If any single indicator does not add significant variance beyond the general CWE factor then the specific indicators do not contribute to the explanation of variance beyond the general CWE factor. This would be evidence that no individual factor contributes incrementally beyond CWE in the prediction of these outcomes. To examine objective 2 a dominance analysis was conducted (Azen and Budescu, 2003, Budescu, 1993) wherein the relative contribution of the general CWE factor and its constituent indicators to the total  $R^2$  was examined. If the general CWE factor makes a larger contribution to the overall  $R^2$  relative to its indicators then this suggests that CWE incrementally adds to the prediction beyond individual factors of important work outcomes. Taken together these two analyses provide evidence for the usefulness and importance of CWE.

### 7.1. Method for Study 3

#### 7.1.1. Participants and procedure

The sample for Study 3 consisted of 232 employees at a large Eastern U.S. organization that operates parking facilities and constructs parking garages and commercial properties. Employees were mailed a packet of survey materials and were asked to return the completed survey packets to the principal investigator through direct mail (response rate = 40%). The respondents (65% men) had worked an average of 6 years in their current positions ( $SD = 5.8$ ). With respect to ethnicity, 23.7% were Caucasian, 69.4% were African American, 3.4% were Asian American, 1.3% were Hispanic, and 2.2% non-responsive to the item.

#### 7.1.2. Measures

Measures used in Study 3 are described below, with the exception of those that were also used in Study 1. Thus, descriptions of the measures of job satisfaction, organizational commitment, and work engagement, are provided in the method section of Study 1.

##### 7.1.2.1. Organizational citizenship behaviors (OCBs)

OCBs were measured with a 20-item measure developed by Podsakoff and MacKenzie (1989). Five facets of OCBs were assessed: altruism, courtesy, sportsmanship, conscientiousness, and civic virtue. Sample items

include “Helps others who have heavy workloads” and “Attends and participates in meetings regarding the organization.” The response scale ranged from 1 (strongly disagree) to 5 (strongly agree).

#### 7.1.2.2. Turnover intentions

Turnover intentions were assessed with a three-item measure from O'Driscoll and Beehr (1994). Sample items are, “I plan to look for a new job within the next 12 months” and “Over the next year I will actively look for a new job outside of the organization where I am currently employed.” Participants responded on a scale ranging from 1 (strongly disagree) to 5 (strongly agree).

## 7.2. Results and discussion for Study 3

Intercorrelations and descriptive statistics for the variables in Study 3 are shown in Table 1. The first step was to examine whether any of the single factors of CWE added incremental variance beyond the variance that was accounted for by the shared variance among the three factors of CWE in predicting OCBs and turnover intentions. If any single attitude was found to explain a significant amount of variance beyond the variance accounted for by the general CWE factor, then that single attitude captures something meaningful beyond CWE (Judge, Erez, Bono, & Thoresen, 2002). However, if any single attitude does not add significant variance beyond the general CWE factor then the specific attitudes alone do not contribute in explaining any variance beyond the general CWE factor, thus providing evidence that the higher-order construct, CWE, is useful for predicting criteria.

To test this we used the approach recommended by Sanders, Lubinski, and Benbow (1995) wherein an EFA was conducted in which one factor was specified, and a factor score was created for the general CWE factor by multiplying the three factors that make up CWE by their factor weights. Six regression analyses (3 individual attitude constructs by 2 behavioral criteria) were then conducted controlling for the general CWE factor. Results for all six analyses showed that adding any of the lower level indicator variables did not explain significant unique variance in OCBs or turnover intentions after controlling for the general CWE factor (refer to Table 2 for regression weights and changes in  $R^2$  for each analysis). Therefore, no individual attitude explains additional variance in the behavioral criteria beyond what was explained by the general CWE factor.

Table 2. CWE predicting behavior beyond the individual elements.

Model	Step 1		Step 2		$\Delta R^2$
	Beta	$R^2$	Beta	$R^2$	
Turnover intentions →		.37**		.38**	< .01
General CWE factor	– .61**		– .55**		
Job satisfaction			– .07*		
Turnover intentions →		.37**		.38**	< .01
General CWE factor	– .61**		– .67**		
Organizational commitment			.06		
Turnover intentions →		.37**		.37**	< .01
General CWE factor	– .61**		– .63**		
Work engagement			.03		
OCBs →		.32**		.32**	< .01
General CWE factor	.56**		.41**		
Job satisfaction			.12		
OCBs →		.32**		.32**	< .01
General CWE factor	.56**		.59**		
Organizational commitment			– .03		
OCBs →		.32**		.32**	< .01

General CWE factor	.56**		.60**		
Work engagement			-.04		

\* $p < .05$ .

\*\* $p < .01$ .

Beyond usefulness we also sought to establish the relative importance of the CWE construct vis-a-vis its indicators. To accomplish this we used dominance analysis (Azen and Budescu, 2003, Budescu, 1993) to determine the relative importance of predictors on the behavioral criteria. This procedure allowed for the ordering of the predictors based on the average increase in the proportion of variance in the outcome variable accounted for ( $R^2$ ) by each predictor across all possible combinations of predictors. This gives a measure of relative importance (dominance) and a “rescaled” dominance measure that reflects the importance of each predictor as a percent of the total variance accounted for in the outcome. A factor score was created for the general CWE factor which was then considered along with its three indicators (job satisfaction, organizational commitment, and work engagement) as predictors of OCBs and turnover intentions. As can be seen in Table 3, CWE had the highest relative importance for OCBs (accounting for 32% of the explainable variance) and turnover intentions (accounting for 33% of the explainable variance). Thus, these results provide additional evidence of the uniqueness of CWE in predicting behavioral criteria above and beyond its individual factors.

Table 3. Summary of Dominance Analysis.

	OCBs				Turnover intentions			
	CWE factor	Job sat	Org comm	Work eng	CWE factor	Job sat	Org comm	Work eng
Overall average	.10	.09	.08	.05	.12	.09	.09	.07
% of explainable variance	32%	28%	24%	16%	33%	25%	25%	18%

## 8. General discussion

Most of the job attitude research over the past several decades has focused on employees' evaluative assessments of specific aspects of the working environment (e.g., job satisfaction and organizational commitment). Although this body of research has advanced our understanding of work attitudes, we argue that employees also make a more global assessment of their work environment, and are regularly asked to report on these global assessments as in our opening dialogue. Further, these global assessments relate to their evaluative assessments of more specific features in the work environment. The purpose of the current manuscript was to introduce a new work attitude construct that captures this global assessment, which we labeled core work evaluation (CWE). To test our theoretical assertions we conducted a series of three studies. Those studies found that CWE (1) explains meaningful shared variance across the more specific indicators that is not merely the result of common method variance, (2) is distinguishable from both nonevaluative features of the work environment and stable individual differences, and (3) predicts important work-related outcomes above and beyond its constituent indicators. Overall the results of the three studies provided evidence of the viability of the CWE construct.

## 9. Theoretical and practical implications

Demonstrating the viability of the CWE construct fills a number of important gaps in the existing literature and has implications for theory and practice. First, by including work engagement as one of the constituent elements

of CWE and following recent recommendations for the development of higher-order constructs, we overcome limitations found in some earlier work in this area. Second, we extend current theory and research from the social-psychological literature into the work attitude literature. That broader, more general literature on attitudes no longer views an attitude as being composed of affect, cognition and behavior but rather as evaluative mental states that can range from positive to negative and from mild to intense (e.g., Eagly & Chaiken, 2007). Based on this we conceptualized CWE as an overall summary evaluation characterized by both valence and intensity. Noting the research on attitude formation (Clore et al., 2001) and generalization (Fabrigar et al., 2005, Ranganath and Nosek, 2008) it was then argued that CWE has as its object the work environment that includes one's job, organization and work activities. The results of the study presented here are consistent with these theoretical assertions drawn from the broader literature on attitudes. Thus we provide one example where developments in theory and research regarding attitudes generally may be extended into the more specific domain of work attitudes. One specific implication of this is that those interested in theorizing about work attitudes should be aware that the general literature on attitude theory suggests that global evaluative assessments can influence evaluations of more specific elements of the attitude object, consistent with top-down cognitive information processing (Egeth & Yantis, 1997). The research presented here strongly suggests that this process applies to work attitudes too. A second, broader implication is that additional aspects of theory and research in the attitude literature might also extend to work attitudes. Some progress incorporating this literature has already been made; for example by Weiss (2002), who provided at least conceptual arguments for disentangling the evaluative component of work attitudes from work-related affect. Still, more could be done here. For example, research and theory on attitude change might be fruitfully applied to theorizing about interventions aimed at changing increasing positive work attitudes.

Another important contribution of demonstrating the viability of the CWE construct is its implications for the ongoing debate about work attitudes. One aspect of that debate is whether or not it is appropriate to aggregate more specific lower order work attitude constructs into more general higher order work attitude constructs (Harrison et al., 2006). This debate has sometimes been referred to as the bandwidth versus fidelity dilemma (Cronbach & Gleser, 1957), and it has been going on for decades on various topics of interest in the areas of management, HRM and OB (Edwards, 2001). For example, the validity and utility of aggregating narrowly defined constructs into a fewer number of broadly defined constructs have been debated in the areas of employee personality (e.g., Hogan and Roberts, 1996, Ones and Viswesvaran, 1996), cognitive ability (Carroll, 1993), and organizational withdrawal (Blau, 1998, Hanisch et al., 1998) to name just a few. We concur with Judge and Kammeyer-Mueller's (2012) conclusion that this debate is valuable to the process of knowledge generation and theory building as long as it does not lead to an either/or mentality where researchers and practitioners must constrain themselves to one approach over the other. As others have pointed out (Edwards, 2001, Judge and Kammeyer-Mueller, 2012) the use of aggregate constructs must be driven by theory and the aggregate construct needs to be supported empirically. By demonstrating the viability of the CWE construct, the results reported here represent an important first step toward this end.

Some important employee behaviors that can be predicted by attitudes cannot be parsed finely the same way that attitudes can. Employees' turnover behavior is a good example; when employees turn over, they typically leave their tasks, their jobs, and their organizations all in one behavior, rather than just leaving the portion of the job that they dislike. In making decisions about some important job behaviors, an overall evaluation of the work situation is useful. Therefore, CWE should be a useful predictor of such global behaviors. The results reported here for the viability of the CWE construct should not be taken to mean that its constituent elements (job satisfaction, organizational commitment and engagement) are any less valid individually, however. Rather, like in some other areas where this issue has been raised, it is perhaps better to view work attitudes as theoretically and empirically linked constructs residing in a taxonomic system arranged hierarchically at various levels of inclusiveness. For example, at a fairly narrow level of inclusiveness are specific separate facets of job

satisfaction (Spector, 1997), bases and foci of organizational commitment (Becker, Billings, Eveleth, & Gilbert, 1996), and specific forms of engagement, that relate to their midlevel of inclusiveness constructs of global job satisfaction, general organizational commitment, and employee engagement. These midlevel constructs, as our results suggest, reflect the more broadly inclusive CWE construct. Although such taxonomic research is an ongoing process, we believe that recognizing such a taxonomy of attitudes has the potential to turn the issue of narrow versus aggregate constructs from a debate into a discussion focused on theorizing and testing the conditions under which one would choose one approach over another.

Most managers are faced with the challenge of managing employee attitudes. From a practical perspective, the results of the present study suggest that it is important for managers to recognize that employee assessments of specific objects of the work environment (e.g., job satisfaction) may be influenced by a more global evaluative assessment of their work environment. For example, when workers are asked to respond to a job satisfaction item such as "I am satisfied with my job" their responses might reflect not only their attitude toward their job, but also their summary evaluation of other elements in their work environment. Recognizing this might suggest a broader set of interventions that target not just the job but the whole work environment.

## 10. Limitations and directions for future research

Although this research contributes to the work attitude literature, we recognize that there are limitations that should be taken into consideration. The first of these is the cross-sectional and nonexperimental approach used for the three studies, which can limit the strength of causal inferences. However, the studies' logic of the relationships proposed in the studies is consistent with prior theoretical and empirical work. Nonetheless, future research might examine the variables in this model using longitudinal designs. A second potential weakness is that the data were derived from self-reports. The most likely problem with that is relationships between all of the variables might be inflated due to response bias. This concern, however, is largely assuaged by the findings of Study 1 that showed that common method variance could be ruled out as an alternative explanation for the shared variance among the CWE indicators. In addition, for many of the particular variables studied here, the individual is in the best position to provide accurate data. This is especially true for CWE because it represents an individual's subjective state. Still, we would encourage future research to use non-self-report measures of the environmental-based variable (i.e., job characteristics), which could be observed and reported by others.

In addition to the suggestions for future research already noted, there are still other potentially fruitful avenues for research. The first of these is for researchers to more extensively establish CWE's nomological network, both in terms of antecedents and outcomes. The present study has provided a strong beginning for such work, examining two possible antecedents (i.e., job characteristics and core self-evaluations) and two outcomes (OCBs and turnover intent). It would be useful to expand on this by adding other variables to the net. For example, research could examine the types of organizational practices that positively correlate with CWE, such as high-performance work practices (HPWP; Huselid, 1995). Along these same lines, it would also be interesting to examine the relationship between CWE aggregated to the organizational level and organizational level measures of performance. Previous research demonstrated a positive relationship between HPWP and organizational performance indicators such as productivity and market returns (Combs, Liu, Hall, & Ketchen, 2006). CWE may be related to both HPWP and organizational performance and act as a mediator between them at the organization level.

Lastly, now that we have demonstrated the viability of CWE as a composite of multiple existing scales, it may be important to develop a more parsimonious measure of it. This would be valuable for researchers and practitioners when questionnaire space is an important consideration. In the present study, CWE was a composite of three measures; it consisted of 21 items even though short measures of each were chosen. A shorter version is likely possible.

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