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# Measuring the Meaning of Meaningful Work: Development and Validation of the Comprehensive Meaningful Work Scale (CMWS)

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## Abstract

In this article we build on two in-depth qualitative studies to systematically develop and validate a comprehensive measure of meaningful work. This scale provides a multidimensional, process-oriented measure of meaningful work that captures the complexity of the construct. It measures the dimensions of “developing the inner self”; “unity with others”; “serving others” and “expressing full potential” and the dynamic tensions between these through items on “being versus doing” and “self versus others.” The scale also measures inspiration and its relationship to the existential need to be real and grounded. Exploratory and confirmatory factor analyses using multicultural samples from a broad range of occupations provide construct validity for the measure. Future research opportunities on the basis of our measure are outlined.

## Keywords

meaningful work, measurement, scale development, existential

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The purpose of this article is to systematically develop and validate a comprehensive measure of meaningful work (MFW). Over the past decade a number of management theories have recognized the importance of meaningful work. It has been found to influence salient work outcomes such as work engagement (May, Gilson, & Harter, 2004); job satisfaction (Sparks & Schenk, 2001); motivation (Hackman & Oldham, 1980) and stress reduction (Elangovan, Pinder, & McLean, 2010). In addition, MFW is a central concept in emerging theories on positive organizational scholarship (Pratt & Ashforth, 2003); corporate responsibility (Ellsworth, 2002); work engagement (May et al., 2004); career as calling (Steger, Pickering, Shin, & Dik, 2009) and workplace spirituality (Sheep, 2006). However, currently MFW is conceptualized in highly different ways with little consensus on how the concept should be determined, measured, and used (Martela, 2010).

In the next section, we identify several concerns with current measures of meaning. These (a) are not precise or comprehensive, (b) do not sufficiently separate individual subjective meaningfulness from organizational antecedents and outcomes and, (c) do not account for the ongoing dynamic of achieving a sense of wholeness or coherence, which is central to meaningful living. Next we summarise the two qualitative studies that form the foundation for our measure. We distinguish the concept of meaningful work from other, similar, concepts. We describe our quantitative studies, starting with our item development and pilot study, and subsequent factor analyses. We conclude with the discussion and suggestions for further research.

## **An Overview of the Relevant Meaningful Work Literature**

### *The Need for a Precise and Comprehensive Measure*

Available measurements of meaningful work are imprecise. They have non-specific items such as “my job activities are personally meaningful to me”; “the work that I do on this job is worthwhile” (May et al., 2004; Spreitzer, 1995); “when I am working, I feel as though I am merely existing rather than living” (Fairly & Flatt, 2004); “my job is very significant and important in the broader scheme of things” (Rafferty & Restubog, 2011) and “The work I do is connected to what I think is important in my life” (Arnold, Turner, Kelloway, & McKee, 2007). These measures have resulted in findings that indicate that MFW is a significant variable in understanding motivation and wellbeing at work. But they are not specific enough to understand *how* the individual and the organization can contribute to crafting (Wrzesniewski,

2003) or fostering (Pratt & Ashforth, 2003) various aspects of meaningfulness at work and as a result there is little information on this in the literature. In addition, “single sources of meaningful work have typically been examined in isolation from other sources” (Rosso, Dekas, & Wrzesniewski, 2010, p. 93) and measures are required that “are representative of the complex interplay of factors contributing to the meaning employees make of their work” (Rosso et al., 2010, p. 119).

### *Meaningful Work as an Individual, Subjective and Existential Concept That Is Distinct From but Influenced by Organizational Antecedents and Outcomes*

When something is meaningful, it helps to answer the question, “Why am I here?” (Pratt & Ashforth, 2003). Meaningfulness is defined as “the value of a work goal or purpose, judged to the individual’s own ideals or standards” (May et al., 2004, p. 11). Within career literature it is defined as “the sense made of, and significance felt regarding, the nature of one’s being and existence (Steger et al., 2006, p. 81). Meaningless work is often associated with existential burnout, apathy, and detachment from one’s work (May et al., 2004). Thus, when someone experiences his or her work as meaningful this is an individual subjective experience of the existential significance or purpose of work. The concept therefore finds its roots in the humanities rather than in management theory. It is based on clearly articulated ontological assumptions: “by nature, a person is involved in his or her being and in his or her becoming (to which alienation is an obstacle): a subject whose whole being is meaning and which has a need of meaning” (Aktouf, 1992, p. 415).

At the same time, there is a substantial management interest in the sources of MFW because “the restoration of meaning in work is seen as a method to foster an employee’s motivation and attachment to work” (May et al., 2004, p.13). Within management theory, a preoccupation with finding tools to measure connections between motivation and productivity has often led to a truncated understanding of the human being at work (Driscoll & Wiebe, 2007). It is therefore vital to gain a proper understanding of the meaning of meaningfulness itself. Until this is properly understood, its relationship to antecedents and outcomes potentially remains ineffectual. Currently, scales that measure MFW regularly blend items that measure meaningfulness itself with items that measure antecedents to MFW. For example, there is a substantial focus on establishing the relationship between MFW and various job-characteristics models

(May et al., 2004). However, the deeper existential layer of meaningfulness under job-enrichment, for example, may be the human need to grow and develop. Once this deeper existential need is identified, a variety of possible antecedents that address this human need may be identified, including career development, feedback, or mentoring and we can assess which one has the most impact on MFW. Similarly, there is a focus on whether selecting for particular personality attributes such as self-worth (Martela, 2010) contributes to MFW. Because current measurements are imprecise, we do not know if self-worth has an influence on all dimensions of MFW or, for example, on meaningful relationships but not on meaningful contribution to others. Similarly, from an existential perspective the individual is responsible for creating her or his own meaning, and hence correlations have consistently been found between self-determination and meaningful life (Ryan & Deci, 2000). However, while self-determination clearly has a relationship to MFW, it is, in itself, unlikely to answer the existential question of “why am I here?” The field requires a scale that takes the individual subjective experience as a starting point and that is simultaneously relevant to the work context. Until this is done, we cannot adequately measure antecedents to, and outcomes from, MFW.

### *The Dynamic Process of Seeking Wholeness Through Addressing the Dynamic Relationship Between Multiple Sources of Meaning*

Within the humanities it is argued that “having multiple sources of meaning in life protects the individual against meaninglessness” (Baumeister & Vohs, 2005, p. 611). Current conceptualisation usually focuses on one or two static dimensions of meaning such as high quality relationships or making a contribution. An exception is the literature review of Rosso et al. (2010; Rosso, Dekas, & Wresniewski, 2011) which has, in part, drawn on a previous version of our work (Lips-Wiersma & Morris, 2009) and addresses some need for balance between the dimensions of MFW.

Existential meaningfulness is achieved through experiencing a sense of wholeness or coherence. The discrete dimensions of MFW are to “fit well together in a complementary pattern of linkages (McGregor & Little, 1998, p. 496). “Life is thus found meaningful through integration of different aspects of it into a coherent whole” (Martela, 2010, p. 6). Such integration hints that meaningfulness, and particularly the search for wholeness, is likely to be a dynamic process where conscious choices need to be made to continue

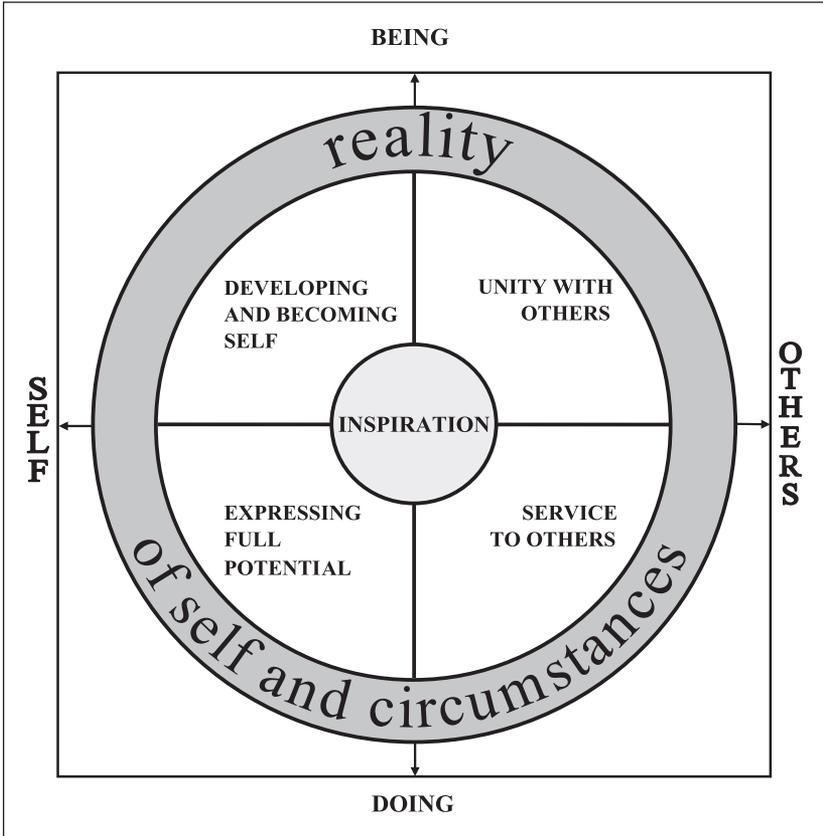
to integrate different aspects into a coherent whole. Thus, a comprehensive measure of MFW needs to be able to assess not only the full range of dimensions of meaningful work but also their relationship to each other.

## Qualitative Foundations of our Meaningful Work Scale

Our measure of meaningful work has been built on the basis of two qualitative research projects (Lips-Wiersma, 2002a, 2002b; Lips-Wiersma & Morris, 2009, 2011). The method for the first project was an in-depth, small sample, qualitative psychobiographical study; a method that is particularly effective in identifying stable meanings over time (Hermans, 1992; Kofodimos, 1993; McAdams & Ochberg, 1988). This was complemented by diary keeping to assess MFW on a day-to-day basis. The method for the second research project was action research in workshops in which a total of 214 participants took place. It focused on the manner in which research participants identified and actively took charge of meaning in their working lives. The design of the research was iterative with research participants influencing the questions, choice of words for labeling various meanings as well as theory building at each phase of the research. In the first research cycle (2002-2004), we started to understand the process of uncovering meaning as a natural and ongoing process. In the second cycle (2004-2006), we kept this initial focus *and* started to understand how the various sources of meaning related to each other and why making this relationship visible was important to creating MFW. In the final cycle (2006-2008), we maintained the first two foci *and* started to understand the relationship between meaningful and meaningless work and the importance of being able to articulate both alongside each other. We used "template analysis" to analyze our data. This process occupies a position between content analysis, where codes are all predetermined, and grounded theory, where there is no a priori definition of codes (King, 1998).

These methods are described in substantial detail elsewhere (Lips-Wiersma, 2002a, 2002b; Lips-Wiersma & Morris, 2009).

The figure below shows the content and process dimensions of MFW as they emerged from these two studies. The content dimensions of the figure refer to purposes that make up MFW itself, the process dimensions describe (a) the ongoing search for coherence through how the purposes relate to each other and (b) how these relate to inspiration and reality as further explained below. We illustrate how these dimensions emerged from the data, and how participants' words were used to develop subsequent items.



**Figure 1.** Framework of meaningful work

### *Four Dimensions of Meaningful Work*

There are four dimensions of meaningful work: These are *developing the inner self*, *unity with others*, *service to others*, and *expressing full potential*.

### *Seeking Balance Between “Being” and “Doing” As Well As “Self” and “Others”*

The framework depicts the tensions inherent to the search for meaning: Tensions between the need to meet the needs of the *self* and the need to meet

the needs of *others*; and the need for *being* (reflection) as well as the need for *doing* (action). These are inherent to MFW because we found not only that sustained lack of balance can cause meaninglessness in itself but also that one never gets this quite right and that the ongoing search helped participants to(re)articulate what is meaningful for them.

### *Inspiration and Reality*

These themes emerged from the data, but before we started our quantitative study, we felt we needed to better understand these conceptually. The idea of the human being as being made up of and caught between two dimensions can be found in most existential writings. On the one hand, there is a certain “facticity” to life. We are finite beings: natural organisms with inbuilt needs and drives, such as fear and survival, not so different from animals (Guignon, 1986). When we cannot face this within ourselves and within the human condition we live in denial of reality. On the other hand, we are free insofar as we are capable of reflecting on ourselves and responding in the light of an overarching purpose or vision of what our life is about (Guignon, 1986; Guignon & Pereboom, 1995). When we cannot regulate our responses in light of a higher goal, purpose, or ideal, we experience hopelessness or existential despair. Reality and inspiration are usually described in relation to each other in existential literature, for example, Simone Weil (1958), describes that we live “between gravity and grace.” In more secular existential terms authors refer to both the need for hope and the need to face our reality. In the data we found that too much reality, often heard in organizations in terms such as “let’s get real here” deflates ideas and possibilities, but that inspiration without reality is experienced as pretence or as inauthentic and alienates from self, each other and the organizational purpose.

Both inspiration and reality are inherent to the structure of being because without either we would not need to make conscious choices to accept responsibility for creating meaningful lives (Pauchant, 1995). They are therefore not prerequisites but grounded in the existential structure of man (Pruyser, 1963).

We considered several names for these dimensions. Reality was a term that research participants used, whereas for “inspiration” the words “hope” and “ideals” were also often used. We settled on “inspiration” because this word captured a secular as well as transcendent worldview which is currently largely overlooked in MFW (Sverko & Vizek-Vidovic, 1995) but is still significantly prevalent in society (Woodhead, Fletcher, Kawanami, & Smith, 2002).

## Distinguishing Meaningful Work From Existing Constructs

Over the past decades a plethora of measures have been developed that are concerned with understanding individual and subjective drivers at work. In this section we briefly describe how MFW is similar to, and different from, the concepts of “calling”; “intrinsic motivation”; “work engagement” and “work values.” Given the focus of our article we discuss the content of MFW, that is, what *is* meaningful, rather than the antecedents to MFW. We also discuss the concepts of “inauthenticity” and “burnout” which relate conceptually to the loss of meaning.

### Calling

Calling (Steger et al., 2009) is usually conceptualised in relation to *one overall purpose* of work, which is to serve some greater good, which then provides meaningfulness. Hence it does not focus on multiple meanings nor does it concentrate on the day to day experiences that make work meaningful or meaningless. It does not ask whether there are additional dimensions to MFW (e.g., caring relationships). This limits its explanatory potential.

### Intrinsic Motivation

Intrinsic Motivation is defined as the doing of an activity for its “inherent satisfactions rather than for some separable consequence” (Ryan & Deci, 2000, p. 55). Similarly to MFW intrinsic motivation is an individual, internal and subjective construct. Ambrose and Kulik (1999) provide a comprehensive overview of how it has been measured over time. Measured items are, for example, competence (as sense of mastery), satisfaction, task involvement (flow, absorption), interests, enjoyment or fun. These measures are quite distinct from what gives meaning to life, that is, what one would look back on as having been of significance. A second strand of intrinsic motivation theory distinguishes between autonomous and controlled motivation and includes measures such as self-determination. It is likely that these are antecedents and even outcomes of MFW but they do not determine the existential significance of MFW, in the sense that the purpose of life might not be to be “empowered.”

### Work Engagement

Work engagement is considered to be the antipode of burnout (Schaufeli, Bakker, & Salanova, 2006, p. 702). Engagement is defined as “a positive, fulfilling work-related state of mind that is characterized by vigour,

dedication, and absorption” (Schaufeli et al., 2006, p. 702). Some scale items overlap with the existential nature of MFW as work engagement is also suggested to “fulfil the human spirit” (May et al., 2004, p. 12). Work engagement is distinct from MFW in that it describes a state of mind rather than existential significance. For example, it could be conceivable that one can be quite dedicated to an activity that in fact diminishes existential significance, such as excessive bureaucracy (Sarros, Tanewski, Winter, Santora, & Densten, 2002). Similarly to MFW, engagement is a positive construct in that it looks at what causes “occupational well-being” (Seppala, 2009, p. 460).

### *Work Values*

Whereas instrumental values fall outside the purview of MFW, terminal values conceptually overlap with MFW in that they transcend specific situations and refer to desirable end states or goals (Schwartz & Bilsky, 1987). Certain terminal values such as achievement and a concern for the welfare of others have also been identified as dimensions of MFW. However, values are ideal end-states and hence more static, whereas meaningfulness is a constant process of searching for, articulating, balancing, struggling with, and taking responsibility for the human need for meaning. It is suggested that it is not the sum of various dimensions of meaning but rather the relationship between these needs that leads to individuals experiencing a sense of coherence and fulfilment (Korotkov, 1998; Wong, 1998). Some therefore argue that MFW is more fundamental than values (Chalofsky, 2010) as it holds clear assumptions about the nature of being human.

Thus, conceptual distinctions between values and meaningfulness exist but are also rather vague. We would therefore expect some variance between our measure and values measures but would at the same time expect to understand this variance better once we have a distinctly existential and multidimensional measure of MFW.

### *Burnout and Inauthenticity*

Both the concepts of burnout and inauthenticity relate to MFW but do so in different ways. The concept of burnout relates to MFW, in that individuals experiencing burnout often see no point in their work. Burnout is caused by long periods of stress leading to exhaustion, which in turn leads to indifference. Inauthenticity also leads to loss of meaning. Existentialists make a distinction between “authentic, complex life” and “shallow and pretence modes of existence” (Schnell, 2010, p. 2). In other words the person—his or

her actions and perceptions of self—have to be grounded in reality for life (and work) to be meaningful.

## **Development of the Meaningful Work Scale Items**

### *Generation of the Item Pool*

We used participant stories to generate the items. The raw data from these stories about MFW have been published previously (Lips-Wiersma, 2002a, 2002b; Lips-Wiersma & Morris, 2009). Verbatim quotes were analysed using thematic analysis and items were derived from within those themes.

All 91 items were written based on the analysis from our previous qualitative work, and in accordance with scale development principles (De Villis, 2003). The items sought to identify the common themes that characterised the experience of MFW for a broad spectrum of employees. Previously developed scales and subscales relating to MFW were reviewed to gain an appreciation of existing measures on the concept, for example, the Work Preference Inventory (Amabile, Hill, Hennessy, & Tighe, 1994), Neoclassical Calling Scale (Bunderson & Thompson, 2009), Meaning in Life Index (Francis & Hills, 2008), Motivation at Work Scale (Gagne et al., 2010), Curiosity and Exploration Inventory (Kashdan & McKnight, 2009), Meaningful Life Measure (Morgan & Farsides, 2009). We reviewed these existing scales to compare the extent to which our newly created measure contributed to the body of knowledge and was distinct from other related scales.

The language used for items in existing scales was often abstract, for example “the work that I do feels like my niche in life.” To measure meaningfulness it is important to arrive at items that resonate with the existential *being* of research participants as they feel and live it. In our qualitative research we were struck by the depth of participant’s articulateness and their positive response to being given this opportunity. Language here is clearly not just a description but also a power to be seized (Foucault, 1967). It was therefore important to write our items in human rather than psychological or management language.

Once we had written the items, we collected qualitative feedback from subject matter experts (SMEs). All 91 items were reviewed by six individuals who had extensive knowledge in MFW research or scale development in organizational psychology. SMEs were asked to provide feedback on the clarity, comprehensiveness, relevance, and readability of the items. From this review, 20 items were identified as causing confusion or being too similar, so

these items were removed. SME feedback was also used to revise items and clarify ambiguous wording, for example, “In my work I am inspired” was changed to “I feel inspired at work.”

## Pilot Study

The purpose of the pilot study was twofold; firstly to explore which items of the 71 were most *important* to employees, and secondly to determine initial factor structure and reliability based on the *frequency* the employee experienced the item in the workplace. The reason we tested importance was to verify the validity of our qualitative analysis. For example, our qualitative analyses revealed that having a sense of belonging at work contributed to MFW. We tested whether the item, and the way we had worded it, was an important factor for the majority of participants of a broader sample.

## Method

**Procedure and Sample.** Data were collected online through a secure website. Each item had two response scales, one for importance and one for frequency, each on a 1 to 5 Likert-type scale. Respondents were given detailed instructions on how to complete the survey. For the dual response format, they were given an example item and instructed that they had to respond separately for both *importance* and *frequency*.

An email invitation was sent to employees of New Zealand-based organizations, who in some capacity had a relationship with the authors. They were asked to forward the email invitation to their colleagues to generate a larger sample. A total of 167 employees from a variety of occupational backgrounds participated (Blue-collar/unskilled, 16%; Managerial/Administrative 15%; Semiprofessional 32%; Professional 35%; Not supplied 2%). A response rate cannot be determined as the total potential population is not known. The individuals participating in the study were mostly female (71.5%), of European descent (75%) and were between the ages of 23 and 70 ( $M = 45.2$  years). 85% of participants had some form of post-high school education, and 75% worked full-time.

**Analyses.** Means were generated for the *Importance* responses. The items considered most important in the workplace (means over 4.0 on the 1-5 Likert-type scale) were retained for further analysis. This is because, on average, any rating above 4.0 indicated that the item was “important” or “very important” to participants. The result was 40 items relating to our construct of MFW. The second step of the pilot study was to conduct an exploratory factor

analysis (EFA) on the surviving items. These items were then used to determine initial factor structure and reliability, based on how *frequently* the employee experienced the item. We studied the distribution, variability, and location parameters of the frequency responses. None presented severe skewness to suggest that Pearson correlations might be attenuated.

The responses to the 40 items were factor analyzed with a principal axis factoring method applying oblique rotation to allow the factors to correlate. The Scree test and communalities were assessed to partly determine the appropriate number of factors to include, the process of which is detailed in Costello and Osborne (2005, p. 3). The eigenvalue rule (greater than 1) can often lead to overfactoring (see Bandalos & Boehm, 2009), so we manually assessed the number of factors in conjunction with what made conceptual sense. This resulted in an interpretable solution. To achieve a “clean” factor structure only items loading above .4 or higher on the intended factor and less than .3 on any other factor were retained (Costello & Osborne, 2005; DeVellis, 2003).

**Results.** The EFA resulted in 6 factors composed of 28 items. Together they explained 70.6% of the variance. The first factor had six items all of which related to the “Unity with Others” aspect of the model (belonging, sharing values, working supportively together). The second factor had four items and related to “Serving Others” (making a difference, serving the needs of humanity). The third factor consisted of six items representing “Expressing Full Potential” (creativity, achievement). The fourth factor had four items that were in some ways related to “Expressing Full Potential” but were largely related to the extent the individual had influence in the organization. It was interesting to us that these clustered separately from “Expressing Full Potential” and in going back to the original qualitative data we think the explanation is that influence and empowerment is likely to be a prerequisite to meaningfulness, but, does not provide meaning in itself. The fifth factor consisted of four items and represented the “Reality” sphere of the model. The final factor was a hybrid of four items relating to the tensions within the model of “Being” versus “Doing” and “Self” versus “Other.” The items we wrote relating to “Inspiration” did not create a factor. All factor correlations were  $< .4$ , except factors 1 and 6 which correlated .49.

Our exploratory quantitative results were generally consistent with the qualitative development of the model. However, it was quite striking and also somewhat counterintuitive that “Developing the Inner Self” did not cluster separately from “Expressing Full Potential.” At this point we had the choice to either adjust the framework or revisit the way in which we had written the items. We rewrote the items so that the outer and active “expressing full potential” and inner reflective development became more clearly distinguished. We found that

while inner development was easy to articulate for participants in the context of their own work stories (e.g., “I learned to stand up for myself”) it was less easy for them to respond to in our scale. When we retested our scale we noticed that the strongly loaded items in “Developing the Inner Self” factor were negatively worded items. Participants could indicate when they did not like who they became as a result of work, for example when they were becoming less patient or honest or more authoritative. In a quadrant that is the most subtle, the negative items therefore resonated more strongly with our respondents than the positive items we had initially developed (e.g., “I am in integrity at work”).

Further item development and refinements were also necessary to include the transcendent aspects of “Inspiration” because this theme too was subtle. Here too, going back and forward between the qualitative data and our items we generated new items and rewrote existing items so that each item had better fidelity and clearer representation of each area of the model.

## **Study I: Item Development and Exploratory Factor Analysis**

As described above, we developed new items by revisiting our original data as well as the conceptual definitions described earlier and having further discussions with the SMEs on each factor and each item. From these sessions, items were rewritten and the scale was augmented with four new items, creating a 32-item scale.

### *Method*

**Procedure and Sample.** To generate a larger sample from a variety of organizations and from a diverse set of respondents, students were asked to recruit full-time employees to participate in the research. Respondents were asked to indicate on the survey the student identification number of the student who recruited them. For each useable survey returned students were given a \$5 monetary payment per complete survey. Students could return a maximum of 10 surveys. 500 surveys were distributed to students. Respondents provided their email address so that we could verify that they actually completed the survey. The respondents consisted of 405 workers (Blue-collar/unskilled 12%; Managerial/Administrative 15%; Semiprofessional 32%; Professional 40%; Not supplied 1%). This represented an 81% response rate. Despite active recruitment of blue-collar workers the percentage of our total sample was lower than desired. We actively recruited for a more even male/female distribution and a more multicultural sample and achieved a much better balance

than in our pilot study. Participants were 57% female, ranging in age from 20 to 67 years ( $M = 37.8$  years). Caucasians made up 50% of the sample, Asians 31%, Pacific Peoples 3%, and 16% were coded as other. 54% of participants had a post-high school education and 80% were permanent employees. The majority of participants worked in the private sector (74%).

**Analyses.** Because of the addition of new items, EFA was used to establish the factor structure and to determine which items performed well enough to be retained and those which needed to be removed. We again studied the data for skew and kurtosis issues (none were noted) and applied the same criteria for determining the number of factors and retaining items used in the Pilot Study.

## Results

**Descriptive Statistics.** The average score on the 32-item meaningful work scale for the sample was 115.86 ( $SD = 18.48$ ) with a range of 56 to 159 (from a possible range of 32-160). Higher scores indicated higher levels of meaning in the individual's work. There were no mean score differences for ethnicity, education level, type of organization, or employment status. There were slight mean differences for gender ( $t(404) = 2.03, p = .046$ ), with women having higher scores ( $M = 117.47$ ) than men ( $M = 113.71$ ). There was a nonsignificant correlation with age ( $r = .097, p = ns$ ).

**Exploratory Factor Analysis.** The EFA resulted in seven factors composed of 30 items. Two items were dropped due to poor factor loadings. Together they explained 68% of the variance. The factors were (a) "Unity with Others" with six items, (b) "Serving Others" with four items, (c) "Expressing Full Potential" with four items, (d) "Developing the inner Self" with four items, (e) "Reality" with four items, (f) "Inspiration" with four items, and (g) "Balancing Tensions" (Doing/Being, Self/Other) with four items. These items were then analysed for their relationships with other related constructs. All factor correlations were  $< .4$ , except factors 1 and 4 which correlated .46.

**Convergent and Divergent Validity.** This aspect of study was designed to validate our scale, by examining convergent and divergent validity. As indicated previously, although MFW shares characteristics with other constructs, namely, calling, intrinsic motivation, work engagement, and work values, our measure of MFW is a construct that is conceptually and empirically distinct from these concepts. We examined how MFW was empirically distinct from related constructs, and showed convergence with existing constructs measuring meaning at work.

**Hypotheses.** Based on our previous discussion, the following was hypothesized:

1. Scores on the meaningful work scale will be negatively correlated with burnout, depressive symptoms, work as inhibiting self, and extrinsic motivation.
2. Scores on the meaningful work scale will be positively related to meaning in life, work engagement, intrinsic rewards (as a value), intrinsic motivation, calling, and existing measures of meaning in work. However, as the scale was not intended to replicate these constructs it was expected that they would not correlate too highly.
3. The correlation between meaningful work and meaning in life (a nonwork variable) would be lower than with the correlation with work-related variables.

### Measures

*Meaning in Life Questionnaire* (Steger, Frazier, & Oishi, 2006). This 10-item scale measured meaning not specifically related to work. An example item is "I am looking for something that makes my life feel meaningful." The Cronbach  $\alpha$  for this scale was .734.

*Existential Meaning of Work Scale* (Fairlie & Flett, 2004). This scale consisted of 27 items relating to work as inhibiting selfhood (e.g., "As a working person, I feel that my life 'belongs' to someone else") and work as enabling selfhood (e.g., "Life is most worth living when I am absorbed in work"). The Cronbach  $\alpha$  for this scale was .803.

*Work Values Scale* (Bu & McKeen, 2001). We used the extrinsic rewards (e.g., high income), and intrinsic rewards (e.g., task variety) subscales of this measure. The Cronbach  $\alpha$  for extrinsic rewards was .812 and intrinsic rewards .793.

*Work Preference Inventory* (Amabile et al., 1994). This 30-item scale measured both intrinsic and extrinsic motivation at work. An example of an intrinsic motivation item is "I enjoy tackling problems that are completely new to me," and extrinsic motivation "I am keenly aware of the promotion goals I have for myself." The Cronbach  $\alpha$  for the two subscales were .734 (Intrinsic) and .721 (Extrinsic).

*Work Engagement Scale* (Schaufeli et al., 2006). We used the shortened version of this measure, comprising nine items. An example item is "I am immersed in my work." The Cronbach  $\alpha$  for this scale was .916.

*Neoclassical Calling Scale* (Bunderson & Thompson, 2009). We used the 6-item context-free version of this scale to measuring the individual's

perception of calling in their work. An example item is “The work I do feels like my calling in life.” The Cronbach  $\alpha$  for this scale was .918.

*Copenhagen Psychosocial Questionnaire* (Pejtersen, Kristensen, Borg, & Bjorner, 2010). We used three subscales to measure meaning of work (3 items, e.g., “Is your work meaningful?”), burnout (4 items, “How often have you felt worn out?”), and depressive symptoms (4 items, e.g., “How often have you felt sad?”). The Cronbach  $\alpha$  for each subscale were .897 (meaning at work), .908 (burnout), and .826 (depressive symptoms).

## Results

We correlated the above measures with the sum scores on the meaningful work scale. As expected, scores on the meaningful work scale were negatively related to burnout ( $r = -.24, p < .001$ ), depressive symptoms ( $r = -.39, p < .001$ ), and work as inhibiting self (from the existential meaning of work scale;  $r = -.37, p < .001$ ). Interestingly, there was no significant correlation with extrinsic motivation ( $r = .04, p = ns$ ). Scores on the scale were positively related to meaning in life ( $r = .19, p < .001$ ), work engagement ( $r = .71, p < .001$ ), intrinsic rewards (as a value;  $r = .34, p < .001$ ), intrinsic motivation ( $r = .34, p < .001$ ), calling ( $r = .56, p < .001$ ), work as enabling self (from the existential meaning of work scale;  $r = .17, p < .001$ ), and the Copenhagen Psychosocial subscale on meaning in work ( $r = .69, p < .001$ ). Overall, hypotheses 1, 2, and 3 were supported by the data providing evidence of divergent and convergent validity for our measure.

## Study 2: Confirmatory Factor Analysis

### Hypothesis

It was hypothesised that the results from this second study would confirm the multidimensional nature of the MFW construct identified in the first study.

### Method

**Procedure and Sample.** An email database of New Zealand employees from various organizations was used to recruit employee participants. This database had been established in previous research studies. Participants were only required to complete the 30-item Meaningful Work Questionnaire and demographic questions. The respondents consisted of 275 employees (Blue-collar/unskilled 12%; Managerial/Administrative 17%; Semiprofessional

38%, Professional 27%; Not supplied 6%). 56% were female, ranging in age from 25 to 60 years ( $M = 37.9$  years). This represented a favorable response rate of 74.9% and well over the average response rate of published organization studies, which is 52.7% (Baruch & Holtom, 2008) and a Subject to Variables Ratio that falls well within the acceptable margin (Arrindell & Van den Ende, 1985; Gorsuch, 1983). Caucasians made up 57% of the sample, Asians 22%, Pacific Peoples 3%, and 18% were coded as other. 75% of participants had a post-high school education and 94% were permanent employees. The majority of participants worked in the private sector (71%).

## Analyses

We used Structural Equation Modeling to assess each item of the scale. A seven factor model was tested using the structure found in the previous exploratory analyses. The seven factors (first order factors) were connected to a second order factor, named “Meaningful Work.”

According to the recommendations of Hu & Bentler (1999) alternative confirmatory factor analyses (CFA) models were evaluated against a number of fit criteria or indices. They included the Comparative fit index (CFI), Root mean square error of approximation (RMSEA), and Chi-Square ( $\chi^2$ ).

**Results.** The results from the exploratory factor analysis indicated that seven factors best comprised the factor structure of the meaningful work scale. From the outset, the seven-factor model (with seven first order factors—identified above—and one second order factor to all first order factors) fitted the data better than a single-factor model, where all the items loaded onto one first order factor. We then established which items had acceptable standardized factor loadings greater than .46 (Comrey & Lee, 1992). Two items were deleted due to poor factor loading (one from “Developing the inner Self” and one from “Reality”). We inspected the modification indices to ensure that an item was not more strongly associated with any factor other than the one for which it was intended. Our inspection of the modification indices suggested no such evidence.

The final seven-factor model provided an acceptable fit with the data ( $\chi^2 = 1148.38$ ,  $df = 370$ ; CFI = .972; RMSEA = .059; RMSEA 90% Confidence Interval (CI) = .054-.064). The single factor model did not provide a good fit with the data ( $\chi^2 = 3043.33$ ,  $df = 405$ ; CFI = .626, RMSEA = .127; RMSEA 90% CI = .123-.131). Change in chi-square ( $\Delta\chi^2 = 1894.95$  ( $\Delta df = 35$ )) was significant at the  $p < .001$  level, favouring the lower value from the seven-factor model. RMSEA confidence interval ranges did not overlap. Thus, there is evidence to suggest the data fits a seven-factor structure over a single-factor

structure. This supports our hypothesis that MFW is a multidimensional construct. The final 28 items representing each of the seven dimensions of meaningful work and how they were measured appear in Table 1. The standardised factor loadings are presented in Table 4, along with the standardized factor loadings over 0.3. The final scale correlations ranged from .285 to .470, as presented in Table 5.

### *Internal Consistency*

The internal consistency of each of the seven dimensions was estimated using coefficient alpha. The reliabilities exceeded the conventional level of acceptance of .70: Unity with Others = .90; Serving Others = .83; Expressing Full Potential = .83; Developing the inner Self = .72; Reality = .79; Inspiration = .89; and Balancing Tensions = .85. The alpha for the total scale was .92.

### *Test-Retest Reliability*

We invited the participants to complete the scale two months after the responses were initially collected for study 2 ( $n = 173$ , response rate 63%). We found a correlation of .80 ( $p < .01$ ) suggesting stability of the scale over time.

## **Discussion**

In this research, we developed and validated a comprehensive scale measuring meaningful work. We generated 91 items to measure meaningful work, and through EFA and CFA methods over several studies, narrowed the measure down to a 28-item scale. The final scale includes items from each dimension of meaning as well as “reality,” “inspiration,” and the self/other-doing/being dynamic of MFW.

While it has previously been identified that meaningful work is likely to be a multidimensional construct (Pratt & Ashforth, 2003; Rosso et al, 2010, 2011), extant scales have not provided the assortment of distinct dimensions that this scale provides. These dimensions are “unity with others,” “developing the inner self,” “serving others,” and “expressing full potential.” These answer the question of “why am I here” and hence are both specific enough to further understand the relationship to antecedents and outcomes and existential enough to distinguish meaningful work from other concepts such as job engagement or self-determination. The content dimensions themselves are not new. The search for meaning is as old as humankind itself, and hence it would be disturbing if we found totally “new” dimensions. However, these

**Table 1.** Descriptions and Data on Dimensions of Meaningful Work*Developing the inner self**Description*

Depending on one's worldview *developing the inner self* can be based on simply wanting to be a good person, or the best we can be. For some it can mean getting the self out of the way, but participants also refer to being true to oneself, developing qualities such as patience or detachment, or becoming one's higher self.

*Example*

Item No. 15 measuring this dimension was developed in the context of the broader work narrative and the words of the research participants were used to develop the item:

"I find myself becoming more intolerant and too often I have to decide on the least bad thing rather than the good thing. *I don't like who I am becoming at work.*"

*Unity with others**Description*

This dimension refers to the meaningfulness of working together with other human beings. Participants also refer to a sense of shared values and a sense of belonging. Unity does not mean uniformity. It requires a balancing with other elements of the model to achieve unity in diversity.

*Example*

Item No. 2:

"In my previous work I could only speak the language of business with my colleagues, which felt alienating to me. Here we *openly talk about our values when we make a decision.* This gives me a much stronger sense of connection with my co-workers."

*Expressing full potential**Description*

This dimension refers to the meaningfulness expressing talents, creativity and having a sense of achievement. It is different from *developing the inner self* in that it is active and outward directed, whereas the former is inward and reflective.

*Example*

Item No. 11:

"I am given many opportunities to use my skills and enjoy the fact that I can constantly *create and apply new ideas or concepts.*"

*Service to others**Description*

Serving others refers to the meaningfulness of making a contribution to the well-being of others (and the world we live in), from helping an individual to making a difference in the wider world.

*Example*

Item No. 7:

"I often look back on a day of work with great satisfaction. *I feel I truly helped our customers.*"

**Table 2.** Descriptions and Data on Balancing 4 Dimensions*Ongoing tensions between “Being” and “Doing”**Description*

“Being” refers to the meaning of examining one’s work (as in Socrates’ “the unexamined life is not worth living”). Research participants would refer to such things as “silence,” “patience,” “taking our time,” “thoughtful togetherness.” Doing is focused out into the world. It is heard in phrases such as; “I just can’t wait to get my hands onto that clay,” or “all these meetings. . . . words are smords, I want to be out there, contributing.” Research participants often described a dynamic tension between these, which in turn caused them to refocus on questions about meaning.

*Examples*

“I achieved a lot and am glad that I did it but had many stressful times and felt my work was becoming totally unbalanced and meaningless as a result.”

“Not that I want to sit and mediate all day: I don’t. I know that about myself. I need to do it every day if possible, but I’m also a very outgoing person and I need to find an expression in doing, in sharing and relating to others.”

*Ongoing tensions between “Self” and “Others”**Description*

The tension between *self* and *other* refers to the ongoing challenge of meeting the needs of the self, while also meeting the needs of others.

*Examples*

“I’d like to contribute to the wider community, but I have a hard enough time just looking after myself.”

“I spent all of this time helping others, I no longer knew who I was or what I wanted. It all became rather meaningless really.”

**Table 3.** Data on Inspiration and Reality*Examples:*

“We all acted as if we were somehow engaged and knew what we were doing, of course we all knew that we were also flawed and so little seemed real.”

“There is nothing wrong with all of this mission and vision and values stuff itself. However if we are not allowed to articulate where we do not and cannot live up to this, it feels as if we mock something that is really quite profound.”

“On the one hand we had these wonderful leadership programs in which we were encouraged to live by our principles. On the other hand, if there was a price increase, no-one would ask how this would affect our poorest customers.”

“We all had to pretend that we were happy and in control and that it was a privilege to work here, whereas we were often intolerant and did not always know what to do next”

“We wanted to aim higher, to better live up to our vision, but we could not get past the ‘let’s get real here’ or ‘in reality’ which made every form of hope or idealism sound ineffective or unprofessional!”

**Table 4.** Items and Standardised Factor Loadings for the Meaningful Work Scale

| Item <sup>a</sup>   | Unity with others | Serving others | Expressing full potential | Developing and becoming self | Reality | Inspiration | Balancing tensions (self/ other, being/doing) |
|---|-------------------|----------------|---------------------------|------------------------------|---------|-------------|---|
| I have a sense of belonging   | .736              | .100           | .256                      | .039                         | .286    | .249        | .099  |
| I can talk openly about my values when we are making decisions                              | .773              | .213           | .287                      | .047                         | .161    | .087        | .157  |
| We talk about what matters to us  | .842              | .079           | .113                      | .221                         | .078    | .111        | .235  |
| We support each other   | .768              | .035           | .132                      | .065                         | .161    | .262        | .268  |
| We reassure each other  | .779              | .102           | .224                      | .136                         | .091    | .006        | .009  |
| We enjoy working together   | .713              | .071           | .256                      | .130                         | .133    | .222        | .154  |
| I feel I truly help our customers/clients   | .071              | .824           | .094                      | .228                         | .006    | .056        | .048  |
| We contribute to products and services that enhance human well-being and/or the environment | .166              | .553           | .104                      | .157                         | .092    | .094        | .092  |
| What we do is worthwhile  | .254              | .719           | .194                      | .165                         | .142    | .096        | .057  |
| We spend a lot of time on things that are truly important                                   | .079              | .838           | .113                      | .221                         | .078    | .111        | .090  |
| I create and apply new ideas or concepts  | .198              | .194           | .625                      | .102                         | .205    | .296        | .185  |
| I make a difference that matters to others  | .211              | .046           | .637                      | .195                         | .091    | .229        | .177  |

(continued)

Table 4. (continued)

| Item <sup>a</sup>   | Unity with others | Serving others | Expressing full potential | Developing and becoming self | Reality | Inspiration | Balancing tensions (self/ other; being/doing) |
|---|-------------------|----------------|---------------------------|------------------------------|---------|-------------|---|
| I experience a sense of achievement                                       | .083              | .015           | .807                      | .202                         | .024    | .193        | .213  |
| I am excited by the available opportunities for me                        | .276              | .043           | .739                      | .149                         | .195    | .174        | .178  |
| At work my sense of what is right and wrong gets blurred (reverse scored) | .237              | .191           | .088                      | .618                         | .137    | .064        | .087  |
| I don't like who I am becoming at work (reverse scored)                   | .079              | .094           | .043                      | .829                         | .149    | .195        | .186  |
| At work I feel divorced from myself (reverse scored)                      | .102              | .231           | .107                      | .806                         | .112    | .088        | .044  |
| At work we face up to reality   | .138              | .098           | .057                      | .153                         | .755    | .127        | .110  |
| We are tolerant of being human  | .263              | .291           | .093                      | .087                         | .673    | .006        | .057  |
| We recognise that life is messy and that is OK                            | .097              | .183           | .101                      | .104                         | .798    | .124        | .069  |
| I feel inspired at work   | .133              | .169           | .068                      | .023                         | .057    | .855        | .164  |
| The work we are doing makes me feel hopeful about the future              | .282              | .062           | .097                      | .185                         | .119    | .882        | .096  |
| The vision we collectively work towards inspires me                       | .001              | .064           | .027                      | .044                         | .040    | .869        | .112  |

(continued)

**Table 4. (continued)**

| Item <sup>a</sup>   | Unity with others | Serving others | Expressing full potential | Developing and becoming self | Reality | Inspiration | Balancing tensions (self/ other, being/doing) |
|---|-------------------|----------------|---------------------------|------------------------------|---------|-------------|---|
| I experience a sense of spiritual connection with my work   | .043              | .149           | .195                      | .174                         | .152    | .704        | .088  |
| In this work I have the time and space to think   | .140              | .171           | .054                      | .152                         | .196    | .151        | .731  |
| We have a good balance between focussing on getting things done and noticing how people are feeling | .102              | .224           | .136                      | .091                         | .006    | .205        | .786  |
| I create enough space for me  | .142              | .082           | .119                      | .055                         | .030    | .131        | .836  |
| I have a good balance between the needs of others and my own needs                                  | .120              | .012           | .127                      | .031                         | .085    | .025        | .733  |

<sup>a</sup>Instructions for the scale: For each of the items please indicate the frequency at which the item occurs in your work. Please respond to the items with reference to your current workplace only. How frequently do you experience the following at work?

**Table 5.** Factor Correlations

|                                 | Unity with<br>others | Serving<br>others | Expressing<br>full potential | Developing and<br>becoming self | Reality | Inspiration | Balancing tensions<br>(self/other, being/<br>doing) |
|---------------------------------|----------------------|-------------------|------------------------------|---------------------------------|---------|-------------|---|
| Unity with others               |                      | .357              | .457                         | .408                            | .397    | .359        | .376  |
| Serving others                  |                      |                   | .360                         | .389                            | .298    | .300        | .334  |
| Expressing full<br>potential    |                      |                   |                              | .302                            | .397    | .470        | .333  |
| Developing and<br>becoming self |                      |                   |                              |                                 | .420    | .300        | .285  |
| Reality                         |                      |                   |                              |                                 |         | .452        | .383  |
| Inspiration                     |                      |                   |                              |                                 |         |             | .375  |

deeper meanings have not been brought together in this way and have not been developed so specifically to capture the richness of meanings that people naturally attribute to their work (Wong, 1998).

While it has long been posited that the search for coherence is central to the process of finding meaningfulness (Wong, 1998) and meaningful work (Baumeister & Vohs, 2005; Martela, 2010) the relationship between the various dimensions of work have not been developed in previous measures. MFW is not a point of arrival but an ongoing search for meaning and therefore it is important to measure the dimensions of meaningful work in relation to each other (Martela, 2010). Again, the process dimensions of MFW are not new, for example it has long been understood that reflection “honours our own inner humanness” (Johns, 2009, p. ix). Similarly balance between the needs of “self” and “others” has been identified by Bakan’s (1966) in his agency and communion concepts. The point here is that sustained lack of balance can cause loss of MFW and that experiencing multiple dimensions, over time, contributes to MFW.

Finally, our results identify a dynamic process to which MFW literature has paid little attention but that are addressed in the existential literature (Guignon & Pereboom, 1995; Schnell, 2010). Individuals identified both “inspiration” and “reality” as well as the dynamic relationship between them to be an aspect of the search for meaning. It is well documented in management literature that human beings need vision, hope, and inspiration (O’Connell, Hickerson, Pillutla, 2011). At the same time an increasing body of management literature challenges what has been referred to as the mutual idealisation of the ego ideal and argues that more emphasis needs to be placed on understanding human reality for what it currently is (Schwartz, 1995).

Only by incorporating all seven elements of the Meaningful Work Framework can the complex construct of meaningful work be adequately and more comprehensively understood. An additional somewhat unexpected but potentially interesting finding is that we found no significant correlation of

MFW with extrinsic motivation ( $r = .04, p = ns$ ). This requires further exploration, but could be consistent with the basic tenets in Herzberg's Motivation-Hygiene theory. That is, the variables that contribute to meaningfulness—which answer “why questions”—are on a different continuum from the variables that contribute to meaninglessness, such as excess in bureaucracy or disempowerment—which answer “how questions.” Future study will have to address this interesting finding.

## Strengths and Limitations

The overall strength of this article is that the scale is grounded in a qualitative understanding of MFW. This allowed us to faithfully capture the attributes of meaning (Michell, 2011) to overcome conceptual shortcomings of previous measurement development (Martela, 2010; Rosso et al., 2010; Wong, 1998), and to avoid the usual traps of scale development as identified by Hinkin (1995) such as “placing too great an emphasis on statistical analysis while overlooking the accuracy of the instrument” (p. 982) and arriving at “fragmented and incomplete scales” (p. 982). Student samples were avoided for all of the studies, placing responses clearly in the work context.

Participant involvement ensured that the interpretations of the data surpass the limited worldview of the researcher. As lay persons, they contributed a wide and complex range (Wong, 1998) of clear but also subtle meanings and identified dimensions but also processes of MFW in search of wholeness and coherence (Wong, 1998).

Item wording provided by research participants meant MFW is worded so that it is recognised by a wide range of people. Where findings of quantitative research were unexpected, we could go back to the qualitative research to identify words, ways of phrasing things (such as using negatively worded items on “the inner self”) and identify new items (such as those on inspiration) that captured important, but hard to discern, meanings.

This study has limitations. The sample used in the initial study was mostly female although in later studies this was more evenly balanced. The sample was mostly well educated. In future studies, it would be interesting to determine occupational differences with a more substantive blue-collar sample and to see whether women have a greater need for MFW or some of its dimensions, e.g., good social relationships (Konrad, Corrigan, Lieb, & Ritchie, 2000).

Common method bias from using self-report data is a potential limitation of this research. Practically, there seems no other plausible or effective way to measure MFW other than gauging the perceptions of the individual. Procedural remedies to counter common method variance associated with cross-sectional designs, such as temporal separation of the measures, ensuring respondent

anonymity, and carefully designed scale items have been used in this research. Statistically, the effects of measurement error were controlled for. In general, if research measures have been carefully designed they should be resistant to common method variance (Donaldson & Grant-Vallone, 2002).

While the model appears to fit the data substantially better than the single factor model, future deductive multileveled statistical analysis can improve the fit further.

## Future Research

The scale promotes an understanding of the relative impact of the various dimensions inherent to MFW. For example, it is now possible to understand why a nursing career was initially chosen because it was a meaningful opportunity to serve, a career change can subsequently occur through loss of meaning if the employee is not able to express their full potential or does not experience unity with others. Or how a greater emphasis on Corporate Responsibility creates the opportunity to better serve others but, if this initiative spawns numerous mini bureaucracies, it may limit the opportunity to “express full potential.” MFW may also get lost when one dimension, for example the meaning of “expressing full potential,” could be overdeveloped at the expense of others (e.g., individuals getting so caught up in their own career progress that they no longer develop supportive relationships). We can therefore better understand *the whole as well as the influence of each of the different dimensions* on meaningful and meaningless work.

The scale aids in understanding the causal relationships between MFW itself, its antecedents and outcomes. Thus the relative impact of various constructs such as self-determination, participation, self-worth, leadership, job-enrichment, organizational culture, and corporate responsibility on MFW can be more precisely understood. It is now possible to understand how specific dimensions of MFW, as well as their combination, are related to work outcomes such as innovation and productivity and we can measure the impact of the organisational system on MFW. For example, the impact of the relentless speed at which contemporary organizing takes place on the various dimensions of MFW.

The scale enables an understanding of both inspiration (from inspirational vision, leadership, or individual sources) and reality (in both the person and the organization needing to be grounded in reality) on the extent to which individuals experience MFW. Too much “but in reality” and “the reality is” can stifle inspiration. New visions can and should create a buzz of excitement “but reality always intrudes” (Ready & Conger, 2008) and with our scale the effect of these phenomena on MFW can be better understood.

In summary, our instrument will aid a more specific understanding of how individual and organizational factors interact in crafting (Wrzesniewski, 2003) and fostering (Pratt & Ashforth, 2003) meaningful work.

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