The Relationship between Calling and Commitment: A Moderated Mediation Model

Amber Yun-Ping Lee[1]

Fei-Ran Yang[2]

Abstract

The pursuit of better performance is always the goal for organizations. In this regard, having employees with higher sense of calling has been deemed as beneficial, and thus results in burgeoning interests in the study of calling. In order to further explore the mechanism of calling and to understand the concept of calling, we proposed a moderated mediation model in which different purposes will be achieved. First, the mediating effect of career commitment illustrated the mechanism of calling that would lead to better organizational commitment. Second, we treated autonomy as the organizational manipulation to establish a moderated model between calling and career commitment. Third, we focused on exploring the meaning of calling, and further discussed the relationship among calling, autonomy, career commitment and organizational commitment.

On the whole, this study contributed to the research of calling through the proposed moderated mediation model, and also advanced understanding of the application of calling by establishing a comprehensive theoretical framework.

Keywords: Calling, Career Commitment, Organizational Commitment, Autonomy.

[1] Assistant Professor, Department of Public Administration Management, National University of Tainan, Tainan, Taiwan (Email: amberlee@gm2.nutn.edu.tw).
[2] Graduate Student, Department of Public Administration Management, National University of Tainan, Tainan, Taiwan (Email: foryyang@gmail.com).

1. INTRODUCTION

The sense of calling has emerged as a burgeoning research interest for the past decade due to its close connection to the work-related outcomes (Duffy & Dik, 2013). In accordance with several key studies of calling, we define calling as "a source or expression of one's broader sense of meaning and purpose in life, and having a calling is in a manner that one feels called by an external, beyond-the-self force to a particular career, and holds other-oriented values and goals as primary sources of motivation" (Dik & Duffy, 2009; Duffy, Dik, & Steger, 2011). Until now, previous research have recognized that people who identify their work as callings are correlated with favorable work attitude such as career commitment, job satisfaction, and lower turnover intention, etc. (Duffy, Dik, et al., 2011). However, the effects of sense of calling and how it works in the workplace remains unclear (Dik & Duffy, 2009). Of most important, the dark-side effect of calling, and the possible inconsistency of defining 'calling' from different culture also arouse our concerns of viewing calling as a positive and/or valuable research concept in the field of organizational behavior, organizational studies, and other related areas.

First of all, despite an increasing evidence of the positivity and desirability of calling, there are some contradictory results showing that the effect of calling is not always promising and beneficial. For example, Bunderson and Thompson (2009) described that calling as a "double-edged sword" because those with callings may have a constant dissatisfaction at what is not being achieved, and are more likely to induce negative effects on work-related outcomes (Cardador & Caza, 2012). Employees with higher sense of calling would also be more likely to encounter the danger of getting exploited by their employers, and thus result in withdrawal behaviors in organizations (Bunderson & Thompson, 2009; Duffy & Dik, 2013). Therefore, our first contribution of this study is to examine the mechanism of how calling could lead to positive outcomes by discussing individuals' commitments toward their careers and organizations respectively. In addition, we further discuss whether there is any organizational practice could bring on the positive rather than negative effect of calling in terms of organizational performance.

Secondly, the conceptual meaning of calling is another interesting yet fundamental issue to discuss. Although it is relatively easy to hear people talking about calling in our daily life (for example, being used as a slogan for organization mission), it is perhaps the most controversial emergent concept within recent literatures in organizational behavior. In fact, Duffy and Dik (2013) mentioned that there are seldom available empirical studies on calling in the work context prior to 2007. Since then, an ongoing debate on the definition of calling has never stopped, and has become one of the major subjects of research on callings (Wrzesniewski, 2012). Through this research, we therefore present a study to investigate the meaning of calling and examine the mechanism of calling in the workplace, and then further identify its application to organizations. We thus add career commitment as a mediator to suggest that the fit between calling and career

commitment might play a key role in delivering positive contribution toward organization. And finally, we conduct a moderated mediation model which allow us to include both individual and organizational variables into the proposed model, and in the end would provide a rigorous and comprehensive demonstration of the way callings work in the working context.

2. THEORETICAL BACKGROUND

2.1 Calling

Traced back to Judeo-Christian theology, the sense of calling represented the respond to God for a particular vocation, and therefore can be the expression of one's deepest self in work (Bellah, Sullivan, Tipton, Swidler, & Madsen, 1985; Rosso, Dekas, & Wrzesniewski, 2010). Recently, the religious root has been receded, and a more modern and secular perspective in terms of the definition of calling has been emerged. With the dramatically and rapidly changing in today's society, it is neither a necessary nor a sufficient condition to focus on religious meaning to define "calling" (Hall & Chandler, 2005). Nevertheless, there is still lack of a consensus in the definition of calling. Among all various perspectives, two central approaches of viewing the concept of calling are as an orientation toward work and as a process one experiences at work.

Viewing calling as an orientation toward work connotes that calling is categorized as one specific type of relations with work, which is supposed to differ from the other two types of relations with work – job and career orientation. People with callings believe that their work is significant and meaningful, and the purpose of doing their work is for the fulfillment for themselves rather than just make their living (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997), implying that people with callings would seek and receive meaning from their work (Dobrow & Tosti-Kharas, 2010). This approach provides an approximate figure of what a "calling" is, and implicitly shows that people with callings would pursue something bigger than themselves for the purpose of making contribution to the society or even the world (Thompson & Bunderson, 2003).

On the other hand, recently the majority of scholars have tended to conceptualize the notion of calling as a process one experiences at work (Dobrow & Tosti-Kharas, 2010). In this regard, the sense of calling is likely to arise from some force outside the person and is pertain to careers that an individual treats as meaningful (Duffy & Sedlacek, 2007). Dalton (2001) also argued that with a deep inner conviction to guide one's life, it can be referred as experiencing a calling. Hence, calling is regarded as an external pull to pursue a particular career path (Duffy, Manuel, Borges, & Bott, 2011).

In sum, to treat calling as a process one experiences at work implies that the sense of calling is no longer a binary concept, but rather it should span a continuum from weaker to stronger

(Dobrow, 2007). In addition, a multidimensional construct seems to provide a more proper approach to assess one's sense of calling across a wide range of populations (Dik, Eldridge, & Steger, 2008). Calling, in this point of view, is believed to be more easily to apply into work context and to investigate its mechanism.

2.2 Career Commitment

Having a sense of calling is regarded as a highly subjective and individual experience, and is specifically toward one's favorite career domain (Hall & Chandler, 2005). When people view their career as a calling, they will more likely to be satisfied with their jobs and put out significant effort on their jobs. That is to say, calling might be able to express through career commitment. Career commitment is the strength of one's motivation to work in a chosen career role (Hall, 1971), and can be defined as a person's attitude towards profession or vocation (Blau, 1985). Previous studies have shown that those with higher sense of calling report greater career commitment, and are less likely to withdraw from work (Duffy, Allan, & Dik, 2011). In a similar vein, one study conducted by Duffy and his colleagues (2011) again proved that higher sense of calling relates favorably to career commitment. In essence, when people sensing their callings, they will be more likely to feel that their work is a strong fit with their personal preferences, and therefore, will put more efforts to improve and develop their work-related skills, and have less intention of career or job withdrawal (Chang, 1999).

2.3 Organizational Commitment

Organizational commitment is a research topic in the management field that has long aroused interests among scholars. Based on Mowday and his colleagues' research (Mowday, Porter & Steers, 1982), organizational commitment refers to individuals' intensity of identification and their attitudes and the devotion toward a specific organization. Employees with higher level of organizational commitment would be more likely to believe and accept the objectives and values of their own organizations. In addition, they would be more willing to devoted high level of efforts for their organization, and have strong desires to commitment to their organizations (Mowday, Porter & Steers, 1982). Meyer and Allen (1991) argued that organizational commitment has three dimensions. The first is affective commitment, which refers to the employees' emotional attachment, identification and devotion to the organization. Employees commit themselves to the organization due to their strong emotion toward the organization rather than benefits. The second is continuance commitment, and it means that employees may commit to the organization because they recognize high costs of losing values if they leave the organization. Thus, they will be more likely to be bound and determined to stay in the organization. The third is normative commitment, which refers to employees' sense of obligation that keeps them within the organization. It is a kind of commitment to stay in the

organization due to their social responsibility formed when they were staying in the organization.

Previous research suggested that organizational commitment could be promoted by motivating employees' intrinsic values which are associated with their goal achievement (Shamir, House, & Arthur, 1993; Shamir, Zakay, Breining, & Popper, 1998). Scholars emphasized the linkages between employees' efforts and goal achievement through creating a higher level of individual commitment based on the shared vision, mission, and goals in the organization with their managers and colleagues (Shamir, House, & Arthur, 1993; Shamir, Zakay, Breining, & Popper, 1998). Calling, in this manner, could be seen as an indicator that would highlight the importance of value for an organization. With the fit between one's calling and the perceived value of organization, the commitment toward an organization is then established (Markow, & Klenke, 2005). Thus, based on the viewpoints proposed by different scholars, we hold that if employees have the sense of calling for their work, the organization could be a channel for employees to realize their callings. Therefore, employees will consider staying in the organization that is conducive to their callings and their commitments to the organization will grow as well.

According to pervious research, many researchers have indicated that career commitment can be regarded as an indicator for evaluating one's organizational commitment (Miller, 1979; Mobley, Griffeth, Hand, & Meglino, 1979). If career commitment makes an employee believe that the job offered by an organization is attractive, then it would be naturally very appealing for employees to stay within the organization, accordingly their organizational commitment will also increase (Kang, Yang, & Zhang, 2004). There is an interactive relationship between organizational commitment and career commitment with a relatively high correlation existing between both sides (Li, & Shi, 2007). Therefore, our research believes that employees with a high sense of calling will generate career commitment, and because the organization can provide them with the opportunity of realizing their calling, employees with high sense of calling can generate organizational commitment through career commitment. As a result, consistent with prior research, we propose that:

Hypothesis 1: An individual's sense of calling will be positively related to employee's career commitment.

Hypothesis 2: An individual's sense of calling will be positively related to employee's organizational commitment.

Hypothesis 3: An individual's career commitment will mediate the relationship between calling and organizational commitment.

2.4 Autonomy

Autonomy describes the degree of how the job provides freedom, independence, and discretion of employee to schedule their work (Hackman & Oldham, 1974), and is positively associated with job satisfaction, commitment, involvement, performance, and motivation (Aubé, Rousseau, & Morin, 2007). According to the Job Characteristics Model (JCM), autonomy is one of the five characteristics in job that provides the motivating potential for an individual (Hackman & Oldham, 1974). When employees enjoy autonomy at work, their sense of control over the job and the environment increase as well (Parker, 1998). Previous studies have pointed out that how employee think of the work environment will affect their motivation, commitment and performance (Brown & Leigh, 1996). For example, Dirks and Ferrin (2002) argued that higher level of autonomy is expected to increase trust in management, and with the increasing level of trust in management, it will automatically lead to positive attitudes and performance. Thus, autonomy is thought to be able to strengthen people's work motivation and thus put out more efforts into their jobs, and is believed to be one of significant factors in job design that will benefit the pursuit of better performance. This argument implicitly indicates that people's perception of autonomy they receive from the work will alter the relation between calling and career commitment. Therefore, we propose a conceptual framework of this study as shown in Figure 1 and assume that,

Hypothesis 4: An individual's perception of autonomy will moderate the relationship between calling and career commitment.
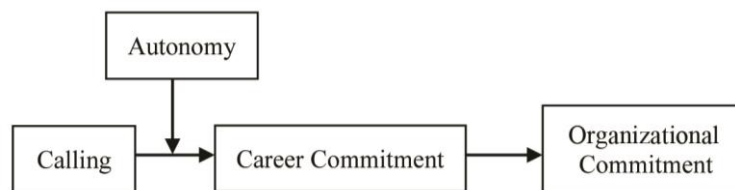

Figure1 Theoretical framework

3. Methods

3.1 Sample and Procedure

Our study is to understand the mechanism of calling and its influence on organizational commitment. Hence, we examined our hypotheses through survey data collecting from employees at different organizations and different positions in Taiwan and Mainland China.

In the end, the 646 of distributed questionnaires yielded 634 valid responses that were used for data analyses. The average age of our participants was 37 years old. More than half of these participants were female (61.5%) and were married (58.4%). The majority of our participants had

received a university degree (41.6%).

3.2 Measures

In this research, the existing research scale was adopted as the research tool. In consideration of the objectives of this research, the research questionnaire is divided into five parts (i.e., calling, autonomy, career commitment, organizational commitment and population background data), specifically as follows:

Calling – A 24-item scale developed by Dik and Steger (2008) was used to examine an employee's calling. Sample items include "I believe that I have been called to my current line of work," " I am looking for work that will help me live out my life's purpose,"" I am always trying to evaluate how beneficial my work is to others". Respondents will be tested through the Likert's five-point response scale from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for the sample was 0.933.

Career Commitment – A 7-item scale developed by Blau (1988) was used to measure an individual's career commitment. Sample items include "I definitely want a career for myself in the profession," "If I had all the money I needed without working, I would probably still continue to work in the profession," and reverse scored items like "I am disappointed that I ever entered the profession". Respondents will use the Likert's five-point response scale from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for this measure was 0.776.

Organizational Commitment – A 16-item scale developed by Meyer and Allen (1997) was used to measure an individual's organizational commitment. Sample items include "I would be very happy to spend the rest of my career with this organization," "Right now, staying with my organization is a matter of necessity as much as desire," and reverse scored items like "I do not feel any obligation to remain with my current employer". All of the items in the questionnaire employed the Likert's five-point scale format, ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha was 0.734.

Autonomy – A 9-item scale was used to measure one's work autonomy. The measure conclude three parts, including work method autonomy, work scheduling autonomy and work criteria autonomy (Breaugh, 1985). Sample items include "I am free to choose the method(s) to use in carrying out my work," "I have control over the scheduling of my work," and "I am able to modify what my job objectives are". Respondents will use a five-point scale to report their perception, ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for this scale was 0.957.

Control variables - In addition to the above-mentioned variables, this research also collected other population background variables of the sample such as age, gender, marital status and

educational background as the control variables.

4. Results

We presented the descriptive statistics (average number, standard deviation) and intercorrelations coefficient of variables in Table 1. Among the correlation analysis on main variables of calling, autonomy, career commitment and organizational commitment, results show that calling was in significant positive correlation with autonomy (r=0.46, p<0.01), career commitment (r=0.43, p<0.01) and organizational commitment (r=0.48, p<0.01). Autonomy has significant correlation with career commitment (r=0.41, p<0.01) and organizational commitment (r=0.41, p<0.01). Moreover, career commitment also has significant positive correlation with organizational commitment (r=0.53, p<0.01). To sum up, it is showed that these three variables were in significant correlation with each other. That is to say, if employees have higher level sense of calling, they not only have higher career commitment, but also have higher autonomy and higher organizational commitment as well. In the following section, we examined the regression analysis of the hypothesis in this study.

TABLE 1 Means, Standard Deviations, and Correlations among Study Variables

Variable	M	SD	1	2	3	4	5	6	7
1. Age	36.66	9.60							
2. Gender [a]	1.62	0.49	0.004						
3. Marital Status [b]	1.59	0.50	0.161**	0.032					
4. Education [c]	2.84	0.82	0.309**	-0.026	0.217**				
5. Calling	3.48	0.64	-0.82*	-0.039	0.009	-0.011			
6. Autonomy	3.50	0.92	0.052	-0.023	0.053	0.115**	0.460**		
7. Career Commitment	3.22	0.75	0.109**	-0.004	0.048	0.126**	0.433**	0.406**	
8. Organizational Commitment	3.16	0.50	0.113**	-0.039	0.002	0.057	0.482**	0.408**	0.526**

Notes: N=634　Significance at: *p < 0.05, **p < 0.01
[a] Gender: 1 = Male, 2 = Female　[b] Marital Status: 1 = Unmarried; 2 = Married
[c] Education: 1 = High school or below; 2 = University (or college); 3 = Master or above

Our research showed the influence of calling on organizational commitment and examined the mediating effect of career commitment between calling and organizational commitment in Table 2. In Model 1, we examined the background variables of age, gender, marital status and education as the control variables to organizational commitment. In Model 2, Hypothesis 1 was supported indicating that an individual's sense of calling is positively related to his/her career commitment ($\beta = 0.439$, p<0.001). In Model 3, Hypothesis 2 was also supported as prediction, suggesting that an individual's sense of calling is also positively related to employee's organizational commitment. In Model 4, Hypothesis 3 was supported showing that career

commitment mediated the relationship between calling and organizational commitment. As shown in Model 4, the regression coefficient of calling is still significant ($\beta = 0.319$, p<0.001) but reduced from 0.494 to 0.319, it revealed that career commitment had a partial mediating effect ($\beta = 0.402$, p<0.001) on the relationship between calling and organizational commitment. Therefore, Hypothesis 3 was partially supported in our research.

TABLE 2 Regression Analysis for Mediating Effect of Career Commitment

Variables	Model 1	Model 2 X → Me	Model 3 X →Y	Model 4 X, Me→Y
Age	0.105*	0.115*	0.145***	0.098**
Gender	-0.030	0.019	-0.012	-0.018
Marital Status	-0.038	0.004	-0.049	-0.052
Education	0.023	0.092*	0.019	-0.018
Calling		0.439***	0.494***	0.319***
Career Commitment				0.402***
R^2	0.014	0.212	0.256	0.384
$\triangle R^2$	0.014	0.191	0.242	0.128
F	2.043	31.532	39.846	60.038

Notes. X: Calling; Y: Organizational Commitment; Me: Career Commitment; Significance at: *p < 0.05, **p < 0.01 ***p < 0.001

As for the moderating effect of autonomy, we firstly examined the background variables of age, gender, marital status and education as the control variables in Model 1 (Table 3). In Model 2, we tested the effect of calling and autonomy on career commitment in the regression equation, and both variables were significantly related to career commitment. In Model 3, the result indicated that the coefficient on the interaction between calling and autonomy was not statistically significant ($\beta=0.014$，p>0.05). This suggested that autonomy cannot enhance the relationship between calling and career commitment. Therefore, Hypothesis 4 was not supported.

Table 3   Regression Analysis for Moderating Effect of Autonomy

Variables	Career Commitment		
	Model 1	Model 2	Model 3
Age	0.077	0.107	0.105
Gender	0.006	0.015	0.015
Marital Status	0.012	0.003	0.003
Education	0.098*	0.066	0.066
Calling		0.318***	0.319***
Autonomy		0.254***	0.255***
Calling x Autonomy			0.014
R^2	0.022	0.262	0.262
$\triangle R^2$	0.021	0.240	0.000
F	3.246	34.530	29.574

Notes. Significance at: *p < 0.05, **p < 0.01, ***p < 0.001

5. Discussion

This research explored the concept of calling and investigated the link between calling and

the organization for the purpose of advancing our understanding of calling. We further provided career commitment as the mediator and autonomy as the moderator to examine the overall mechanism of calling that would eventually lead to organizational commitment. This section summarized the results of the study and put forward corresponding management suggestions for managers in the hope to help organizations strengthen the application of calling from both theoretical and practical perspectives.

5.1 Research discussion and conclusion

First, based on the previous literature review, calling has strong subjectivity and relies much on personal experience (Hall & Chandler, 2005) and especially for the great interest of their career. Employees with higher calling exhibited higher career commitment (Duffy, Allan, & Dik, 2011). The results of our study are consistent with previous research in which calling is positively related to career commitment and organizational commitment. This also shows that when employees have a calling for their career, they can form higher level of job satisfaction in their organization and devote greater efforts to their work, revealing that calling can be expressed by people's commitment to their own careers and organizations. In fact, our study suggests that career commitment would play a partial mediating role in the relationship between calling and organizational commitment, implying that one's calling might not directly engender their commitment to the organization. As calling is seen as employees' self-identification to their own career, employees would have higher sense of commitment to their careers (Duffy, Allan, & Dik, 2011). While career commitment allows employees to display interest and work satisfaction toward their jobs, it then make employees more easily recognize their organizations as a channel to achieve their career commitment. Therefore, with higher sense of calling, employees are more likely to commitment to their careers and the subsequent sense of belonging toward their own organizations. In short, calling is believed to play a positive guiding role in the work environment (Duffy, Allan, & Dik, 2011) and act as an important factor for improving and enhancing employees' commitment toward their organizations. In the end, calling is expressed as people's pursuit for their own work on a job, while an organization serves as a tool for them to realize their objective about their calling, making employees with a calling increase their sense of dependence on the organization. This indicates that employees' commitment to the organization can be achieved through their sense of callings and career commitment.

In addition, our results also reveal that attempt to determine whether autonomy plays a moderating role between calling and career commitment. The research results indicate that autonomy did not moderate the relationship between calling and career commitment. As presented in previous research, autonomy referred to the degree of freedom, degree of independence, and employees' right of making their own arrangement of work provided by the job (Hackman & Oldham, 1974). However, our research holds that the sense of calling is

employees' own perceptions of work, and employees with calling would sustain their feeling about their favorite career fields and their calling might not be influenced by job motivation given by the organization. Likewise, career commitment is employees' attitudes toward their professions and their position that they work in, and might not be influenced by the organization's management practices and job design.

5.2 Research Implications

Based on the results and discussion of this research, management implications and directions for future research are presented in the following sections respectively.

For management implications, as calling is positively correlated to organizational commitment, we suggest that organizational managers need to maintain or strengthen employees' callings for their work, and creating a good work environment in the organization to generate sense of belonging and dependence in employees, so that they would make more contribution to their work out of their calling and bring about more performance for the organization. Therefore, future research could explore how to enhance employees' sense of callings through organizational management and practices.

However, the career commitment of employees with high sense of callings might overpass their commitment to the organization. The partial mediating role of career commitment suggests that calling could lead to organizational commitment through career commitment. Therefore, managers should aware of the linkage between career commitment and organizational commitment and to implement management practices to enhance their relation. For example, emphasizing the importance of training and career development program to employees in order to make them understand the opportunities and development in the organization. As a result, when employees are confident that they could enjoy a better future in the organization, they will be happier to consider their organization as a place to achieve their callings and career goals, which will automatically lead to higher organizational commitment in the end.

On the other hand, the insignificant influence of autonomy of this study indicates that the effect of job design might not be as strong as we predict when it comes to people's intrinsic motivation such as calling and career commitment. Therefore, future research could further explore whether autonomy has a moderating effect between career commitment and organizational commitment, or if there exists any other moderating effects among calling, career commitment, and organizational commitment (e.g., personal-organization fit and organizational support climate) in attempt to discover management practice that could better motivate employees in their work.

5.3 Research limitations

Due to the limitation of time and resources, we did not conduct a longitudinal research design for this study, but employees' working experience might have different effects at different periods of time. The calling and career commitment of newcomers in the workplace might be still at an initial stage and their understanding and adaptation in the organization would not be high enough. Over time, employees' feelings toward the organization might change. Therefore, time periods are considered to be one of the limitations of this research and it is suggested that future research could set up two or more time periods for investigating employees in an organization, so as to observe their calling and career commitment at different time periods as well as whether their commitment to the organization changes with time.

The second limitation is that the questionnaire adopted in this research is merely self-report from the employees and the results might thus lack objectivity. It is excessive subjectivity but not much persuasiveness. Therefore, our research suggests that two sets of different questionnaires for employees and managers respectively could be developed for the future research, so that not only the limitation of the subjective experience of the employees could be avoided, but also a perspective from the manager could be provided. Last but not least, to increase research samples is also good for the future studies, it would definitely make the research results more convincing and establishing more comprehensive theoretical and practical contributions.

Reference

Aubé, C., Rousseau, V., & Morin, E. M. (2007). Perceived organizational support and organizational commitment: The moderating effect of control and work autonomy. *Journal of Managerial Psychology, 22*(5), 479-495. doi: 10.1108/02683940710757209

Bedeian, A., Kemery, E., & Pizzolatto, A. (1991). Career commitment and expected utility of present job as predictors of turnover intentions and turnover behavior. *Journal of Vocational Behavior, 39*, 331-343.

Bellah, R., Sullivan, W., Tipton, S., Swidler, A., & Madsen, R. (1985). *Habits of the Heart*: University of California Press Berkeley.

Berg, J. M., Grant, A. M., & Johnson, V. (2010). When callings are calling: Crafting work and leisure in pursuit of unanswered occupational callings. *Organization Science, 21*(5), 973-994. doi: 10.1287/orsc.1090.0497

Blau, G. J. (1985). The measurement and prediction of career commitment. *Journal of Occupational Psychology, 58*(4), 277-288.

Blau, G. J. (1988). Further exploring the meaning and measurement of career commitment. *Journal of Vocational Behavior, 32*(3), 284-297. doi: http://dx.doi.org/10.1016/0001-8791(88)90020-6

Breaugh, J. A. (1985). The Measurement of Work Autonomy. *Human Relations, 38*(6), 551-570.

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology, 81*(4), 358-368. doi: 10.1037/0021-9010.81.4.358

Bunderson, J. S., & Thompson, J. A. (2009). The Call of the Wild: Zookeepers, Callings, and the Double-edged Sword of Deeply Meaningful Work. *Administrative Science Quarterly, 54*, 32-57.

Burke, R. J., & Fiksenbaum, L. (2008). Work motivations, work outcomes, and health: Passion versus addiction. *Journal of Business Ethics, 84*(S2), 257-263. doi: 10.1007/s10551-008-9697-0

Cardador, M. T., & Caza, B. B. (2012). Relational and identity perspectives on healthy versus unhealthy pursuit of callings. Journal of Career Assessment,20(3), 338-353.

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology, 83*(2), 234-246.

Chang, E. (1999). Career commitment as a complex moderator of organizational commitment and turnover intention. *Human Relations, 52*(10), 1257-1278.

Dalton, J. C. (2001). Career and calling: Finding a place for the spirit in work and community. *New Directions for Student Services, 2001*(95), 17-25. doi: 10.1002/ss.19

Dik, B. J., & Duffy, R. D. (2009). Calling and Vocation at Work: Definitions and Prospects for Research and Practice. *The Counseling Psychologist, 37*(3), 424-450. doi: 10.1177/0011000008316430

Dik, B. J., Eldridge, B. M., & Steger, M. F. (2008). *Development of the Calling and Vocation Questionnaire (CVQ)*. Paper presented at the American Psychological Association, Boston.

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87*(4), 611-628. doi: 10.1037/0021-9010.87.4.611

Dobrow, S. R. (2004). *Extreme subjective career success: A new integrated view of having a calling*. Paper presented at the Best Paper Proceedings of the Academy of Management Conference, New Orleans.

Dobrow, S. R. (2007). *The development of calling: A longitudinal study of musicians*. Paper presented at the Best Paper Proceedings of the Academy of Management Conference, Philadelphia.

Dobrow, S. R., & Tosti-Kharas, J. (2010). *Calling " a calling" a calling: The development of a scale measure*. Working Paper.

Duffy, R. D., Allan, B. A., & Dik, B. J. (2011). The presence of a calling and academic satisfaction: Examining potential mediators. *Journal of Vocational Behavior, 79*(1), 74-80. doi: 10.1016/j.jvb.2010.11.001

Duffy, R. D., & Dik, B. J. (2013). Research on calling: What have we learned and where are we going? *Journal of Vocational Behavior, 83*(3), 428-436. doi: http://dx.doi.org/10.1016/j.jvb.2013.06.006

Duffy, R. D., Dik, B. J., & Steger, M. F. (2011). Calling and work-related outcomes: Career commitment as a mediator. *Journal of Vocational Behavior, 78*(2), 210-218. doi: 10.1016/j.jvb.2010.09.013

Duffy, R. D., Manuel, R. S., Borges, N. J., & Bott, E. (2011). Calling, vocational development, and well being: A longitudinal study of medical students. *Journal of Vocational Behavior*. doi: 10.1016/j.jvb.2011.03.023

Duffy, R. D., & Sedlacek, W. E. (2007). The presence of and search for a calling: Connections to career development. *Journal of Vocational Behavior, 70*, 590-601. doi: 10.1016/j.jvb.2007.03.007

Elangovan, A. R., Pinder, C. C., & McLean, M. (2010). Callings and organizational behavior. *Journal of Vocational Behavior, 76*(3), 428-440. doi: 10.1016/j.jvb.2009.10.009

Hackman, J. R., & Oldham, G. R. (1974). The job diagnostic survey: An instrument for the diagnose is of jobs and the evaluation of job redesign projects.

Hall, D. T. (1971). A theoretical model of career subidentity development in organizational settings. *Organizational Behavior and Human Performance, 6*(1), 50-76. doi: http://dx.doi.org/10.1016/0030-5073(71)90005-5

Hall, D. T., & Chandler, D. E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior, 26*, 155-176. doi: 10.1002/job.301

Hirschi, A. (2011). Callings in career: A typological approach to essential and optional components. *Journal of Vocational Behavior, 79*(1), 60-73. doi: 10.1016/j.jvb.2010.11.002

Hirschi, A., & Herrmann, A. (2013). Calling and career preparation: Investigating developmental patterns and temporal precedence. *Journal of Vocational Behavior, 83*(1), 51-60. doi: http://dx.doi.org/10.1016/j.jvb.2013.02.008

Lee, A. Y.-P. (2011). *Understanding the sense of calling in the work context.* (PhD), National Sun Yat-sen University, Kaohsiung City.

Lee, A. Y.-P., Chen, I.-H., Chen, H.-C., & Chang, P.-C. (2012, June 20-24). *Where does the sense of calling come from? The examination of individual and organizational factors for sources of calling*. Paper presented at the International Association for Chinese Management Research, Hong Kong, China.

Markow, F., & Klenke, K. (2005). The effects of personal meaning and calling on organizational commitment: An empirical investigation of spiritual leadership. *International Journal of Organizational Analysis*, *13*(1), 8-27.

Meyer, J. P., & Allen, N. J. 1991. A three-component conceptualization of organizational commitment. ***Human Relations***, 44 (1): 61-89.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace*. Thousand Oaks, CA: Sage. Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology, 79*(4), 475-480. doi: 10.1037/0021-9010.79.4.475

Miller, S. M. (1979). Controllability and human stress: Method, evidence and theory. *Behaviour Research and Therapy*, *17*(4), 287-304.

Mobley, W. H., Griffeth, R. W., Hand, H. H., & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological bulletin*, *86*(3), 493.

Mowday, R. T., Porter, L. W., & Steers, R. M. 1982. *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. San Diego, CA: Academic Press.

Parker, S. K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology, 83*(6), 835-852. doi: 10.1037/0021-9010.83.6.835

Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*. doi: 10.1016/j.riob.2010.09.001

Shamir, B., House, R., & Arthur, M. (1993). The motivational effects of charismatic leadership: A self-concept theory. *Organization Science, 4,* 577-594.

Shamir, B., Zakay, E., Breining, E., & Popper, M. (1998). Correlates of charismatic leader behavior in military units: subordinates' attitudes, unit characteristics and superiors' appraisal of leader performance. *Academy of Management Journal, 41,* 387-409.

Thompson, J., & Bunderson, J. (2003). Violations of principle: Ideological currency in the psychological contract. *The Academy of Management Review, 28*(4), 571-586.

Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers and callings: People's relations to their work. *Journal of Research in Personality, 31*, 21-33.

Wrzesniewski, A. (2012). Callings. In K. Cameron & G. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 45-54). New York: Oxford University Press.