An Initial Examination of the Work as Calling Theory

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Over the past decade, research on work as a calling has seen a rapid growth, with hundreds of empirical articles on the topic having been published. Until recently, however, there has been no comprehensive theoretical model of work as a calling to guide research. Duffy, Dik, Douglass, England, and Velez (2018) published the Work as Calling Theory (WCT), which provides a comprehensive model of the predictors and outcomes of living out a calling. The present study provides the first empirical examination of the 20 propositions outlined within the predictor portion of this model. Using data collected from a sample of 424 employed adults living in the United States, from diverse social class backgrounds and occupations, we conducted latent variable structural equation modeling to evaluate the model propositions. Overall, we found full (17) and partial (1) support for 18 of the 20 model propositions, which included direct effects along with mediating and moderating effects. Person–environment fit, career commitment, and work meaning appear to be critical in helping to translate a perceived calling and access to opportunity into a lived calling. Additionally, calling motivation, organizational support, and job crafting may play a key role in helping employees with a calling experience more fit with their work environments. Taking these findings into consideration, we explore practical implications for career counselors and employers and highlight future directions for scholars using the WCT.

Public Significance Statement
This study demonstrates the pathways for individuals who feel a calling to live it out in the workplace. Findings are useful for counselors and employers seeking to help individuals enact their callings at work.

As research has flourished around understanding predictors and outcomes of a career calling, numerous recommendations have been made regarding developing an empirically testable theory of the construct (Duffy & Dik, 2013). The Work as Calling Theory (WCT; Duffy, Dik, Douglass, England, & Velez, 2018) attempted to answer this call. The theory contains 32 propositions that seek to explain how a felt calling leads to a lived out calling, and the resulting outcomes. The theory is specifically intended to capture the process of living out a calling for all individuals, not just those with high levels of privilege and power. The current study is the first to empirically test the model propositions using data from employed adults within the United States. We hope that these results, which offer novel insight on how key predictor variables of living a calling function concurrently, will be useful in advancing calling research broadly as well as supporting interventions with clients and employees seeking to enact a career calling.

Theoretical Framework

The WCT (Duffy, Autin, England, Douglass, & Gensmer, 2018) conceptualizes a calling as an approach to work that encompasses (a) finding individual meaning and overall purpose in that work, (b) helping others or contributing to the common good, and (c) feeling a sense of being compelled (either internally or externally) toward that work. Duffy, Dik, et al. (2018) provide an extensive review of how this conceptualization was developed, drawing from an accumulation of empirical and theoretical work attempting to understand the essential components of the construct that make it unique and empirically testable. The model attempts to explain both the predictors and outcomes of living a calling at work. On the predictor side, the model is broad and incorporates multiple paths that lead to living a calling—including several moderating (motivation, support, job crafting) and mediating (e.g., person–environment [P-E] fit) variables—with the goal of addressing how the constructs function together as a whole. This sets the WCT apart from previous models and studies looking at similar domains that have focused more on isolated schemes or a smaller subset of predictor variables (e.g., Duffy, Allan, Autin, & Douglass, 2014; Duffy, Autin, & Douglass, 2016; Duffy, Bott, Allan, Torrey, & Dik, 2012; Hall, & Chandler, 2005; Hirschi, Keller, & Spurk, 2018).

Another key distinguishing factor of the WCT is the separation of perceiving a calling and living a calling into two distinct

variables. Previous studies have mostly positioned perceiving a calling as a direct predictor of workplace outcomes, whereas this new model posits that for individuals with a perceived calling, living out that calling must follow for the positive outcomes to be fully acknowledged. This proposition is supported by several empirical studies which found that the potential benefits of perceiving a calling were especially pronounced in individuals who identified that they were, in fact, living out that calling (Duffy, Allan, Autin, & Bott, 2013; Duffy, Bott, et al., 2012; Duffy & Dik, 2013; Hirschi et al., 2018).

Finally, the WCT model is unique in that it proposes both positive (e.g., job satisfaction) and negative outcomes (e.g., workaholism) can result from living a calling. We will not discuss those specific outcome propositions as the current study will focus only on the predictor side of the WCT model. It is, however, important to acknowledge that the pathways examined in this study are part of a larger WCT framework. In the following sections, we more extensively review the specific propositions within the model which are examined in the current study.

Theoretical Propositions

Predictors of Living a Calling

As stated above, the WCT positions perceiving a calling and living a calling as two separate variables with the important distinction that perceiving a calling does not necessarily imply that one is living out that calling (Duffy, Dik, et al., 2018). Multiple studies have found that the correlation of these two variables hovers around .50 and that the benefits of a calling (such as work satisfaction, life meaning, and life satisfaction) are much more strongly correlated with living a calling versus perceiving a calling (Duffy, Allan, et al., 2013; Duffy, Douglass, Autin, & Allan, 2016; Duffy, Torrey, England, & Tebbe, 2017). The WCT posits that perceiving a calling is best positioned as a predictor of living a calling, and in the current study we hypothesize that perceiving a calling directly predicts living a calling (*Hypothesis 1*).

With regard to actually securing work that aligns with one's calling, there is an element of opportunity that exists on a continuum for all individuals. Often, individuals need to accept work that is not necessarily aligned with their aspirations or personal characteristics for the sole purpose of making ends meet (Duffy, Blustein, Diemer, & Autin, 2016). Accordingly, the WCT proposes that access to opportunity is also a direct predictor of living a calling. Empirical research supports this proposition. Numerous studies have demonstrated that markers of access to opportunity—such as social status, educational attainment, income, and work volition—all serve as meaningful predictors of living out a calling (Duffy & Autin, 2013; Duffy, Autin, et al., 2016; Duffy, Autin, et al., 2018; Duffy, England, Douglass, Autin, & Allan, 2017; Hirschi et al., 2018).

In the current study, we use work volition as an indicator of access to opportunity, which captures a broad feeling of choice in one's career decision making. We use this subjective versus objective variable as studies have shown the subjective sense of access to be more predictive of outcomes than objective indicators (Duffy, Diemer, Perry, Laurenzi, & Torrey, 2012). When examining work volition's relation to living a calling, Duffy, Autin, et al. (2016) found that work volition fully explained the impact of

social class on living a calling. More recent longitudinal research examined the effects of social status and work volition on living a calling at three time points over a six-month period. (Duffy, Autin, et al., 2018). Work volition strongly predicted living a calling over time and fully mediated the relation of Time 1 social status on Time 3 living a calling. Based on this accumulation of correlational, mediational, and longitudinal findings, we view work volition as a broad variable that captures access to opportunity, which is impacted by such variables as income, social status, educational opportunity, and experiences of marginalization. We hypothesize that work volition will directly predict living a calling (*Hypothesis 2*).

Two more variables that are theorized to have a direct influence on living out a calling are work meaning and career commitment. We define work meaning as an individual's subjective feeling that their current work is significant, contributing to the greater good, and facilitates personal growth (Steger, Dik, & Duffy, 2012). Whereas perceiving a calling in part concerns the solidification of a specific career path that is meaningful and prosocial, work meaning is something an individual experiences from actually doing the work, and naturally occurs after a calling has been discovered (Steger et al., 2012). Work meaning has consistently been measured distinctly from calling and numerous studies have found strong, but nonoverlapping, relations between the constructs (e.g., Duffy & Dik, 2013; Duffy, Allan, et al., 2013; Duffy, Douglass, et al., 2016; Duffy et al., 2014). As for the directional relation between the constructs, initial cross sectional studies suggested that work meaning and career commitment were outcomes of living a calling (Duffy, Allan, et al., 2013; Duffy, Bott, et al., 2012). However, when these three variables were studied over time, results demonstrated that both meaning and commitment were better positioned as predictor variables (Duffy et al., 2014). This variable alignment was later supported by a separate study with working adults (Duffy, Douglass, et al., 2016). Specifically, the WCT proposes that growing a sense of meaning and commitment to a specific career will, over time, make one more likely to feel that a calling is enacted. Accordingly, in the current study, we hypothesize that work meaning (*Hypothesis 3*) and career commitment (*Hypothesis 4*) will directly predict living a calling.

Mediators Linking Predictors and Living a Calling

The bulk of the remaining propositions in the predictor portion of the WCT concern the reasons why (mediators) access to opportunity and perceiving a calling would lead to a lived calling over time. As discussed above, we hypothesize that career commitment and work meaning each directly predict living a calling. However, we also propose that they will act as mediators in the relations of both of our two main predictor variables—work volition and perceiving a calling—with living a calling.

Access to opportunity can clearly limit vocational options for people, whether it be through experiences of marginalization (Ariel et al., 2015; Douglass, Velez, Conlin, Duffy, & England, 2017) and/or socioeconomic factors, both of which may ultimately lead to a lower likelihood of securing long-term and meaningful careers (Diemer & Rasheed Ali, 2009). A robust set of research exists which links aspects of access to opportunity (e.g., social class, social status, educational attainment, marginalization experiences) with a sense of commitment to one's job and the experi-

ence of work meaning (Allan, Autin, & Duffy, 2014, 2016; Ensher, Grant-Vallone, & Donaldson, 2001). Additionally, a recent study by Duffy, Autin, et al. (2016) explored the proposed mediation path from work volition to living a calling via meaning and commitment, finding that these two variables did indeed serve as significant mediators. Here, the theory would suggest that individuals with greater access to opportunity will be more likely to live out their callings because they are in jobs they feel committed to and derive meaning from. Thus, we hypothesize that access to opportunity, as measured in the current study by work volition, will predict work meaning (*Hypothesis 5*) and career commitment (*Hypothesis 6*), and that work meaning and career commitment will each mediate the relation of access to opportunity to living a calling (*Hypothesis 7, 8*).

Work meaning and career commitment are also proposed to mediate the link of perceiving a calling to living a calling, as those who perceive a calling will be more likely to live it out when meaning and commitment are high. Multiple studies have supported these propositions, finding that perceiving a calling is significantly associated with greater work meaning and career commitment (e.g., Dik et al., 2015; Duffy, Bott, et al., 2012; Neubert, & Halbesleben, 2015) and that over time individuals who found greater meaning and commitment in their work were more likely to feel that they were living out their calling (Duffy, Allan, et al., 2014). Thus, we hypothesize that perceiving a calling predicts work meaning and career commitment (*Hypothesis 9, 10*) and that each will mediate the relation of perceiving a calling and living a calling (*Hypothesis 11, 12*).

Finally, the WCT proposes that the primary reason why a perceived calling would lead to a stronger sense of work meaning and commitment is due to an increased sense of P-E fit. Traditional P-E fit theory suggests that when a person's individual characteristics align well with her or his working environment, positive work experiences and outcomes are more likely to be observed (Pervin, 1968), and empirical evidence supports a strong link between fit and a sense of work meaning and commitment (Greguras & Diefendorff, 2009; Tims, Derks, & Bakker, 2016). To achieve this fit, individuals are likely motivated to seek out an occupation that they perceive to match with their personal characteristics. The WCT proposes that individuals who perceive a calling will be drawn to work environments that fit with that calling, and numerous studies have found that those who experience a calling endorse a strong sense of fit with their current occupation (Bunderson & Thompson, 2009; Hunter, Dik, & Banning, 2010). Based on this empirical evidence and theoretical support, we hypothesize that perceiving a calling will directly predict P-E fit (*Hypothesis 13*), that P-E fit will directly predict work meaning and career commitment (*Hypothesis 14, 15*), and that P-E fit will mediate the relation of perceiving a calling with work meaning and career commitment (*Hypothesis 16, 17*).

Moderators of Perceiving a Calling and Fit

The final part of the predictor portion of the WCT model concerns moderators that may alter the relation between perceiving a calling and fit. Here, Duffy, Dik, et al. (2018) proposed that certain variables may allow those with a felt calling to be more likely to feel that their calling fits their work environment. The first of these is calling motivation, which is defined as one's level of

motivation to pursue a calling (Duffy, Bott, Allan, & Autin, 2015). This refers to beliefs about what one will do in the future versus what is currently occurring in the workplace, such as experiencing the work related benefits of a calling. Self-Determination Theory (SDT; Deci & Ryan, 2000) posits that one's ability to reach a goal is strongly centered on her or his motivation to pursue it. Individuals with a perceived calling are likely to be intrinsically motivated toward the work they do (Kolodinsky, Ritchie, & Kuna, 2017), therefore calling motivation is positioned as a natural drive that pushes an individual to achieve the goal of living her or his calling. Calling motivation has previously been found to significantly moderate the relation of perceiving a calling to both living a calling and life meaning (Duffy, England, et al., 2017). In this study, we propose that a strong calling motivation acts by prompting an individual with a perceived calling to seek out a job that is a good personal fit. Thus, we hypothesize that calling motivation will moderate the direct association of perceiving a calling with P-E fit such that the direct association of perceiving a calling with P-E fit will be stronger with individuals high in calling motivation (*Hypothesis 18*).

Job crafting is another factor that could promote stronger P-E fit. Wrzesniewski and Dutton (2001) define job crafting as the modification of the cognitive, task, and/or relational elements of one's job in a way that changes the individual's work identity and work meaning. For an individual who might have entered a profession that does not align well with her or his perceived calling, consciously altering the work environment through job crafting could be a way to still derive a heightened sense of P-E fit from that profession. The WCT proposes that, among individuals with perceived callings, those who actively employ job crafting strategies will be more motivated to seek out challenges and make changes in their workplaces, which leads to a stronger sense of fit with the job. Berg, Grant, and Johnson (2010) found that individuals who utilized job crafting strategies in their current careers were better able to experience the benefits and meaning of pursuing an unanswered calling even if their current job did not completely fit with their calling. Furthermore, when studied longitudinally, job crafting predicted person-job fit over time (Tims et al., 2016). Thus, we hypothesize that job crafting will moderate the direct association of perceiving a calling with P-E fit by strengthening the association (*Hypothesis 19*), such that there will be a stronger relation of calling and fit for individuals more likely to job craft.

Organizational support is the third proposed moderator that may promote a stronger calling and P-E fit relation. Organizational support, defined as the level of assistance, care, and encouragement that an organization gives to its employees, is thought to have positive psychological effects on workers that leads to greater engagement in work (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Kurtessis et al., 2015). Previous research has also linked aspects of organizational support with feeling and living a calling (Duffy & Autin, 2013; Lee et al., 2016). Furthermore, Eisenberger et al. (1986) suggest that perceived organizational support also increases a worker's attachment to her or his organization. If individuals who perceive greater support feel a greater connection to their work environment, it is likely they will also feel that their work environment is more personally fitting for them. Thus, in workers who perceive a calling, having strong organizational support likely contributes to a greater perception of P-E fit, and we hypothesize that organizational support will moderate the

direct association of perceiving a calling with the P-E fit (*Hypothesis 20*).

The Present Study

The goal of the present study is to test the predictor portion of the newly developed WCT (Duffy, Dik, et al., 2018) with a large sample of employed adults. We seek to examine 20 hypotheses which were initially laid out in the theory to understand how various established predictor variables work in conjunction to explain the experience of living out a calling. From a scholarly standpoint, we hope the results may be instructive in advancing research on calling, particularly as we understand the most important aspect of the construct, which is living it out. From a practical standpoint, we hope the results can inform work with clients seeking to live out their calling, particularly by identifying potentially malleable variables that can be addressed at the client level. Furthermore, findings from this study could also provide practical implications for employers. Some of these potentially malleable variables, such as organizational support or job crafting, could offer pathways for employers to potentially increase P-E fit and, subsequently, feelings of living a calling among workers. Numerous studies have demonstrated that individuals living out their callings are more likely to perform better in their jobs (Bunderson & Thompson, 2009; Duffy, Bott, et al., 2012; Lee et al., 2016) and feel more satisfied with their work (Duffy, Bott, et al., 2012). These findings could offer practical routes for employers to increase feelings of living a calling in workers with perceived callings and, subsequently, increase job performance and job satisfaction among those employees.

Method

Participants

Our sample consisted of 424 adults living in the United States with a mean age of 39.13 years ($SD = 11.62$). Of this sample, 274 (64.6%) were female, 148 (34.9%) were male, 1 (0.2%) was transgender, and 1 (0.2%) was gender nonbinary. Regarding ethnicity, 331 (78.1%) participants in identified as White/European American/Caucasian, 32 (7.5%) identified as African/African American/Black, 20 (4.7%) identified as Hispanic/Latinx American, 19 (4.5%) identified as Asian/Asian American, nine (2.1%) identified as Multiracial, six (1.4%) identified as Asian Indian, four (0.9%) identified as American Indian/Native American/First Nation, one (0.2%) identified as Arab American/Middle Eastern, and one (0.2%) selected "other" and self-identified as Cuban. For employment status, 342 (80.7%) of participants were employed full-time, 54 (12.7%) were employed part-time, 17 (4.0%) were self-employed full-time, 10 (2.4%) were self-employed part-time, and one (0.2%) was retired.

Regarding income, education, and social class, our sample breakdown was as follows. Participants reported an average yearly household income in the following ranges: Less than $25,000 per year (12.3%), $25,000 to $50,000 (31.4%), $51,000 to $75,000 (24.3%), $76,000 to $100,000 (15.8%), $101,000 to $125,000 (7.8%), $126,000 to $150,000 (3.8%), $151,000 to $175,000 (1.2%), $176,000 to $200,000 (1.2%), $201,000+ (1.9%), and I do not know ($n = 1$). For highest degree obtained, 184 (43.4%) of participants reported that they obtained a college degree, 99 (23.3%) reported attending some college, 81 (19.1%) obtained a professional degree, 29 (6.8%) were high school graduates, 25 (5.9%) reported attending trade/vocational school, two (0.5%) reported some high school, and two (0.5%) reported less than high school. For self-reported social class, 216 (50.9%) participants currently identified as middle class, 141 (33.3%) currently identified as working class, 47 (11.1%) currently identified as upper-middle class, and 18 (4.2%) identified as living in poverty.

Instruments

Perceiving a calling. Two items from the Presence subscale of the Brief Calling Scale (BCS; Dik, Eldridge, Steger, & Duffy, 2012) were used to assess participants' levels of perceiving a calling. An initial prompt was given, providing participants with the following definition of calling: "A person's belief that she or he is called upon (by the needs of society, by a person's own inner potential, by God, by Higher Power, etc.) to do a particular kind of work. Although at one time most people thought of a calling as relevant only for overtly religious careers, the concept is frequently understood today to apply to virtually any area of work." Participants used a scale ranging from 1 (*not at all true of me*) to 5 (*totally true of me*) to rate the following two items: "I have a calling to a particular kind of work" and "I have a good understanding of my calling as it applies to my career." At development, the BCS was found to have good internal reliability of $\alpha = .79$ (Dik et al., 2012), and the BCS has also been shown to correlate strongly with other scales that have been used to measure calling (Dik et al., 2012; Duffy, Autin, Allan, & Douglass, 2015). From this present study, the correlation of the two items used from the BCS was .85.

Living a calling. The six-item Living Calling Scale (LCS; Duffy, Bott, et al., 2012) was used to measure the degree to which participants felt they were living out their callings. A 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) was used to answer the items, and an option of "Not applicable—I don't have a calling" was also presented. Example items included, "I have regular opportunities to live out my calling" and "I am currently working in a job that closely aligns with my calling." Multiple studies have found scale scores from the LCS to be significantly associated with related variables including perceiving a calling, life satisfaction, and life meaning in directions that are expected (Duffy, Allan, et al., 2014; Duffy, Autin, et al., 2016). The LCS has also been previously shown to have strong internal reliability with an estimated reliability coefficient of $\alpha = .82$ (Duffy, Bott, et al., 2012). From this present study, the estimated internal consistency reliability of the LCS was $\alpha = .97$.

Work volition. Defined as an individual's perceived degree of choice, despite constraints, in making work-related decisions, work volition was measured using the general four-item volition subscale of the Work Volition Scale (WVS; Duffy, Diemer, et al., 2012). Participants responded using a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items from the general volition subscale include, "I've been able to choose the jobs I have wanted" and "I can do the kind of work I want, despite external barriers." This subscale of the WVS was found to have good internal reliability ($\alpha = .78$) upon its initial development and validation (Duffy, Diemer, et al., 2012),

and further studies have found scale scores to be significantly associated with related variables including person-environment fit, perceived organizational support, and work meaning (Duffy, Autin, & Bott, 2015; Duffy, Bott, Allan, & Torrey, 2013). From this present study, the estimated internal consistency reliability of the general volition subscale of the WVS was α = .84.

Work meaning. The 10-item Work as Meaning Inventory (WAMI, Steger et al., 2012) was used to measure work meaning. The WAMI consists of three subscales—positive meaning, meaning making through work, and greater good motivations—all of which were utilized in this study. Participants responded to each item using a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items from each subscale include, "I have discovered work that has a satisfying purpose" (positive meaning subscale), "My work helps me make sense of the world around me" (meaning making through work subscale), and "I know my work makes a positive difference in the world" (greater good motivations subscale). Although the final subscale is labeled as "motivations", it actually refers to the perception that one's current work serves the greater good. Scale scores from the WAMI have been found to positively with measures of calling, and each of the subscales were found to be highly correlated (ranging from .85 to .94) with the overall measure (Steger et al., 2012). From this present study, the estimated internal consistency reliability of the WAMI was α = .95.

Career commitment. The extent to which an individual felt committed to her or his career was measured using the seven-item Career Commitment Scale (CCS; Blau, 1985). Items were measured using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Example items included, "I definitely want a career for myself in my current job" and "If I had all the money I needed without working, I would probably still continue to work in my current job." The CCS has been found to have strong internal reliability with a reliability coefficient of α = .87 (Blau, 1985), and scale scores have been found to be correlated with both perceiving and living a calling (Duffy, Bott, et al., 2012). From this present study, the estimated internal consistency reliability of the CCS was α = .89.

Person–environment fit. The four-item Person–Job Fit Scale (PJFS; Saks & Ashforth, 1997) was used to measure P-E fit. All items were measured with a 7-point scale ranging from 1 (*no match*) to 7 (*complete match*), measuring the match of different personal characteristics or desired job characteristics with the individual's current job. Example items included, "How would you describe the match between your personality traits (e.g. extrovert vs. introvert, agreeable vs. disagreeable, and dependable vs. undependable) and those required by the job?" and "How would you describe the match between the characteristics of your current job (e.g. autonomy, importance, and skill variety) and those you desire for a job?" The initial study using the PJFS been found it to have strong internal reliability, α = .89 (Saks & Ashforth, 1997). From this present study, the estimated internal consistency reliability of the PJFS was α = .83.

Calling motivation. One's level of motivation to pursue her or his calling was measured using a three-item calling motivation scale developed by Duffy, Bott, et al. (2015). The three items were, "It is important to pursue my career calling," "No matter how difficult, I will try to achieve my career calling," and "My career calling motivates my job search." Participants responded to each of the items using a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Upon initial development of the scale by Duffy, Bott, et al. (2015), it was shown to have strong reliability with a coefficient of α = .82. From this present study, the estimated internal consistency reliability of the calling motivation scale was α = .92.

Perceived organizational support. Eight items from the Survey of Perceived Organizational Support (SPOS; Eisenberger et al., 1986) were used to measure the level of perceived organizational support of participants, who responded to each item using a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items used included, "The organization values my contribution to its well-being" and "The organization cares about my general satisfaction at work." This scale has shown strong reliability, with an estimated reliability coefficient of α = .97 after its development (Eisenberger et al., 1986). From this present study, the estimated internal consistency reliability of the SPOS was α = .94.

Job crafting. The five-item Increasing Structural Job Resources subscale of the Job Crafting Scale (JCS; Tims, Bakker, & Derks, 2012) was used to measure the degree to which participants in the study utilize job crafting strategies. Participants responded to the items based on a 5-point frequency scale ranging from 1 (*never*) to 5 (*often*). Example items include, "I try to learn new things at work," "I decide on my own how I do things," "I make sure that I use my capabilities to the fullest," and "I try to develop myself professionally." Tims et al. (2012) found this subscale to have an internal consistency reliability of α = .82 and found the subscale to positively correlate with proactive personality and personal initiative. From this present study, the estimated internal consistency reliability of this subscale was α = .87.

Procedure

After receiving IRB approval from the primary author's university, data for this study were collected via the online platform Mechanical Turk (MTurk). This platform allows researchers to post tasks, such as online surveys, which individuals complete for compensation. For the current study, we posted a task specifically recruiting participants who were (a) employed, (b) over the age of 18, and (c) were from the United States, to take on online survey on experiences with their work. Participants were offered $0.50 for completing the survey. After agreeing to the tasks, participants were directed to an online survey hosted by Qualtrics. Here, participants filled out a series of counterbalanced measures which are discussed in the instruments section above. At the end of the survey, participants were given a code which they then inserted into their MTurk account to confirm they had completed the survey.

Although researchers have demonstrated that collecting online survey data via MTurk is equally as reliable as other online survey data collection methods (e.g., Buhrmester, Kwang, & Gosling, 2011; Paolacci & Chandler, 2014), it is essential that certain steps be taken to ensure the validity of participants and the data itself. First, only MTurk participants who were employed were allowed to complete the task—this is a qualification that MTurk workers note about themselves within their profile. Second, we only recruited MTurk worked who had completed over 100 tasks and had been approved for at least 95% of them, eliminating workers with

lower approval ratings likely due to not taking tasks seriously. Third, we inserted four validity check items (e.g., "click *strongly agree* on this item to ensure you are paying attention") as well as this item at the very end of the survey, "Did you take this survey seriously? Note you will be compensated regardless of your answer." A total of 497 people started the survey and 73 were removed for failing one of the validity check items or noting they did not take the survey seriously. This resulted in a final total of 424 participants.

Results

Preliminary Analyses

Before conducting structural equation modeling, we assessed the data for both univariate and multivariate outliers. No cases emerged as a univariate outlier, but one case had a Mahalanobis distance significant at $p < .001$ at the corresponding χ^2 value (Tabachnick & Fidell, 2013). As such, we ran the models to be discussed below with and without this case in the dataset. Because the models did not differ in terms of significance, magnitude, or fit indices, we retained this case for all analyses. Lastly, following the guidelines of Weston and Gore (2006), we examined all variables for skewness values > |3| and kurtosis values > |10|. Values for all of our variables were well below these cutoffs and appeared normally distributed.

Our analytic sample consisted of 424 participants. Of these remaining participants, one participant was missing two data points, and 10 participants were missing one data point each. Results of Little's MCAR test—$\chi^2(428) = 637.13$, $p < .001$—suggested that the data were not missing completely at random. However, because the amount of missing data represented <1% of possible data points (12 items of 20,776), we used full information maximum likelihood (FIML) estimates to address the missing data. Although Tabachnick and Fidell (2013) suggested that procedures for handling missing data produce similar results when less than 5% of data points are missing from larger data sets, FIML is preferred over other methods (e.g., mean substitution, listwise deletion) because it generates data estimates with added error to produce unbiased estimates that are similar to what would be expected in the sample (Singer & Willett, 2003; Tabachnick & Fidell, 2013).

Model Testing

We used the Lavaan package in R (R Development Core Team, 2008; Rosseel, 2012) to construct our structural equation models. Following standard SEM reporting practices (Kline, 2016), we used the chi-square (χ^2), the Comparative Fit Index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean residual (SRMR) as our fit indices. Tabachnick and Fidell (2013) underscored the need to consider model complexity when evaluating fit statistics. For example, they highlighted that a significant χ^2 may suggest a poorly fitting model but noted that the test is largely sensitive to sample size. Conservative criteria for the remaining fit indices are CFI $\geq$ .95, RMSEA and SRMR $\leq$ .08, whereas less conservative criteria are CFI $\geq$ .90, RMSEA and SRMR $\leq$ .10 (Hu & Bentler, 1999; Weston & Gore, 2006).

Regarding the construction of latent variables, we used individual scale items as indicators for constructs measured by five or fewer items (perceived calling, P-E fit, work volition, job crafting and calling motivation). For the meaningful work latent variable, we used the three WAMI (Steger et al., 2012) subscales as indicators. For the remaining constructs, we created three parcels per construct. We used parcels for these constructs based on research demonstrating the advantages of using parcels for SEM, such as improved model fit and reduced bias among parameter estimates (Bandalos, 2002; Dow, Serenko, Turel, & Wong, 2006). All parcels were created using the method outlined by Weston and Gore (2006), which consists of running an exploratory factor analysis and assigning items to the parcels in countervailing order. Lastly, we tested our three proposed moderators with the latent variable interaction approach proposed by Jackman, Leite, and Cochrane (2011).

Measurement Model

We constructed a measurement model to assess factor correlations and examine indicator factor loadings. This model had good fit to the data: $\chi^2(369) = 799.37$, $p < .001$, CFI = .96, RMSEA = .05, 90% CI [.05, .06], $p < .001$, and SRMR = .04, and all indicators loaded onto their respective factors at values of .39 or higher. Factor correlations and descriptive statistics are reported in Table 1.

Table 1

Descriptive Statistics and Correlations of Living Calling and Predictor Variables (N = 424)

Measure	1	2	3	4	5	6	7	8	9
1. Perceived calling	—								
2. P-E fit	.46	—							
3. Work meaning	.53	.76	—						
4. Career commitment	.45	.82	.83	—					
5. Living calling	.67	.71	.78	.74	—				
6. Work volition	.41	.67	.73	.76	.69	—			
7. Calling motivation	.53	.33	.35	.29	.51	.39	—		
8. Job crafting	.44	.58	.55	.45	.44	.50	.40	—	
9. Organizational support	.24	.56	.56	.67	.43	.57	.24	.39	—
M	5.94	19.63	47.81	28.57	25.69	18.75	16.48	66.77	38.10
SD	2.75	4.99	14.68	7.01	11.72	5.64	4.78	11.64	11.60

Note. All correlations significant at the $p < .01$ level.

Structural Model

Next, we tested a structural model that contained all hypothesized direct and indirect effects. This model also had good fit to the data: $\chi^2(139) = 495.64$, $p < .001$, CFI = .95, RMSEA = .08, 90% CI [.07, .08], $p < .001$, and SRMR = .11. Overall, one hypothesized direct path was nonsignificant (perceiving a calling to career commitment). The entire model with standardized estimates of direct effects can be seen in Figure 1. We also examined the six hypothesized mediation paths by following the recommendations of Shrout and Bolger (2002). Based on these guidelines, we examined indirect effects using 1,000 bootstrapped samples. Table 2 shows which of the 20 structural model hypotheses were supported. Indirect effect estimates can be seen in Table 3.

Moderation Models

We examined the three hypothesized moderator analyses though a series of three independent model tests to avoid multicollinearity among the moderator variables and to avoid the increase of Type I errors that occurs when simultaneously testing multiple moderators (Fritz & Arthur, 2017). In these model tests, we included all variables and significant paths from the main structural model as well as the path from the moderator variable to fit and the interaction effect of perceiving a calling with the moderator variables on fit. Below we examine the significance of the interaction effects within the larger structural model and also discuss any changes that resulted with other model paths when the moderator was included.

Calling motivation. The first moderator we tested was calling motivation, and this model had good fit to the data: $\chi^2(232) = 615.56$, $p < .001$, CFI = .96, RMSEA = .06, 90% CI [.06, .07], $p < .001$, and SRMR = .07. Perceiving a calling ($\beta = .24$, $SE = .06$, $p < .001$) and calling motivation ($\beta = .42$,

$SE = .08$, $p < .001$) had significant direct effects with P-E fit, and the perceiving a calling by calling motivation interaction term had a significant association with P-E fit as well ($\beta = .41$, $SE = .07$, $p < .001$). See Figure 2 for a depiction of the relation of perceiving a calling to P-E fit at low (-1 SD) and high ($+1$ SD) levels of calling motivation. In this model, all paths that were significant in the initial structural model also remained significant.

Job crafting. The job crafting moderation model had good fit to the data: $\chi^2(279) = 727.09$, $p < .001$, CFI = .95, RMSEA = .06, 90% CI [.06, .07], $p < .001$, and SRMR = .06. Although perceiving a calling ($\beta = .25$, $SE = .05$, $p < .001$) and job crafting ($\beta = .50$, $SE = .05$, $p < .001$) were significantly associated with P-E fit, the perceiving a calling by job crafting motivation interaction term had a nonsignificant association with P-E fit ($\beta = .09$, $SE = .05$, $p = .052$). See Figure 3 for a depiction of the relation of perceiving a calling to PE fit at low (-1 SD) and high ($+1$ SD) levels of job crafting. In this model, all paths that were significant in the initial structural model also remained significant.

Perceived organizational support. The perceived organizational support model had good fit to the data: $\chi^2(233) = 706.64$, $p < .001$, CFI = .95, RMSEA = .07, 90% CI [.06, .08], $p < .001$, and SRMR = .05. Perceiving a calling ($\beta = .34$, $SE = .04$, $p < .001$) and job crafting ($\beta = .53$, $SE = .04$, $p < .001$) had significant direct effects with P-E fit, and the perceiving calling by job crafting interaction term had a significant association with P-E fit as well ($\beta = .09$, $SE = .04$, $p = .037$). See Figure 4 for a depiction of the relation of perceiving a calling to P-E fit at low (-1 SD) and high ($+1$ SD) levels of organizational support. In this model, all paths that were significant in the initial structural model also remained significant.
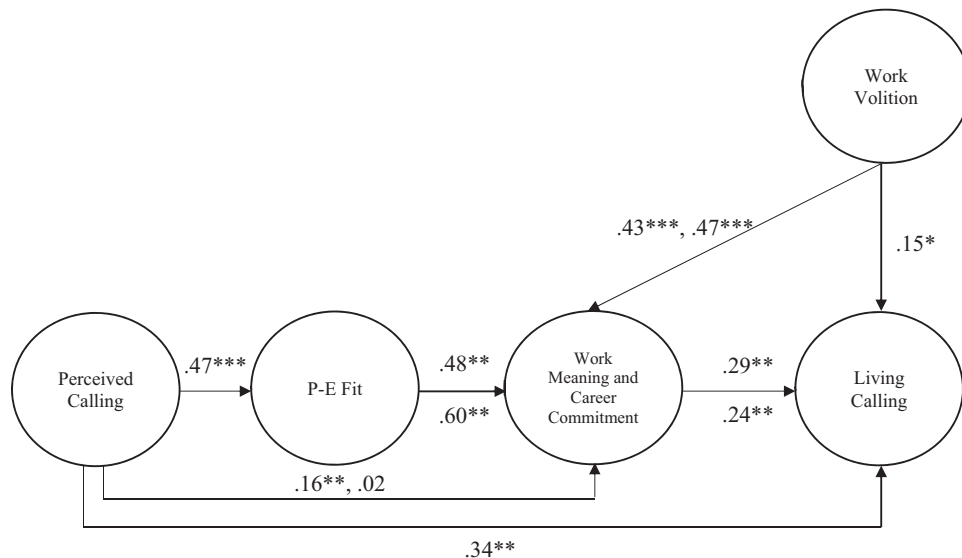

Figure 1. Structural model with standardized path estimates. The first estimate in a given pathway corresponds with work meaning, and the second pathway corresponds with career commitment. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
Hypothesis Testing From Structural Model

Hypothesized path	Support?
1. Perceiving calling → Living calling	Supported
2. Work volition → Living calling	Supported
3. Work meaning → Living calling	Supported
4. Career commitment → Living calling	Supported
5. Work volition → Work meaning	Supported
6. Work volition → Career commitment	Supported
7. Work volition → Work meaning → Living calling	Supported
8. Work volition → Career commitment → Living calling	Supported
9. Perceiving calling → Work meaning	Supported
10. Perceiving calling → Career commitment	Unsupported
11. Perceiving calling → Work meaning → Living calling	Supported
12. Perceiving calling → Career commitment → Living calling	Unsupported
13. Perceiving calling → Fit	Supported
14. Fit → Work meaning	Supported
15. Fit → Career commitment	Supported
16. Perceiving calling → Fit → Work meaning	Supported
17. Perceiving calling → Fit → Career commitment	Supported
18. Perceiving calling × Calling motivation → Fit	Supported
19. Perceiving calling × Job crafting → Fit	Partially supported
20. Perceiving calling × Organizational support → Fit	Supported

Post Hoc Analyses

Given the potential overlap between P-E fit, work meaning, and career commitment—as suggested by their strong correlations—we sought to test whether these three constructs were better represented individually or as a combined construct within the WCT model. Thus, we constructed a second measurement model where P-E fit, work meaning and career commitment indicators all loaded onto one factor; the rest of the measurement model was identical to our previous model. Whereas our original measurement model had good fit to the data, this new measurement model had adequate fit to the data: $\chi^2(384) = 1239.80$, $p < .001$, CFI = .92, RMSEA = .07, 90% CI [.07, .08], $p < .001$, and SRMR = .05. Additionally, our original measurement model had lower Akaike Information Criterion (AIC; 43,767.44 vs. 44177.87) and Bayes Information Criterion (BIC; 44,277.71 vs. 44,627.39), suggesting superior fit to the data (Tabachnick & Fidell, 2013). Considering model fit and theoretical support

from the WCT, we retained our original measurement model. However, given the potential overlap among key WCT constructs, future research should further examine how distinct these core variables are.

We examined whether the results presented above might have been affected as a result of being employed full- versus part-time. To test this, we conducted t tests to compare these two groups on our study variables. People that identified as being full-time employees reported significantly greater levels of job crafting, $t(403) = 2.13$, $p = .034$, and significantly lower levels of perceiving a calling, $t(421) = -2.42$, $p = .016$. Because of these relations, we ran an additional job crafting moderation model that incorporated multiple group analysis, which allowed us to examine potential differences between the employment status groups. We only conducted this analysis for the job crafting moderation model because job crafting was the only moderator that significantly differed based on employment status. This model had adequate fit

Table 3
Indirect Relations for the Structural Model

Paths	Standardized indirect effect		Bootstrap estimate		95% confidence interval bootstrap bias corrected	
	β	SE	B	SE	Lower bound	Upper bound
PC > Fit > WM	.22*	.04	1.10	0.20	0.75	1.55
PC > Fit > CC	.28*	.04	0.59	0.09	0.44	0.81
PC > WM > LC	.05*	.02	0.14	0.05	0.05	0.26
PC > CC > LC	.01*	.01	0.02	0.04	−0.05	0.10
Fit > WM > LC	.14*	.031	0.51	0.16	0.24	0.90
Fit > CC > LC	.14*	.05	0.52	0.18	0.22	0.90
WV > WM > LC	.13*	.04	0.34	0.10	0.17	0.57
WV > CC > LC	.11*	.04	0.30	0.10	0.12	0.51
PC > Fit > WM > LC	.07*	.02	0.20	0.07	0.09	0.36
PC > Fit > CC > LC	.07*	.02	0.20	0.07	0.09	0.37

Note. PC = perceived calling; WM = work meaning; CC = career commitment; LC = living calling; WV = work volition.
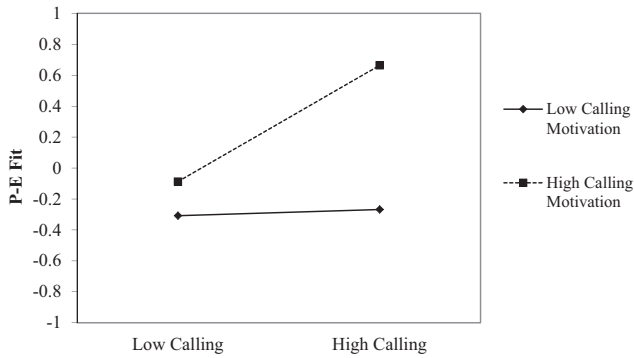* $p < .05$.

Figure 2. Calling motivation as a significant moderator of the association between calling and P-E fit.

to the data: $\chi^2(558) = 1124.56$, $p < .001$, CFI = .94, RMSEA = .07, 90% CI [.06, .08], $p < .001$, and SRMR = .07. Results from this model revealed significant differences between the two groups, such that the calling by job crafting interaction term was significantly associated with P-E fit only for full-time employees ($\beta = .13$, $SE = .05$, $p = .01$).

Discussion

The goal of the current study was to empirically examine propositions from the recently developed Work as Calling Theory (WCT; Duffy, Dik, et al., 2018), specifically focusing on the predictor portion of the model. With a sample of employed adults representing diverse social class backgrounds and occupations, support was found for the majority of the 20 hypotheses examined (17 full support, one partial support), on the whole providing general support for the model. In the following sections, we discuss findings regarding the direct effects, mediations, and moderations, and close by highlighting practical implications, limitations, and future directions.

Direct Effects

The majority of the direct effects in the model were significant, which is an important finding given that all of these paths were examined while accounting for the variance attributable to other model paths. Perceiving a calling, work volition, work meaning,
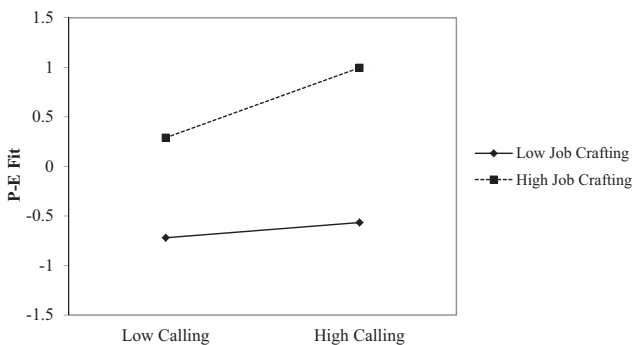

Figure 3. Job crafting as a moderator of the association between calling and P-E fit.
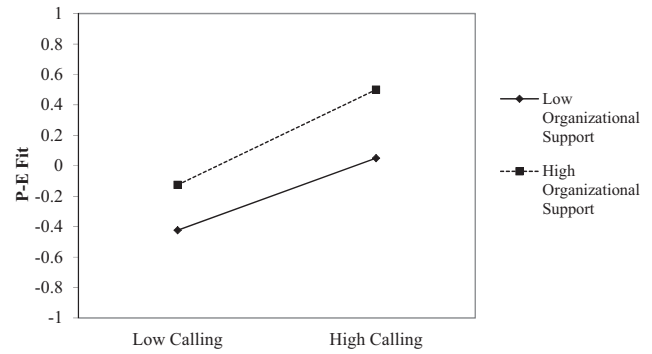

Figure 4. Perceived organizational support as a significant moderator of the association between calling and P-E fit.

and career commitment were all found to be direct predictors of living a calling, accounting for 72% of the variance in the construct. This indicates that working adults who feel a calling, have a strong sense of choice in their careers, and are working in jobs that they are committed to and derive meaning from are highly likely to feel they are living out their calling. This finding coincides with conclusions from previous studies which have often looked at several of these variables in combination as living calling predictors (e.g., Duffy, Douglass, et al., 2016; Hirschi et al., 2018). These main predictor variables themselves were also found to be predicted by other model variables. Specifically, work meaning and career commitment were each significantly predicted by work volition and P-E fit and work meaning and P-E fit were significantly predicted by perceiving a calling.

The relation of perceiving a calling and career commitment—and in turn the indirect effect of perceiving a calling on living a calling via commitment—were both unsupported. Although the correlation of perceiving a calling and commitment was moderate (.45), these nonsignificant findings suggest that within the larger model when accounting for other variables, the effect of perceiving a calling may flow more through experiences of fit and meaning then commitment. Career commitment concerns how one feels toward their career in general whereas fit and meaning concern specific feelings with one's particular work or workplace. When it comes to the impact of perceiving a calling, perhaps these specific outcomes are more instructive in explaining why a calling would lead to enhanced job satisfaction versus generally feeling committed to a career path.

Also confirming results from previous studies (e.g., Duffy, Autin, et al., 2016), individuals who are high in career commitment and meaning often endorse a strong sense of choice in selecting these careers and a strong sense of fit with their work environments. Additionally, those with a calling were more likely to express a strong fit with their work environment and derive meaning from their work. These direct effects become more noteworthy to discuss when considering their role as part of the mediation paths.

Mediation Effects

In the WCT, the six proposed mediation paths suggest that specific variables relate to one another because of another variable

in the model. Five of these six mediating paths were found to be significant. Specifically, feeling greater choice in one's career linked to an increased sense of living out a calling due to an increased commitment to, and meaning felt, from one's work. Given that the indirect effects of work volition to living a calling via meaning and commitment were as strong as the direct effect, this suggests robust mediation. It may be that a high level of choice allows individuals to live out their calling in part because of being able to select jobs where one has more positive experiences in the workplace.

The second exogenous predictor variable of living a calling, perceiving a calling, was also significantly mediated by several model variables. Perceiving a calling primarily related to work meaning and career commitment via P-E fit, where the indirect effects of perceiving a calling on meaning and commitment via fit were stronger than the direct effects. This suggests that individuals with a calling primarily have more positive experiences with their work and career because of being in a work environment that fits them well. In the case of the link of perceiving a calling to career commitment, this was fully mediated by P-E fit. Finally, perceiving a calling also indirectly related to living a calling via work meaning. Although this effect was small—likely given the weak direct relation between perceiving a calling and meaning in the full model—it does suggest that individuals with a calling are more likely to live it out when they experience greater meaning from their work.

Overall, the significant indirect effects found in the structural model test support the narrative proposed by Duffy, Dik, et al. (2018) about how a calling is enacted. Specifically, individuals who have a strong sense of calling and high levels of career choice likely enter work environments that fit them well, that they are committed to, and that they draw meaning from. Because of these high levels of fit, meaning, and commitment, individuals are more likely to feel they are living out their calling.

Moderation Effects

The final part of the model examined the three proposed moderator variables—calling motivation, job crafting, and organizational support. These proposed moderators represent the most untested part of the predictor portion of the WCT, but also offer the most potential for change. Two of these three moderators were found to be significant in the direction proposed across the entire sample—calling motivation and organizational support. Specifically, the link between perceiving a calling and fit was stronger for individuals with a greater motivation to pursue their calling and who felt supported by their organization. The job crafting effect, however, was found to be significant only for the full-time employees in our sample such that people who engaged in more job crafting had a stronger association between perceiving a calling and P-E fit. A potential reason this moderation was only significant for full-time employees is that part-time employees do not have as much time to engage in job crafting at work. Overall, these findings are important given the statistical difficulty in identifying moderation effects (McClelland & Judd, 1993), particularly when examining these effects in structural models with multiple variables. Practically speaking, they suggest intervention targets for counselors working with clients to enact their calling, which we discuss in greater detail in the following section.

Overall Significance

The predominant support of the WCT hypotheses in the current study sheds light on the path that may occur for an individual to turn a felt calling into a lived calling. Clearly, having a calling is the most important component, but the process is complex. It involves the ability to make career choices and in turn choose jobs that offer a strong person-environment fit, with key aid coming by way of personal motivation, supportive organizations, and an ability to job craft. These results serve to push research on calling forward by being the first to demonstrate the validity of a complex, theory built model. This is a critical step considering the lack of theory driven research on calling prior to the development of the WCT. As research continues to grow in this area, the WCT may offer a valid lens for which to conduct a wide range of investigations on the experience of calling at work.

Practical Implications

This study may offer important practical implications for professionals such as career counselors and organizational leaders. First and foremost, counselors must consider clients' access to opportunity in planning interventions around finding or fulfilling a calling. Work volition, which we used as the indicator of access to opportunity, was found to be a direct predictor of living a calling even after accounting for other model paths in the study, indicating its importance in calling enactment. Thus, initially assessing work volition could be helpful for counselors in planning sessions. For example, if the clients' initial work volition is low, counselors might decide to first understand the scope of factors limiting one's access to choice. Counselors should attend to both individual-level (e.g., self-efficacy, motivation) and macrolevel (e.g., economic conditions, state policies) constraints that might be limiting a sense of volition. This will help frame whether the pursuit of a calling is even feasible at the current time.

The process through which the perception of calling leads to the enactment of calling may also benefit practitioners (Duffy, Allan, et al., 2013; Duffy & Dik, 2013). As expected in the WCT, those perceiving a calling are likely to actually live out a calling because of having a great fit with their work, finding meaning in their work, and feeling committed to their work. Practitioners may ask their clients' if they have a calling and then work to understand the current levels of fit, commitment, and meaning in their current work. If these are low, what are the reasons and are there parts of the job that are amendable to change?

Further, to enhance individuals' P-E fit, counselors may focus on the relatively malleable moderators. Two proposed moderators, calling motivation and organizational support, were found to be significant in the study for all employees. Counselors and employers may use various methods to improve these two variables. For instance, counselors may encourage clients to pursue their calling despite initial misalignment with their work by helping clients find creative ways to develop work motivation. This may be built by tying the pursuit of a calling to longer term goals and/or an increase in well-being. In the organizational setting, leaders may provide opportunities where employees can be directly supported by leadership for their work tasks, particularly those that relate to an individual's sense of calling. By creating a support system for employees, organizational leaders may promote employees' subjective feelings

of being aligned with their work. This increased feeling of being aligned with one's work can also be beneficial to employers seeking to maximize job performance among employees. Complementing our findings that organizational support moderates perceiving a calling's effect on fit, Lee et al. (2016) found that organizational support also plays an important role in the relation of calling with job performance. Taken together, these findings emphasize the significance of organizational support in possible connections calling might have with maximizing job performance, showing how the implications of this model could be of added interest to organizational leaders.

Limitations and Future Directions

The results of the present study need to be considered in light of a number of limitations. First, though the sample could be considered diverse taking into account the social class backgrounds and the occupations of the participants, our sample only consisted of working adults from the United States who mostly identified themselves as white. Thus, it is difficult to extend these results to those with different cultural backgrounds, particularly racial and ethnic minorities who experience racism and marginalization that may have more pronounced impacts on access to opportunity. Future studies with racially and ethnically diverse populations may replicate the results or reveal certain nuances that may help understand how culture influences the key constructs of the WCT model. For example, for racially and ethnically diverse populations, work volition may have a greater effect on living a calling relative to other model variables given the degree to which experiencing higher levels of discrimination serves to limit a sense of choice. Another cultural variation of the model may occur with populations at different career stages (early, mid, late), as certain workplace variables may be more or less important.

Second, although this study examined the predictors of living a calling, it was conducted in a cross-sectional manner. Future longitudinal research is needed to support the directionality of the constructs. Third, we examined access to opportunity only with work volition; future studies might include other markers such as income, education, and social status to further the understanding of contextual influences on living a calling. In addition to these limitation-informed research suggestions, there are other areas for future research. The most obvious area of future research would be further examination of the WCT. Though numerous empirical studies have supported the positive effect living a calling has on outcome variables, and this study confirms many of these findings, relatively less work has been done on the potential negative effects (Dik et al., 2012; Duffy, Dik, et al., 2018). Thus, to gain a more complete understanding of the model, future research on the negative outcomes of living a calling such as workaholism, burnout, and exploitation—along with moderators of these paths—needs to be conducted. Also, studies on developing intervention strategies designed to increase the chances of enacting a perceived calling would be important once enough research is accumulated on the predictors of living a calling.

Conclusion

The Work as a Calling Theory (WCT; Duffy, Dik, et al., 2018) was developed as an answer to the numerous calls for an empiri-

cally testable theory of calling. The current study conducted an initial test of the predictors of the model, and the results generally supported the hypothesized propositions. Although this study does have its limitations, the findings provide important initial support of WCT that might guide future calling research and also provide implications for counselors and organizational leaders who are seeking to improve employee work attitudes.

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