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ORIGINAL PAPER

The Effect of Fairness, Responsible Leadership and Worthy Work on Multiple Dimensions of Meaningful Work

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Abstract
The present study extends the meaningful work and ethics literature by comparing three ethics-related antecedents. The second contribution of this paper is that in using a multi-dimensional MFW construct we offer a more fine-tuned understanding of the impact of ethical antecedents on different dimensions of MFW, such as expressing full potential and integrity with self. Using an international data set from 879 employees and structural equation modelling, we confirmed an updated seven-dimension Comprehensive Meaningful Work Scale (CMWS). The structural model found that fairness, responsible leadership and worthy work are all significant and positively related to the majority of meaningfulness dimensions. However, different antecedents are related to different dimensions of MFW, showing that a complex and multi-level combination of ethics-related practices are required to cultivate MFW. All relationships were in the expected positive direction except responsible leadership, which was negatively related to the MFW dimension of integrity with self. Across the seven dimensions of MFW, only the dimension 'Service to Others' was uniformly not predicted by any antecedent. However, all three antecedents significantly related to important dimensions of MFW not usually measured in the ethics literature, such as 'Unity with Others' and 'Expressing Full Potential'. In addition, we conducted dominance analysis to test the relative importance of the three antecedent across the MFW dimensions, and found that worthy work is the most dominant antecedent, although all three antecedents are the most dominant for at least one MFW dimension—further highlighting the importance of exploring MFW as a multi-dimensional construct. We discuss the implications for MFW theory and practice.

Keywords Meaningful work · Ethics · CMWS · Antecedents · SEM · Multi-group analysis

Introduction

Ethics scholars have examined meaningful work (MFW) from the perspective of the worker's moral aspiration or duty to find meaningful work, as well as the perspective of the employer's duty to create the conditions that increase the potential for people to find meaningful work (Ciulla 2012; Michaelson et al. 2014). From the employer's perspective, it is an ethical imperative for organisations to create the conditions for meaningful work because meaningful work is a fundamental human need (Yeoman 2014). This paper focuses on three ethical conditions for MFW: fairness, responsible leadership, and worthy work. At present, the organisation-level mechanisms that create such conditions are not yet well understood. There is consensus that empirical research on MFW has remained relatively scarce (Wang and Xu 2017; Bailey et al. 2016a, b, c; Michaelson et al. 2014) and while research has examined the positive consequences of meaningful work, "little research has theorised or tested the antecedent factors influencing the development of meaningfulness" (Demirtas and Akdogan 2015, p. 59).

A significant body of empirical research is currently emerging (Bailey and Madden 2016a; Bunderson and Thompson 2009; Cassar and Buttigieg 2013; Demirtas and Akdogan 2015; Wang and Xu 2017). However, this research mostly lacks necessary detail for future researchers to hypothesise specific relationships between antecedents and outcomes of meaningful work. These specific relationships are important because MFW is often referred to as consisting of a combination of dimensions such as 'mastery', 'community' and 'promoting the welfare of others' (Pratt et al. 2013; Kahn and Fellows 2013; Rosso et al. 2010). Yet,

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the vast majority of current MFW research still draws on a limited 3-items scale to measure MFW. As a result, the effect of different antecedents on different dimensions of MFW has not been compared. This is in contrast with what ethics scholars (Bowie 1998; Ciulla 2012; Yeoman 2014) point out to be a complex, deep, and rich concept.

While there have been fundamental differences in how MFW has been conceptualised (Lepisto and Pratt 2017), there is also some consistency in the theoretical perspectives from which the intersection of MFW and Ethics have been explored. A first perspective is concerned with the extent to which MFW has objective ethical features in the sense of being freely entered into, having some measure of autonomy and being adequately compensated (Arnesson 1987; Bowie et al. 1998). A second perspective is concerned with moral requirements internal to the organisation such as structural conditions for employees to experience themselves as autonomous responsible agents (Ciulla 2012) or creating an ethical climate where employees experience alignment between personal and organisational values (Kahn and Fellows 2013). This body of literature also focuses on removing obstacles to MFW, such as bad leadership (Bailey et al. 2016a, b, c). A third perspective is concerned with the object of work itself and the extent that the individual, through the organisation and its purpose, contributes to humanity and the planet (Ciulla et al. 2012; Yeoman 2014). In this paper, we focus on the antecedents of Fairness; Responsible Leadership and Worthy Work because (a) they each address a distinct ethical concern; (b) they are each representative of one of the above three perspectives; (c) they each identify a distinct core problem or barrier to MFW and (d) collectively, they are representative of the development of MFW over the past three decades rather than just of the recent surge in MFW literature.

In the 1970s and 1980s, theory at the intersection of ethics and MFW primarily addressed objective features of MFW by looking at the inherent worth and value of organisational actors through fair and respectful treatment and fair compensation (Arneson 1987). Here the basic problem was conceptualised as the employer not meeting the employees' right to dignified and just work (Bowie 1998). Current literature still recognises that employers have a moral obligation to meet basic conditions for meaningful work (Michaelson et al. 2014; Ciulla 2012); however, basic ethical standards have not received much attention in recent MFW research. Hence, we want to understand if, in the current impermanent and individualised work environment (Sennett 2006; Kuhn et al. 2008), an expectation of fair compensation still influences the extent to which MFW is experienced.

In the 1990s, we saw interest in how MFW was managed in organisations. In particular, this research focused on the relationship between transformational leadership and MFW (for an overview see Walumba et al. 2013). Here, the core problem of meaning is conceptualised as the individual employee needing organisational support (in the form of leadership) to connect their search for meaning to that of fellow workers and the organisation as a whole. More recently, still at the organisation management level, there has been a focus on the impact of ethical (rather than transformational) leadership on MFW. Here the core problem of meaningful work, while still conceptualised as the need for the leader to provide purpose and direction, is also conceptualised as MFW requiring the leader to set, and live up to, a set of objectively defined ethical standards internal to the organisation (Wang and Xu 2017). It will therefore be useful to understand the importance of a number of leadership styles on different dimensions of MFW.

Finally, in the past decade, also in the context of corporate social responsibility (CSR), the problem of meaningful work has been conceptualised beyond whether the leader can connect employees to the organisational purpose to whether an organisation has an objectively worthy enough purpose for the individual to experience MFW (Ciulla 2012).

At present, the MFW literature largely focuses on individual level phenomena such as calling and job-crafting. It has a been suggested that this focus, by itself, is in danger of being overly romantic when it does not acknowledge minimal standards for a humane and dignified experience or minimal criteria for the type of work that benefits humanity or the planet (Melé 2012; Ciulla 2012). An important contribution of this paper is that we test and compare antecedents from three different theoretical perspectives beyond the individual. We acknowledge that other antecedents at the ethics-MFW intersection such as autonomy, ethical climate, or organisational citizenship behaviour are likely to also influence MFW. However, we focus on three antecedents at three different levels (job, organisation, and society) that have received particular attention in the MFW literature. We also want to understand if one of these antecedents has a more dominant relationship to MFW.

A second important contribution of our study is that we measure MFW as a multi-dimensional construct. At present, it is recognised that a combination of multiple elements might make up the MFW experience. For example, Pratt et al. (2013) refer to MFW through craftsmanship (using skill and expertise); doing good (serving beneficiaries) and kinship (the quality of relationships one experiences or creates in one's work). In spite of this, most studies use measures that describe MFW as a single dimension, such as 'my work is significant' which is either more or less true for an individual. This approach to measuring MFW makes it difficult to discern the precise relationship of antecedents to the different dimensions of MFW such as quality relationships or serving beneficiaries. In comparing antecedents that conceptualise ethical barriers to MFW from three distinct perspectives, in using a comprehensive MFW scale, and

in looking at the dominance of each antecedent for multiple MFW dimensions, this paper goes some way to answer the call for studies to investigate multiple mechanisms and their overlapping, independent, and additive effects on MFW (Rosso et al. 2010; Michaelson et al. 2014; Bailey et al. 2016a, b, c; Wang and Xu 2017).

Defining and Measuring Meaningful Work

Meaningful work is a concept with a diverse theoretical and empirically demonstrated nomological net. In the literature, a number of conceptual distinctions have been made; meaning *in* versus meaning *at* work; subjective versus objective dimensions of meaningful work and sociological versus psychological perspectives on meaningful work (for an overview see Wang and Xu 2017). However, there has been little debate on how these conceptual distinctions influence the way MFW is measured. Most of the literature is focused on measuring antecedents to, and consequences of, MFW rather than unpacking the richness, complexities and nuances in the concept itself.

The "most widely-used scale in work meaningfulness literature" (Wang and Xu 2017, p. 9) is Spreitzer's three-item scale (see also an in-depth review of Bailey et al. (2016b) which makes the same point). The three-item scale measures "my job activities are personally meaningful to me"; "the work I do is very important to me" and "the work I do is meaningful to me". While this measure is widely used, the wide range of possible interpretations of what is important, meaningful or significant hinders a more nuanced analysis of the mechanisms that cultivate MFW. It has therefore been suggested that measures are required that represent the complex interplay of factors contributing to the meaning employees make of their work (Rosso et al. 2010). MFW as measured by the Spreitzer scale captures two levels of meaning, meaning in work (job activities) and meaning at work (the work I do). It also captures the amount of meaningfulness as perceived by the individual (Pratt and Ashforth 2003): "the work is meaningful *to me*". This scale has been very useful in understanding the importance of MFW, but does not really capture the richness of the MFW experience and the exact influence of antecedents on different MFW experiences. What does the individual experience at work when they perceive it to be significant, important or worthwhile? This question is important because in key MFW articles the concept is often defined or referred to as an *experience*.

Hackman and Oldman (1980, p. 256) define work meaningfulness as "the degree to which the individual *experiences* the job as one that is generally meaningful, valuable and worthwhile"; (Barrick et al. 2013, p. 132) refer to "the psychological state of *experienced* meaningfulness"; Lips-Wiersma and Morris (2009, p. 429) define meaning as "the subjective *experience* of the existential significance or purpose of life"; Rosso et al. (2010, p. 95) refer to "work *experienced* as particularly significant" and Bailey at al. (2016b, p. 2) also refer to "*experienced* meaningfulness". While the implications of referring to MFW as an experience are not usually pursued in depth, it seems relatively safe to (a) assume that *experienced* MFW is a state rather than a trait, also as it has been found that the experience of meaning is episodic (Bailey and Madden 2016a, b, c) and (b) assume that, similar to the concept of experienced engagement, a meaningful work experience embraces both the psychological state and the behaviour it implies (Macey and Schneider 2008).

When *experience* is central to the MFW concept, such experience embraces both a psychological state and a behaviour, and such experience is episodic, the question is 'what does a person actually experience when they report that their work is meaningful, significant and worthwhile'? When this question cannot be answered the action implications of MFW research will at best be vague and at worst inconsequential. To measure what individuals experience when they say their work is meaningful, we use the Comprehensive Meaningful Work Scale (CMWS) instrument (Lips-Wiersma and Wright 2012). The CMWS measures the MFW experience as distinct from antecedents as well as other concepts such as calling and engagement, and was developed based on the basis of two qualitative studies (psycho-biographical and action research) (Lips-Wiersma 1999; Lips-Wiersma and Morris 2009) in which employees describe episodes of MFW. In other words, when an individual says my work is meaningful/significant/worthwhile today, this month or year, because… they relate experiences of MFW. These were subsequently tested to create the Comprehensive Meaningful Work Scale (Lips-Wiersma and Wright 2012).

This scale captures three components of experienced MFW. The first component consists of the core dimensions of MFW. Where individuals were asked to relate episodes of MFW they referred to episodes in which they experienced integrity with self (previously referred to as 'Developing Inner Self'), unity with others, service to others, and expressing full potential. The second component refers to the balance between the different dimensions, the needs of self and others, and between the need to be and the need to do. In other words, employees experience their work as more meaningful when multiple dimensions of meaning are experienced and less meaningful when one is expressed to the exclusion of another. They are referred to as 'tensions' because that is how they were experienced; "I spent all of this time helping others [doing for others], I no longer knew who I was [being with self] or what I wanted. It all became rather meaningless really" (Lips-Wiersma and Wright 2012, p. 674). A third component is that MFW is work that needs to be perceived as hopeful and inspirational but also be

grounded in reality (rather than being Utopian). For a full description of each of these dimensions of MFW, see Lips-Wiersma and Wright (2012).

The present study hypothesises the following study model (Fig. 1).

Ethical Antecedents to Meaningful Work

Fairness

It has long been argued that the meaning that people ascribe to their work is shaped by the rewards that they get from that work (Kahn and Fellows 2013). Fairness relates to both outcomes (distributive justice) and process (procedural justice). Due to a limitation to the numbers of items we could use with our occupationally diverse sample of workers, we decided to measure distributive justice because it has been found to be somewhat more influential (Spell et al. 2011). In addition, distributive justice, and in particular fair compensation and fair workload distribution, was the primary focus of MFW literature in the 1970s and 1980s. Distributive justice, which examines equity of workload and compensation, relates to "how individuals react to the amount and form of compensation they receive" (Tremblay et al. 2000, p. 269).

Overall, there is strong meta-analytic support for the influence of distributive justice on job attitudes and behaviours (Cohen-Charash and Spector 2001; Colquitt et al. 2001). However, beyond the earlier Hackman and Oldham (1980) research there is little empirical evidence of the impact of Fairness on MFW. The evidence that does exist is somewhat mixed. In their qualitative research, on a wider sample (not just those with a sense of calling), Bailey and Madden (2016a, b, c) found that unfairness and injustice can make work feel meaningless. They found evidence of a lack of distributive justice (anticipated pay or pay rise not forthcoming) negatively impacting MFW. They also found evidence of the negative impact of procedural injustice such as bullying and lack of opportunities for career progression. While Bailey and Madden did find evidence of the impact of Fairness on MFW, Bunderson and Thompson (2009) found that this might be moderated by the extent to which the individual experiences a calling orientation in their work. Their research on the impact of calling on MFW found that those who had a sense of calling sacrificed pay but did not seem to resent this. However, they looked at a very specific occupational group of zoo workers. In general, research has shown that a lack of Fairness fuels a deep sense of cynicism about the workplace (Maslach et al. 2001), and has been found to impact work alienation (Nair and Vohra 2010). Both alienation and cynicism have been conceptualised as antitheses of MFW (Cartwright and Holmes 2006). We therefore posit that fair treatment with regard to distribution of workload as well as compensation will be positively related to multiple dimensions of MFW.

Hypothesis 1 Fairness will be positively related to MFW.

Responsible Leadership

Empirical evidence on the impact of leadership on MFW has shown mixed results to date. The qualitative research of Bailey and Madden (2016a, b, c) finds that research participants do not volunteer 'leadership' as a factor influencing MFW; however, quantitative studies have found that ethical leadership does positively relate to MFW (Demitras and Akdogan 2015; Wang and Xu 2017). Wang and Xu (2017) found that ethical leadership was positively related to MFW, and also found support for a number of moderating effects. However, that study—similar to others (e.g. Shantz et al. 2014)—used the 3-item Spreitzer scale (1995).

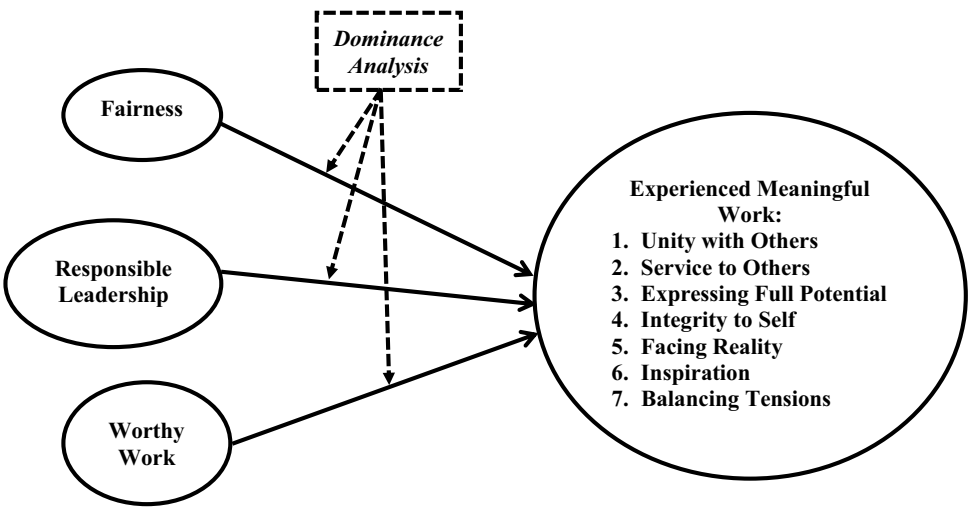

Fig. 1 Study model

Others have focused on transformational leadership and it has been suggested that MFW, in part, results from visionary leadership whereby leaders imbue work with greater meaningfulness by articulating an inspiring vision and linking it to shared values (Michaelson et al. 2014). Dimensions of transformational leadership, such as inspirational motivation, have also been suggested to enhance MFW because it motivates employees to sacrifice self-interest for a higher cause (Yukl 1999). Next to ethical and transformational leadership, effects of authentic leadership, such as hope (Rego et al. 2014), self-awareness and transparency (Fry and Kriger 2009), and the creation of a trusting and secure work environment (Macik-Frey et al. 2009), have also been suggested to impact MFW. Cassar and Buttigieg (2013) found that authentic leadership was positively related to meaningfulness at work, although this research again this reflects a single-dimensional approach to MFW. Also more recently, it was found that servant leadership, which focuses on leadership values that reach beyond the self to others (subordinates), can help organisational newcomers experience their work as meaningful. Finally, some MFW research has found that leader relations with followers positively affect MFW (Tummers and Knies 2013). This research focuses on leader–follower exchange, rather than leader-centred theories such as transformational or authentic leadership.

Instead of using multiple ethics-related leadership concepts in our study, which would make the analyses overly complex, we chose to use the term 'Responsible Leadership' (Maak and Pless 2006). Similar to others, we use this term to mean "the overarching term for the inclusion of ethical and moral aspects in leadership…at the overlap of studies in ethics, leadership and corporate social responsibility" (Antunes and Franco 2016, p. 126). Five leadership styles collectively comprise Responsible Leadership: transformational, servant, authentic as well as spiritual and emotional (Antunes and Franco 2016). From these, we focus on the first three as these have received more prominence in the MFW literature. In addition, we added 'shared leadership'. The reason for adding 'shared leadership' is that although ethical, transformational, and authentic leadership are not automatically leader-centred, they also do not usually address power differentials head on. Because empowerment, self-determination, and control have been found to significantly enhance MFW (Bailey and Madden 2016a, b, c) and these are supported by shared leadership (Yun et al. 2006), we included 'shared leadership' in our measurement. We could not find previous evidence of one of these leadership styles being more effective than others in cultivating MFW. We hypothesise that Responsible Leadership, operationalised as including elements of ethical, transformational, authentic, and shared leadership, is positively related to MFW.

Hypothesis 2 Responsible leadership will be positively related to MFW.

Worthy Work

The MFW literature often refers to organisational purpose (Lepisto and Pratt 2017; Yeoman 2014). In this literature, it is suggested that MFW work arises from employees experiencing congruence between their core values and the mission or the ideology of the organisation (Rosso et al. 2010). Rosso et al. (2010) focus on the fit between personal and organisational values, and, as discussed above, some MFW literature concentrates on the role of the leader in keeping purpose alive and providing direction. Worthy Work is somewhat different in that it suggests meaning not only arises when one is subjectively attached to the outcome of one's work but also that one's work, to be meaningful, has to have independent value to society. Lips-Wiersma and Morris (2009) suggest that "meaning is distinguished from meaninglessness in that such a cause [for which one works] does not only transcend self, but also transcends the organisation to a more universally beneficial legacy". The Worth of one's work can therefore be objectively discerned by the beneficiaries of one's work (Lepisto and Pratt 2017; Yeoman 2014). Worthy Work is conceptually distinct from CSR in that the first asks 'for what purpose should organisations exist' whereas the second asks 'how do organisations do less harm and more good'? While we distinguish CSR and Worthy Work, it is important to recognise that some CSR literature also suggests CSR only gains legitimacy with internal stakeholders, and hence only increases employee motivation, to the extent that it serves a worthwhile purpose (Bolton et al. 2011). However, not all companies that adopt CSR practices serve a worthwhile purpose and some, such as tobacco companies that still have CSR policies could be argued to be objectively worthless (Yeoman 2014).

In the context of MFW, Ciulla (2012) suggests a set of objective criteria for Worthy Work: "They are jobs in which people help others, alleviate suffering, eliminate difficult, dangerous or tedious toil, make someone healthier and happier, aesthetically or intellectually enrich people, or improve the environment in which we live. All work that is worthy does at least one of these things in some big or small way" (Ciulla 2012, p. 127). Whereas Both Ciulla (2012) and Yeoman (2014) posit harmful purposes as the opposite of Worthy Work, Yeoman also considers futile work (work that makes no difference at all) as the opposite of Worthy Work. The present study follows Ciulla's conceptualisation of Worthy Work by including items that measure worthy purpose in relation to society. We hypothesise that employees who perceive their organisation as engaging in more Worthy Work will perceive themselves as having greater meaning in their work.

Hypothesis 3 Worthy work will be positively related to MFW.

Comparing the Relative Influence of Fairness, Responsible Leadership and Worthy Work on Multiple Dimensions of MFW

Our three antecedents operate at three different levels. Whereas Fairness is concerned with objective features of MFW (in the same way that autonomy or freedom are an objective feature of MFW) and leadership is concerned with connecting the personal search for meaning to the organisation, Worthy Work is concerned with the object of one's work and the value it has to society. While we have little comparative research to draw on, we anticipate that while the dominance of our antecedents on specific dimensions of MFW may vary, Worthy Work will be the most dominant of the three antecedents. Worthy Work is one of the most prominent concepts in ethics-related MFW literature (Ciulla 2012; Yeoman 2014; Michaelson et al. 2014; Lips-Wiersma and Morris 2009; Lepisto and Pratt 2017). Pratt and Ashforth (2003) cluster of 10 practices/variables included 'in work', 'at work' and 'transcendence'. They suggest that "creating meaningfulness at work may be generally more effective than creating meaningfulness in working" (p. 325). Similarly, Yeoman (2014) suggests that the experience of meaningfulness is most likely to occur when a person works towards a worthy objective.

Worthiness is also a prominent theme in meaningful life theory which generally assumes that meaningfulness is derived from causes and actions that are beneficial to humanity and/or the planet (for an overview of the literature justifying the worth of one's work, see Lepisto and Pratt 2017). Frankl (1959, p. 110) stresses that "the true meaning of life is to be discovered in the world rather than within man or his own psyche as though it was a closed system" and that "being human always points, and is directed, to something or someone other than oneself" such as "giving oneself to a cause" or "love" another person. While we have hypothesised that all three antecedents will be positively related to multiple dimensions of MFW, we anticipate that the antecedent of Worthy Work might have the strongest influence on MFW. Worthy Work is likely to be the most fundamental antecedent, because the other antecedents of Fairness and Responsible Leadership may become less significant (or insignificant) if, ultimately, the organisation does not make a positive contribution to society. For example, an employee might be treated fairly, but if they feel their organisation is involved in unethical work, the other positive factors are likely to become 'over-ridden' by the worth (or lack of worth) of the work being done, as shown by the significant drop in employee engagement at Volkswagen (a company that has a reputation for fairness) post the diesel emissions scandal. The contribution of the organisation to society is likely to have a significant effect on worker's responsibility for one another and to the wider community (Hollensbe et al. 2014). Therefore, we expect worthy work to have a more dominant relationship to MFW than fairness and responsible leadership.

Hypothesis 4 Worthy work will be the most dominant antecedent to MFW dimensions.

One possible reason for antecedents towards specific dimensions not having been studied to date (in addition to the complexity of such an approach), may be that the (already quite scarce) extant "research on MFW has focused on measuring proxies for meaningfulness and less on finding ways to directly measure the subjective experience of meaningfulness" (Ivtzan et al. 2013, p. 16). As a result, there is very little evidence to hypothesise which of our antecedents will have a more dominant influence on dimensions of MFW. In spite of this, and drawing on the diverse literatures from MFW, we postulate some broad hypotheses across the antecedents and the seven MFW dimensions.

For unity with others, we anticipate that all three antecedents (responsible leadership, worthy work and fairness) will have similar strength of influence because each of them influences the extent to which the organisation has a collaborative (or divisive) organisational culture (Cheney et al. 2008). With regard to expressing full potential, we expect that dominant antecedents would be responsible leadership and worthy work as both of these create opportunities for the individual to use their talents, while we expect distributive fairness to be relatively weaker influence on the individual being able to use their talents. With regard to integrity with self, we expect our argument for worthy work to hold, as it is the antecedent most likely to cause an alignment between personal and organisational values and thus lead to a stronger personal experience of integrity and the sense of becoming a better, or at least not a worse, person at work. Fairness may still play an important role as a predictor, as even in a context where the organisational purpose may not be worthy (by Ciulla's standards), distributive justice has been shown to play a significant role in the extent to which employees behave ethically. We would expect Responsible Leadership to have a weaker influence because while leadership has influence over the extent to which a person experiences integrity, meaningfulness literature also suggests that it is incumbent upon each person to take responsibility for their ethical choices regardless of external influences such as leadership (Yeoman 2014).

With regard to the MFW dimension of service to others, we again assert worthy work as the dominant antecedent as it determines whether one's overall work makes the world a better or worse place (Ciulla 2012). With regard

to dimensions of inspiration and reality, we would expect fairness to have weaker influence as it is a baseline condition and thus we would expect worthy work and responsible leadership to the dominant predictors as these antecedents both influence inspirational purpose (Hollensbe et al. 2014), while at the same time both are required to ground such purpose in the current reality of the organisation (Lips-Wiersma and Morris 2018). Finally, with regard to Balancing Tensions between the different dimensions of MFW, we expect no single antecedents to be dominant, as each is likely to play a role in influencing some MFW dimensions that employees seek to balance, and so the combination of them is required for workers to express all dimensions of MFW. This leads to our final hypothesis.

Hypothesis 5 Dominance analysis will show all antecedents are relatively equal towards predicting (a) Unity with Others and (b) Balancing Tensions. Worthy Work will have the strongest influence towards (c) Integrity to Self and (d) Service to Others. Worthy Work and Responsible Leadership will have the strongest influence towards (e) Expressing Full Potential, (f) Inspiration, and (g) Reality.

Methods

We recruited workers to complete the survey. The workers were recruited through our very diverse student body to ensure that the sample would reflect a diverse range of occupations. Although student-recruited samples produce similar demographics and results compared to other strategies (Wheeler et al. 2014), there are conditions which must be met to ensure demographic and occupational diversity. Students were selected by the researchers based on their capacity to access different occupational groups to complete the survey. For example, some students were recruited because of their unique access to blue-collar workers through their student jobs (e.g. road workers, factory workers). Each student was required to collect data from a maximum of 10 workers for which she or he was paid $5 per completed, returned survey. A research assistant was hired to verify the integrity of the data by emailing a random sample of research participants seeking confirmation of participation. This method yielded 607 useable responses (52% women, average age 34 years, 71% Caucasian).

Workers were also recruited from a general population participant pool via MTurk. Participation was open to 'Master' workers (verified by MTurk as having previously demonstrated reliability in their MTurk tasks). Workers were restricted to the US and paid $3 for a completed survey. This generated an additional 272 useable responses (52% men, average age 33 years, 72% Caucasian). Buhrmester, Kwang and Gosling (2011) as well as Horton et al. (2011) have found that data collected from MTurk generally yield the same patterns of results as those collected via traditional methods, and are at least as reliable. Buhrmester et al. (2011) also found that MTurk participants were more demographically diverse than standard internet samples and typical U.S. college student samples. In the present study, no mean differences between MTurk respondents and non-MTurk respondents were found on CMWS scores ($t[483] = 0.13$, $p = 0.45$).

The total sample was roughly evenly split by gender (50.4% female) and the majority self-identified as Caucasian (71.7%) with other ethnicities 15% Asian, 4.2% Hispanic, 3.0% African American, and 2.2% Indian. The average age was 33.9 years (SD = 11.7 years), with 70.9% full-time employees and 29.1% part-time employees. By education, around 2% did not complete high school, 17% had a high school qualification, 47% had a bachelor's degree or higher, while the remaining 34% had done some university study but not completed a degree. Respondents were well spread by organisational size, with 42% working for small organisations (50 employees or less), 25% in small to medium sized organisations (51–300 employees), with 16% in large sized organisations (301–2000 employees) and 17% in organisations with over 2000 employees. By sector, the majority came from commerce/private (58%), followed by education (13%), construction (10%), automation, aviation and technology (9%) and communication and media at 8%. The remaining 2% was in the not-for-profit sector.

Measures

We confirmed the distinct characteristics of our study constructs using confirmatory factor analysis in SEM using AMOS 24. Williams, Vandenberg, and Edwards (2009) assert that SEM studies typically report a number of goodness-of-fit indexes that can be meaningless due to (for example) sample size factors. As such, they suggest three goodness-of-fit indexes to provide useful (and uniform) statistics for assessing model fit: (1) the comparative fit index (CFI ≥ 0.95), (2) the root-mean-square error of approximation (RMSEA ≤ 0.08), and (3) the standardised root mean residual (SRMR ≤ 0.10). We also analysed the CMWS items individually and suggest in the future a somewhat shorter version could be implemented if useful. See below for details.

Fairness

Fairness was measured with three items from the distributive justice dimension by Niehoff and Moorman (1993), coded 1 = strongly disagree to 5 = strongly agree. A sample item is "I think that my level of pay is fair". The measure had good internal consistency reliability ($\alpha = 0.84$).

Responsible Leadership

Responsible leadership was measured with a unique four item construct developed for the present study, coded 1 = never to 4 = always. Because we were interested in a broad understanding of Responsible Leadership, and each of the selected styles typically involves many items, we utilised an approach where we provided a description of each leadership style with the instruction: "Please tick the extent to which each of the following leadership styles is exhibited in your organisation" and included a description of each style for authentic leadership, transformational leadership, ethical leadership and shared leadership. A sample is "Ethical leadership: the demonstration of ethical conduct through what the leader does and how they relate to others, and the promotion of such behaviour to employees". Because this was a new construct, we confirmed its nature via exploratory factor analysis (principal components, direct oblimin rotation) which showed that the items loaded onto a single factor with eigenvalues that were all greater than 1 (2.476), accounting for 61.9% of the variance; all items had loadings greater than 0.6. Overall, the measure had good internal consistency reliability (α = 0.79).

Worthy Work

Worthy Work was based on items from the literature (e.g. Ciulla 2012; Melé 2012; Currás-Pérez et al. 2009; Lin and Liu 2017). We extended the present measure to be more encompassing of both work outcomes and worker treatment to improve the psychometric properties. Responses were coded 1 = strongly disagree to 5 = strongly agree. Items used were "Overall, I work for an ethical organization", "Our product or service creates a better life for current and future generations", "Our organisation implements programmes to contribute to a better environment and/or community", "Our organisation can be relied on to uphold my best interest" and "Our organisation has a good reputation as an employer". We confirmed its nature via exploratory factor analysis (principal components, direct oblimin rotation) which showed that the items loaded onto a single factor with eigenvalues that were all greater than 1 (3.358), accounting for 67.2% of the variance, and with all items having loadings greater than 0.6. Overall, the measure had excellent reliability (α = 0.88). While both are concerned with the beneficiaries of one's work, we expected worthy work to measure as distinct from service to others, as the items of the former measure organisation-level phenomena and the items of the latter measure individual experience phenomena. We did an additional check which confirmed the construct distinction between worthy work and the MFW dimension of service to others (detailed below). The chi-squared difference test (Hair et al. 2010) confirmed this was a poorer fit: $\Delta\chi^2$ (Δdf) = 1885.8 (1), p = 000, indicating that worthy work is distinct from the 'service to others' MFW dimension.

The extent to which participants experienced each dimension of MFW was captured by the CMWS (Lips-Wiersma and Wright 2012), coded 1 = never/hardly ever to 5 = always. Questions follow the stem "For each of the items please indicate the frequency with 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?". The original scale had 28 items. The present study used CFA in AMOS to conduct analysis where cross-loading items were removed to provide a more parsimonious construct (measurement model). This resulted in three items for six constructs and four for one (22 items in total). Table 1 has the items and related factor loadings.

Overall, the seven dimensions each had good reliability: Unity with Others (α = 0.82), Service to Others (α = 0.87), Expressing Full Potential (α = 0.83), Integrity with Self (α = 0.83), Reality (α = 0.80), Inspiration (α = 0.80), and Balancing Tensions (α = 0.84). Overall, the analysis was a good fit for the data: χ^2 (df) = 438.0 (188), CFI = 0.98, RMSEA = 0.04, and SRMR = 0.04. Similar to Lips-Wiersma and Wright (2012), we explored the potential for the CMWS as a higher order construct and, as did those authors, we found that a higher order construct is not a better fit for the data: χ^2 (df) = 1206.4 (208), CFI = 0.91, RMSEA = 0.07, and SRMR = 0.16. The χ^2 difference test (Hair et al. 2010) confirmed this was a poorer fit $\Delta\chi^2$ (Δdf) = 768.4 (20), p = 000, being significantly different from the multi-dimensional construct. We also note that Service to Others—while having no issue with factor loadings (all above 1.0)—was not significantly related to any other MFW construct and the three antecedents. We include this construct in our analysis but note that unlike other studies (e.g. Lips-Wiersma and Wright 2012; Lopez and Ramos 2017) this appears to be an outlier. We discuss this later in the "Discussion" section.

Williams et al. (2009) suggest fewer control variables in SEM, and we utilised three. We controlled for Gender (1 = male, 2 = female) because significant gender variation has been found on MFW (Tummers and Knies 2013; Lopez and Ramos 2017), as well as for our antecedents, including perception of Leadership Styles (Bellou 2011). We also controlled for Part Time as previous research has demonstrated that full-time employees report higher levels of work involvement than part-time employees (Martin and Hafer 1995) "Are you full-time (more than 36 h) or part-time (less than 35 h per week)?" coded 1 = full-time, 2 = part-time. Finally, we controlled for Education (1 = Did not complete high school, 2 = complete high school, 3 = some tertiary courses, 4 = completed University degree), as Tummers and Knies (2013) found education was positively related to MFW.

Table 1 Confirmatory factor analysis of CMWS

MFW dimension	Items	
Unity with others ($\alpha = 0.82$)	1. I have a sense of belonging	0.818
	2. We talk about what matters to us	0.789
	3. We enjoy working together	0.740
Service to others ($\alpha = 0.87$)	1. I feel I truly help our customers/clients	0.619
	2. We contribute to products and services that enhance human well-being and/or the environment	0.764
	3. What we do is worthwhile	0.890
	4. We spend a lot of time on things that are truly important	0.892
Expressing full potential ($\alpha = 0.83$)	1. I make a difference that matters to others	0.729
	2. I experience a sense of achievement	0.843
	3. I am excited by the available opportunities for me	0.824
Integrity with self ($\alpha = 0.83$)	1. At work my sense of what is right and wrong gets blurred (rev)	0.605
	2. I don't like who I am becoming at work (rev)	0.878
	3. At work I feel divorced from myself (rev)	0.873
Reality ($\alpha = 0.80$)	1. At work we face up to reality	0.709
	2. We are tolerant of being human	0.675
	3. We recognise that life is messy and that is OK	0.886
Inspiration ($\alpha = 0.80$)	1. The work we are doing makes me feel hopeful about the future	0.904
	2. The vision we collectively work towards inspires me	0.911
	3. I experience a sense of spiritual connection with my work	0.694
Balancing tensions ($\alpha = 0.84$)	1. In this work I have the time and space to think	0.732
	2. I create enough space for me	0.866
	3. I have a good balance between the needs of others and my own needs	0.815

Measurement Models

The hypothesised measurement model and two alternative models are shown in Table 2.

Overall, the hypothesised measurement model was the best fit for the data with the alternative CFA models resulting in a poorer fit (Hair et al. 2010). This confirms that CMWS is best conceptualised in its seven dimensions, and they are distinct from Fairness, Responsible Leadership, and Worthy Work, as the alternative models were a worse fit than the hypothesised measurement model.

Analysis

Hypotheses were tested using SEM in AMOS v. 24. Dominance analysis (see below) was conducted using the LeBreton (2006) excel spreadsheet with macros.

Table 2 Results of confirmatory factor analysis

Model	Model fit indices					Model differences			
	χ^2	df	CFI	RMSEA	SRMR	χ^2	Δdf	p	Details
Model 1	1381.0	482	0.95	0.05	0.04				
Model 2	6354.2	521	0.66	0.11	0.10	4973.2	39	0.001	Model 1–2
Model 3	2524.6	499	0.88	0.07	0.05	1143.6	17	0.001	Model 1–3

Model 1 = Hypothesised 10-factor model: Unity with Others, Service to Others, Expressing Full Potential, Integrity with Self, Reality, Inspiration, Balancing Tensions, Fairness, Responsible Leadership and Worthy Work

Model 2 = Alternative 4-factor model: All CMWS dimensions *combined* (Unity with Others, Service to Others, Expressing Full Potential, Integrity with Self, Reality, Inspiration, and Balancing Tensions), Fairness, Responsible Leadership and Worthy Work

Model 3 = Alternative 8-factor model: Unity with Others, Service to Others, Expressing Full Potential, Integrity with Self, Reality, Inspiration, Balancing Tensions, and all antecedents *combined* (Fairness, Responsible Leadership and Worthy Work)

Results

Descriptive statistics for the study variables are shown in Table 3.

Table 3 shows that the six of the seven MFW dimensions were significantly correlated with all the antecedents ($0.59 > r > 0.19$, all $p < 0.01$). Only the dimension service to others was not significantly correlated with any of the antecedents. Within the CMWS all dimensions were significantly correlated with each other ($0.71 > r > 0.10$, all $p < 0.01$), again except service to others, which was not significantly correlated with the other six dimensions. Finally, education was significantly correlated with Worthy Work ($r = 0.07$, $p < 0.05$), Expressing full potential ($r = 0.08$, $p < 0.05$), and inspiration ($r = 0.09$, $p < 0.05$). Looking at the mean scores of the CMWS dimensions, we see that all are above the mid-point of 3.0 except inspiration, which is exactly 3.0, with the highest dimension being integrity with self.

Structural Models

We ran a simple structural model where the three antecedents predict the seven dimensions of the CWMS scale. We controlled for gender, part-time work and education. Overall, the structural model was a good fit to the data (Williams et al. 2009): χ^2 (df) = 1490.4 (554), CFI = 0.95, RMSEA = 0.04, and SRMR = .04. In line with the recommendations of Grace and Bollen (2005), unstandardised regression coefficients are presented in Table 4 (path analysis results).

Table 4 shows that fairness is a useful predictor of MFW, being significantly related to unity with others (path coefficient = 0.14, $p < 0.01$), integrity with self (path coefficient = 0.22, $p < 0.001$), reality (path coefficient = 0.09, $p < 0.05$), and balancing tensions (path coefficient = 0.26, $p < 0.001$), providing support for Hypothesis 1. Responsible leadership was found to be a strong predictor of MFW being significantly linked to five of the seven dimensions: unity with others (path coefficient = 0.44, $p < 0.001$), expressing full potential (path coefficient = 0.25, $p < 0.001$), integrity with self (path coefficient = − 0.15, $p < 0.05$), inspiration

Table 3 Correlations and descriptive statistics of study variables

Variables	M	SD	1	2	3	4	5
1. Education	3.3	0.80	–				
2. Fairness	3.6	0.90	0.02	–			
3. Responsible leadership	2.6	0.69	0.03	0.45**	–		
4. Worthy work	3.7	0.81	0.07*	0.50**	0.62**	–	
5. Unity with others	3.8	0.81	0.04	0.42**	0.51**	0.52**	–
6. Service to others	3.8	0.87	−0.01	−0.03	0.02	0.00	0.02
7. Expressing full potential	3.5	0.91	0.08*	0.35**	0.48**	0.56**	0.60**
8. Integrity with self	4.2	0.87	−0.02	0.34**	0.20**	0.35**	0.30**
9. Reality	3.8	0.83	0.03	0.33**	0.36**	0.46**	0.47**
10. Inspiration	3.0	1.1	0.09*	0.36**	0.51**	0.58**	0.55**
11. Balancing tensions	3.5	0.86	0.02	0.43**	0.44**	0.44**	0.48**

Variables	M	SD	6	7	8	9	10	11
1. Education	3.3	0.80						
2. Fairness	3.6	0.90						
3. Responsible leadership	2.6	0.69						
4. worthy work	3.7	0.81						
5. Unity with others	3.8	0.81						
6. Service to others	3.8	0.87	–					
7. Expressing full potential	3.5	0.91	−0.03	–				
8. Integrity with self	4.2	0.87	0.00	0.19**	–			
9. Reality	3.8	0.83	−0.00	0.44**	0.24**	–		
10. Inspiration	3.0	1.1	0.01	0.70**	0.11**	0.38**	–	
11. Balancing tensions	3.5	0.86	−0.02	0.52**	0.22**	0.40**	0.46**	–

$N = 879$

*$p < 0.05$, **$p < 0.01$

Table 4 Final structural model path results

Variables	Unstandardised path coefficient Combined
Controls	
Part-time → unity with others	−0.16**
Part-time → expressing full potential	−0.21***
Part-time → integrity with self	0.17***
Part-time → reality	−0.10*
Part-time → inspiration	−0.24***
Part-time → balancing tensions	−0.13*
Gender → integrity with self	0.08*
Gender → unity with others	0.11*
Gender → balancing tensions	−0.19***
Fairness → unity with others	0.14**
Fairness → integrity with self	0.22***
Fairness → reality	0.09*
Fairness → balancing tensions	0.26***
Responsible leadership → unity with others	0.44***
Responsible leadership → expressing full potential	0.25***
Responsible leadership → integrity with self	−0.15*
Responsible leadership → inspiration	0.36***
Responsible leadership → balancing tensions	0.28***
Worthy work → unity with others	0.27***
Worthy work → expressing full potential	0.47***
Worthy work → Integrity with Self	0.36***
Worthy work → reality	0.43***
Worthy Work → inspiration	0.77***
Worthy work → balancing tensions	0.19**
r^2 values	
Unity with others	0.46
Service to others	0.00
Expressing full potential	0.45
Integrity with self	0.27
Reality	0.37
Inspiration	0.49
Balancing tensions	0.38

Significant effects only shown. Unstandardised path coefficients
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

(path coefficient = 0.36, $p < 0.001$), and balancing tensions (path coefficient = 0.30, $p < 0.001$). This provides strong support for Hypothesis 2. However, interestingly we found that responsible leadership was not positively related to integrity with self. This dimension is defined as conveying "a sense of being true to one's self, self-awareness/self-knowledge (as opposed to alienation from self) and moral development" (Lips-Wiersma et al. 2016, p. 3).

Similar to responsible leadership, worthy work was found to be a strong predictor of MFW, being significantly linked to six of the seven dimensions: unity with others (path coefficient = 0.27, $p < 0.001$), expressing full potential (path coefficient = 0.47, $p < 0.001$), integrity with self (path coefficient = 0.36, $p < 0.001$), Reality (path coefficient = 0.43, $p < 0.001$), inspiration (path coefficient = 0.77, $p < 0.001$), and balancing tensions (path coefficient = 0.19, $p < 0.01$), providing strong support for Hypothesis 3.

Amongst the control variables, education was not significantly linked to any of the MFW dimensions. However, part-time work was significantly linked to six of the seven dimensions of MFW, and was almost universally detrimental, being negatively related to the following dimensions: unity with others (path coefficient = −0.16, $p < 0.01$), expressing full potential (path coefficient = −0.21, $p < 0.001$), reality (path coefficient = −0.10, $p < 0.05$), Inspiration (path coefficient = −0.24, $p < 0.001$), and balancing tensions (path coefficient = −0.13, $p < 0.05$). Only towards integrity with self (path coefficient = 0.17, $p < 0.001$) was there a positive relationship. Gender was also significantly related to half the MFW dimensions: integrity with self (path coefficient = 0.08, $p < 0.05$) and unity with others (path coefficient = 0.11, $p < 0.05$) were positively related, indicating significant positive effects for females. However, gender was also related to balancing tensions (path coefficient = −0.19, $p < 0.001$) and indicates significantly negative effects for females.

Overall, the models account for modest to large amounts of variance for all MFW dimensions except service to others: unity with others ($r^2 = 0.46$), integrity with self ($r^2 = 0.27$), expressing full potential ($r^2 = 0.45$), reality ($r^2 = 0.37$), inspiration ($r^2 = 0.49$), and balancing tensions ($r^2 = 0.38$), and reflecting no significant relationships was service to others ($r^2 = 0.00$).

To further examine these effects of our three ethics-based antecedents (fairness, leadership and worthy work) on MFW, we conducted a relative importance analysis. Johnson and LeBreton (2004) defined this as the extent to which a variable—such as fairness or worthy work—influences an outcome, such as our MFW dimensions (e.g. Expressing full Potential). Tonidandel and LeBreton (2011, p. 2) state that "relative importance weights are a useful supplement to multiple regression because they provide information not readily available from the indices typically produced from a multiple regression analysis".

We conducted a general dominance analyses (Cliff 1993) to compare the influence of our three antecedents utilising the LeBreton approach (see Tonidandel and LeBreton 2011, pp. 9). The analysis provides a final contribution (as a percentage) of each antecedent to provide insights into whether one (or more constructs) is more dominant than others. We did this analysis on six of the MFW dimensions excluding service to others which had no significant relationship to the three antecedents, making this analysis unworkable.

The results are presented in Table 5.

For the analysis on unity with others, the dominance score for Responsible leadership accounted for 36.5% of the total explained variance, compared to a dominance score for fairness of 32.8 and 30.7% for worthy work. This suggests a fairly well-shared influence across the three antecedents. Towards expressing full potential, the dominance score was highest for worthy work (42.7%), followed by responsible leadership (40.3%), and with fairness having a much smaller (17%) influence. This suggests that regarding expressing full potential, worthy work and responsible leadership have the dominant influences. With the MFW dimension of integrity with self, worthy work was the dominant antecedent at 40.4%, followed closely by fairness at 36.7%, with responsible leadership trailing with 22.9%. In regard to reality, worthy work again was the dominant antecedent (44.8%), but this time was followed by responsible leadership (35.7%), with fairness last on 19.4%. For Inspiration, both worthy work (43.8%) and responsible leadership (40.5%) were dominant, with fairness trailing a distant third (15.6%). Finally, aligned with the last MFW dimension of balancing tensions, all three antecedents were fairly balanced in their influence on this dimension, with responsible leadership (35.6%), followed closely by fairness (33.4%), and worthy Work (31%). Worthy work is the dominant antecedent for three of the six MFW dimensions, followed by responsible leadership (twice) and Fairness once. The analysis shows fairness to be the least dominant antecedent, with it being significantly smaller (as a percentage of variance) than the other two antecedents on three of the six MFW dimensions. The overall consistency of worthy work in the dominance analyses provides support for Hypothesis 4. Hypothesis 5 was also confirmed because, overall, the dominance allowance analysis illustrates that the greatest proportion of influence amongst our three antecedents varies depending on the MFW dimension we explore.

Discussion and Implications

The present study sought to enhance the understanding of ethical antecedents of MFW. The recent MFW literature has an increased appreciation of the role of ethics in meaningful work (Lips-Wiersma and Morris 2009; Michaelson et al. 2014; Yeoman 2014; Wang and Xu 2017; Weeks and Schaffert 2017) but lacks empirical data. In addition, while MFW has been conceptualised as existing of different dimensions (Pratt et al. 2013; Rosso et al. 2010) the implications of this remained undeveloped. Finally, there have been few studies comparing different theoretical perspectives on conditions for meaningful work, and our dominance analysis goes some way towards meeting this need.

Worthy Work was overall the most dominant antecedent for our very diverse sample of workers. This confirms earlier conceptual work of ethics and MFW scholars (Ciulla 2012; Yeoman 2014) as well as OB and MFW scholars (Lips-Wiersma and Morris 2009; Pratt and Ashforth 2003). This finding indicates that MFW research needs to focus on the business-society relationship, which is featuring very prominently in ethics and CSR research but is currently overlooked in much MFW research. The use of dominance analysis brings much needed nuanced understanding of the factors that drive the various components of MFW, and enables researchers and organisations to better understand the components that drive and enhance MFW. Clearly, doing work that is fundamentally worthy—around organisational programmes, products and services that enhance the community and environment, appeal the most to employees, and help shape their MFW across a broad range and number of MFW dimensions.

Importantly, we also found that all three antecedents of Fairness, Responsible Leadership and Worthy Work are the most significant for at least one experienced MFW dimension. Our multi-dimensional MFW findings show the

Table 5 Results of dominance analyses on MFW dimensions

Antecedents	MFW dimensions					
	Unity with others	Expressing full potential	Integrity with self	Reality	Inspiration	Balancing tensions
Responsible leadership						
β	0.168	0.182	0.062	0.132	0.197	0.134
%	36.5	40.3	22.9	35.7	40.5	35.6
Fairness						
β	0.151	0.077	0.100	0.072	0.076	0.126
%	32.8	17	36.7	19.4	15.6	33.4
Worthy work						
β	0.141	0.192	0.110	0.165	0.213	0.117
%	30.7	42.7	40.4	44.8	43.8	31

continued importance of theory on fair and respectful treatment of the 1980s, as well as subsequent Leadership and Worthy Work literature. For the first time, we understand a range of ethics-related antecedents on multiple experiences of MFW. There was a broad range of effect sizes—for example, Worthy Work was positively related to the MFW dimension of Inspiration at a strong 0.77, but to balancing tension at a more modest 0.17. This reinforces the argument by Lips-Wiersma and Wright (2012) that examining MFW with a multiple-dimensional construct provides greater depth and insight. For example, some factors have stronger effects (such as worthy work on inspiration) while others do not, such as Fairness having no significant relationship to inspiration. In this regard, we can see that the alignment with an organisations' goals and policies are inspiring, while Fairness might be an 'assumed norm' and irrelevant in terms of Inspiration, yet having significant impact on other dimensions of MFW. For example, fairness has a stronger relationship to integrity with self than responsible leadership, which may indicate that for the employee to experience integrity, resources put into leadership development need to be matched by resources ensuring basic fairness. Our data may also explain previously divergent findings on the relationship of leadership to MFW, in that the multi-dimensional measurement of MFW shows that leadership affects several, but not all, dimensions of MFW.

Our findings indicate that to fully understand the relationship between ethics and MFW, research and practice should look at how ethical work environments create the opportunity of the individual to develop their full potential and to work harmoniously with others. For example, it has been suggested that those who participate in CSR activities gain concrete skills that can be carried over to other aspects of their job (Bhattacharya et al. 2008) and hence CSR can potentially enhance Expressing Full Potential of any employee when such responsibilities are delegated throughout the hierarchy. At the same time, if being involved in such CSR initiatives requires the individual to move away from her or his team, it could potentially diminish unity with others.

The multi-dimensional conceptualisation of MFW (Lips-Wiersma and Wright 2012) also measures the extent to which different antecedents enable the employee to balance tensions. This refers to what Lips-Wiersma and Wright (2012, p. 658) call "the dynamic relationship between multiple sources of meaning". Fairness, responsible leadership and worthy work were all positively related to balancing tensions, meaning that they affected the extent to which a person could balance their own needs with those of others as well as balance doing with being (having the space to individually or collectively reflect). Interestingly too in this context was that while part-time work was detrimental to six out of seven MFW dimensions, there was a positive relationship to Integrity with Self, which could indicate that the ability to have some distance from work enhances this dimension. These findings confirm that MFW research needs to look beyond static or linear concepts of MFW to understand how the experience of discrete dimensions of MFW fit together in dynamic patterns (Rosso et al. 2010).

All three antecedents were positively related to the individual experiencing that their work is grounded in reality. Thus, for example responsible leadership, as we measure it, helps employees to face up to reality, be tolerant of being human and recognise that life is messy and that is okay. What is not real is not experienced as meaningful, thus, responsible leadership, worthy work and fairness practices avoid the creation of a disconnected utopian culture that is not related to how people experience their daily reality.

While we hypothesised that responsible leadership would be positively related to all dimensions of MFW, it is not entirely unexpected that for men, responsible leadership was significantly *negatively* related to integrity with self. Clearly more research is required on this finding but it may well suggest that for responsible leadership to enhance MFW, the leader can communicate an inspirational vision and be a moral exemplar, but needs to stop short of language or practices that suggest the leader 'provides meaning' and the follower is an empty vessel to be filled with meaning, as at that point the follower can lose the sense of being true to self (Lips-Wiersma and Morris 2009). It may also indicate that there is a fine-line between practices that foster meaningfulness and those that manipulate the human need for meaning and are therefore not ethical (Michaelson et al. 2014; Bailey and Madden. 2016b). Further exploration of this finding is warranted, particularly for women, who experienced higher levels of integrity with self and unity with others but lower levels of balancing tensions. This finding also indicates it might be useful to research the factors that lead to a person experiencing too much MFW in one or more dimensions.

Of the seven factors from the CMWS-Scale, our antecedents did not significantly predict service to others, which was an unexpected finding. Overall, ethics-related MFW literature seems to assume that when the organisation promotes ethical practices (in our study measured as fairness, responsible leadership and worthy work), this will translate into the individual experiencing service to others. However, this is not what we found. To confirm this was not a spurious effect or related to issues around the construct, we explored an additional variable unrelated to the present study. We tested a three-item negative affect construct (Watson et al. 1988): this was significantly related to all CMWS-Scale dimensions (including Service to Others) and our three antecedents, all at $p < 0.01$. This suggests that the lack of significant correlations with service to others might reflect our choice of antecedents, and not invalidate the construct per se. For example, if we had looked at organisational citizenship we might

have obtained a different outcome. Research which further compares antecedents within and across different theoretical perspectives is required to further test the CMWS scale.

Nevertheless, it seems that, at least in the context of ethics-related MFW antecedents measured in the current research, Service to Others is experienced differently from the other dimensions of meaning. Individuals experience this dimension to be separate from any organisational antecedent we measured. In the current MFW literature, there are some possible individual- and organisation-level explanations of this finding. Employees might find it problematic to see the connection between working for an organisation that overall makes a worthy contribution, and their own ability to experience Serving Others. Grant (2007) found that individuals perceive social impact to the extent they are in contact with beneficiaries, and Michaelson et al. (2014) suggest "leaders might not be as effective in delivering the message that beneficiaries convey about the meaning of the work". Therefore, the overall 'Worthy' purpose of the organisation, or responsible leadership itself, may not be so effective in translating into the "service to others" dimension of experienced MFW. Another explanation has been offered in the values literature, where it has been found that benefiting others is a core value in life (Schwartz and Bardi 2001) and that "any job can be experienced as contributing to others' welfare or not" (Colby et al. 2001, p. 483). Frankl (1959) research on concentration camp experience also indicated that serving others could be so fundamental that it is relatively independent of any context, good or bad. And the research of Bunderson and Thompson (2009) on Zoo workers also showed that meaning could be a double-edged sword as in their those who saw their work as a moral duty to help animals (service others) sacrificed pay, personal time, and comfort. Clearly more research is required to explain these findings as it could also lead to the organisations misusing this fundamental human need and hence being unethical.

Future Research and Implications

Our findings suggest a number of future research avenues, including utilising and broadening our three ethics-related MFW antecedents for future research, as well as broadening this study to explore MFW outcomes. For example, earlier research has shown MFW to act as a mediator (Demirtas and Akdogan 2015; Arnold et al. 2007; Wang and Xu 2017) and thus, future research might explore the multi-dimensional CMWS to determine its usefulness in explaining relationships of particular dimensions of MFW to particular outcomes.

Taken together, our findings reveal the complexity of MFW as a construct. Our research limited itself to three antecedents to MFW, but, given the different relationships of antecedents to different dimensions of MFW, it will also be particularly interesting to test other antecedents as well as the extent to which each of these relationships translate into turnover intentions, job satisfaction, and commitment. In addition, future researchers will be able to hypothesise specific relationships in much more detail.

As we found that part-time work had a negative relationship to six of the seven dimensions of MFW, further research is also warranted to look at conditions for MFW in the part-time context. Clearly, those working part-time work find less meaning in their work, but future research might test these differences in relation to work centrality. Similarly, while gender theory has developed significantly over the past decades, this has not yet translated into researching gender within the MFW field, yet our findings indicated significant gender differences. Hence, a research avenue exists to determine the relative influence of antecedents on MFW by gender. One example might be using a multi-group approach as this lets the number of relationships and strength of effects be determined for both female and male respondents. We furthermore found that education had a positive impact on three dimensions of MFW, confirming earlier research (Tummers and Knies 2013).

While we found Fairness continued to have an important effect on MFW, it was not the most dominant variable. Because Fairness is also a subjective perception (Adams 1965), it would be interesting to understand if this is because basic conditions for fairness are increasingly met, or because fairness is no longer assumed to be a fundamental right in current precarious work conditions. Additional measures of fairness such as procedural and interactional justice may also further explain the relationship between fairness and MFW. On the whole, high correlations have been found between the three forms of justice (Colquitt et al. 2001), but given that elements of procedural justice such as employee voice may well relate to MFW variables we did not study, such as Autonomy, we suggest future research be done comparing the effect of distributive, procedural and interactional justice on MFW.

In the context of ethics, a particularly interesting finding was that Worthy Work was found to be the most dominant variable. At present, there is little research on the impact of a worthy purpose on MFW. Further research should focus on the effect of Worthy Work versus other antecedents, as well as the effect on MFW of Worthy Work versus relatively isolated CSR initiatives. Another interesting finding is was that our antecedents had a positive relationship to meaningful work dimensions of unity with others and expressing full potential, which are not usually discussed as a result of ethics-related antecedents. These findings suggest that ethics is a meta-construct affecting all domains of MFW and hence significantly more research on the ethics-MFW relationship is warranted.

Finally, we found the shorter CMWS (22 instead of 28 items) had strong factor loadings across the dimensions, as well as consistent strong reliabilities (all $\alpha > 0.80$). To reduce the CMWS further to say a parsimonious single factor construct would remove the benefits of testing the multiple dimensions of MFW (Lips-Wiersma and Wright 2012) for which reason we do not encourage further reduction. This is also backed up by our dominance analysis which showed all three antecedents were dominant in predicting at least one MFW dimension, further highlighting the utility of this multi-dimensional approach.

Practical Implications

Our research shows that in cultivating MFW, the organisation needs to consider a package of multiple practices to enhance the experience of all dimensions of MFW. In addition, our research shows confirms that ethical practices—including fairness, responsible leadership, and Worthy Work—play a significant role in building the MFW experience of employees. Researchers have noted the potential for ethics-related practices to lead to win–win scenarios for employers and employees (Bhattacharya et al. 2011), but there is a lack of empirical research. Specifically, Ashman and Winstanley (2006) suggest that in the context of corporate responsibility literature the daily personal experience of employees and their work roles are being overlooked. Our findings do indeed suggest that there are potential win–win solutions, with employees reporting enhanced MFW when their organisation engages in ethical practices. We may expect that, as the collective consciousness of humanity with regard to the environment and inequality is raised, employees will increasingly ask questions about the objective worth of their work and how it benefits humanity and the planet as a whole, which should further increase the importance of the worthy work antecedent. Given that worthy work was already found to be the most dominant influence on MFW, it is important that organisations become very clear on their purpose beyond profit.

Finally, if in practice MFW is portrayed as a straightforward input–output relationship rather than a combination of dimensions, lack of resources or the latest management fads may encourage organisations to concentrate on one practice (such as worthy work) to the exclusion of another (such as responsible leadership). While, in focusing on ethics, we only measured a limited amount of such practices, it seems likely that other practices such as teamwork, performance reviews and corporate culture management similarly affect different dimensions of MFW, which means that organisations need to look at the combination of their practices to foster MFW.

Limitations

While our data represent a large number of respondents in various occupations and sectors, there is still the issue around common method variance (CMV) due to same source data (Podsakoff et al. 2003). Haar et al. (2014) argue that results obtained by advanced statistics like SEM minimise the effects of CMV, because the CFA calculations would identify issues of CMV where constructs would begin to overlap and be indistinct. In this regard, the alternative CFA model testing indicated poorer fit statistics, which shows that the constructs used here are distinct. Thus, SEM provides a platform for such issues to be identified. Podsakoff et al. (2003) suggest Harman's One Factor Test as a basic CMV test, and this approach is well applied in employee studies (e.g. Gadenne et al. 2009; Haar and Roche 2010; Thompson and Hood 1993). The factor analysis (unrotated) resulted in a number of factors, with the largest factor accounting for 30% of the overall variance, suggesting that CMV is not an issue in this study (Podsakoff and Organ 1986).

In addition, Podsakoff et al. (2003) noted that Lindell and Whitney's (2001) CMV assessment procedure is more robust, where a partial correlation adjustment between our study variables, controlling for an unrelated construct (we used household income). This analysis showed no change in correlation strength or significance, further indicating no issues around CMV. Despite these findings, future research might seek to collect secondary source data, for example, supervisor-rated performance data or HR Department information around absenteeism or actual turnover. Similarly, co-worker data might be fruitful.

In the present study, we used a multi-dimensional measure of MFW which has 22 items (compared to the Spritzer (1995) three-item commonly used to measure MFW). We also measured more than one antecedent and used actual workers who have less time or incentive than for example paid students to fill in survey instruments. In this context, the researcher is inevitably faced with survey length issues as longer surveys have been found to lead to lower response rates and quality (Crawford et al. 2001; Galesic and Bosnjak 2009). This limited the number of instruments we could use. We chose a responsible leadership measure that constituted of a variety of leadership styles because evidence had already shown that multiple leadership styles, such as ethical and servant leadership had a positive relationship to MFW. While exploratory factor analysis showed good reliability for our responsible leadership measure, more nuanced understandings of the impact of, for example, ethical versus shared leadership on MFW, need to be achieved through research using comprehensive extant leadership measures. Future research

would have to develop a validated measure of our current leadership items. However, given the significant influence of leadership on multiple dimensions of MFW, it will be useful to, in future studies, examine the relative influence of multiple leadership styles. In particular, given the dominance of worthy work, it would be interesting to use the responsible leadership scale (Voegtlin 2011) which measures the extent to which the leader engages with external stakeholders and hence measures the business-society interface with which worthy work is concerned. It would be interesting to compare this to ethical or servant leadership. Survey length constraints also limited the number of antecedents we could compare. Above we already suggested further exploration of the impact of objective features on MFW, such autonomy. From the perspective of management requirements that enables the individual to connect their search for meaning to the organisation, antecedents such as ethical climate or corporate citizen behaviour may render interesting results. For the third perspective, which is concerned with the object of work itself, it would be useful to generate longitudinal research on MFW in corporations (such as interface carpets) which have changed over time from being solely profit driven to creating worthy work.

Conclusion

The present study sought to explore ethics-related factors on the multi-dimensional experience of MFW and overall we find strong support that fairness, responsible leadership and worthy work are important influencers in shaping the meaningfulness of employee work. Ethical organisational practices therefore play a significant role in cultivating MFW and we warn against over-individualising MFW research. In applying a multi-dimensional, rather than the typical three-item scale, this paper goes significantly above and beyond other recent empirical papers on MFW recently published in the Journal of Business Ethics and elsewhere. We found that a multi-dimensional MFW scale offers unique insights into MFW theory and practice as different antecedents relate to different dimensions of MFW. We also found that a combination of ethical antecedents is required for the individual to fully experience all dimensions of MFW, and suggest that overall ethics research will benefit from studying combinations of ethics-related antecedents. At this stage in the development of MFW theory where basic relationships are increasingly well-established, our research findings make a strong case for more nuanced analysis of the mechanisms that cultivate MFW. Our dominance analysis revealed that of the three antecedents Worthy Work had the most impact on experiencing MFW. Our research is therefore a strong indicator that more research on MFW at the business-society interface is required. Overall, our research showed that the employer plays a significant role in creating the moral conditions for experiencing meaningful work.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval Ethical approval was sought from, and Granted by, the University's Human Ethics Committee. All procedures in this study were in accordance with the ethical standards of this institutional research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Informed Consent All participants consented to being part of the research study by completing an anonymous questionnaire.

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