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Callings in career: A typological approach to essential and optional components

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ABSTRACT

A sense of calling in career is supposed to have positive implications for individuals and organizations but current theoretical development is plagued with incongruent conceptualizations of what does or does not constitute a calling. The present study used cluster analysis to identify essential and optional components of a presence of calling among 407 German undergraduate students from different majors. Three types of calling merged: "negative career self-centered", "pro-social religious", and "positive varied work orientation". All types could be described as vocational identity achieved (high commitment/high self-exploration), high in career confidence and career engagement. Not defining characteristics were centrality of work or religion, endorsement of specific work values, or positivity of core self-evaluations. The results suggest that callings entail intense self-exploration and might be beneficial because they correspond with identity achievement and promote career confidence and engagement while not necessarily having pro-social orientations. Suggestions for future research, theory and practice are suggested.

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Introduction

In recent years, there has been increased scientific interest in the perception of having a calling regarding one's career, or "work that a person perceives as [her or] his purpose in life" (Hall & Chandler, 2005, p. 160). It has been argued that a sense of calling is the ultimate form of subjective career success and an important promoter of career metacompetencies, such as identity and adaptability (Hall & Chandler, 2005). A sense of calling is also regarded as an important source of meaning and purpose in work, and it corresponds with the emerging interest in positive organizational scholarship whose purpose is to investigate the conditions that enable employees and organizations to thrive and reach their full potential (Cameron & Caza, 2004; Steger & Dik, 2010; Wrzesniewski, 2003). Supporting the proposed positive effects of a sense of calling, empirical research has shown that there is a positive relationship between work and life satisfaction, meaning in life, career decidedness, career choice comfort, self clarity, choice-work salience, work enjoyment, and positive affect (Duffy & Sedlacek, 2007, 2010; Steger, Pickering, Shin, & Dik, 2010; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997).

Despite these promising results, there is still disagreement over what exactly defines a sense of calling. For example, for Dik and Duffy (2009), it entails an external summons, which distinguishes it from the notion of vocation. However, Hall and Chandler (2005) and Elangovan, Pinder, and McLean (2010) propose that a calling can also stem from within and originate from intense self-reflection. Likewise, several notions stress the importance of other-directed and pro-social values as a part of one's calling (Dik & Duffy, 2009; Elangovan et al., 2010), while others do not consider this to be a defining component (Hall & Chandler, 2005). In order to advance our understanding of calling in one's work and career, it seems necessary to clarify the concept.

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The present paper makes a contribution to this emerging literature by proposing and empirically investigating the notion that a sense of calling ought to be approached from a typological perspective. That is, we propose that there are different types of callings for different people. We propose, and subsequently empirically demonstrate, that some key components are present among all types of calling, while others are true for some but not others. In this way, the present study contributes to a greater conceptual clarity of what may or may not constitute a sense of calling, which can guide further research and practice in this area.

What constitutes a calling?

In its earliest forms, calling has been perceived in a religious way as a summons by God for a religious life and, later, as a calling for whatever honest work one might be supposed to do (for historical overviews, see Dik & Duffy, 2009; Elangovan et al., 2010). Until today, calling has been defined by some as a call to serve God or as a summons by God to a particular career (Dalton, 2001; Davidson & Caddell, 1994). However, most current conceptualizations of the construct acknowledge that religiosity is neither necessary nor sufficient to experience a calling in work. Hall and Chandler (2005) define a calling as a sense of purpose, that is, the work one was meant to do (p. 155), and as work that a person perceives as his purpose in life (p. 160). As such, they propose a secular view of calling, where (a) the source of calling comes from within the individual; (b) the calling serves the individual and/or community; (c) the calling is identified by means of introspection, reflection, meditation, and/or relational activities; and (d) the meaning of a calling is enacting one's individual purpose for personal fulfillment.

While the possible secular nature of one's calling is also acknowledged by Dik and Duffy (2009), they differ in some important aspects form the secular notion proposed by Hall and Chandler (2005). In their conceptualization (Dik & Duffy, 2009), a calling is distinct from a vocation. Both entail an overall sense of purpose and meaningfulness. However, a calling is distinct from a vocation in that it emerges from a transcendent summons, experienced as originating beyond oneself. This summons does not need to be experienced as stemming from God but can also stem from the needs of society or a serendipitous fate. Another defining component of calling (and vocation) for Dik and Duffy is that it holds other-oriented values as the primary source of motivation. In this way, they define calling as “a transcendent summons, experienced as originating beyond the self, to approach a particular life role in a manner oriented toward demonstrating or deriving a sense of purpose or meaningfulness and that holds other-oriented values and goals as primary sources of motivation” (Dik & Duffy, 2009, p. 427). They further propose that a calling is an inclusive and cross-culturally relevant construct that involves an ongoing process of evaluating the purpose and meaningfulness in one's work and is not immediately and finally discovered. Moreover, their definition implies that every person can potentially have a vocation and that a calling can occur in every legitimate area of work (Wrzesniewski et al., 1997).

Still another conceptualization has been proposed by Elangovan et al. (2010). For them, calling is “a course of action in pursuit of pro-social intentions embodying the convergence of an individual's sense of what he or she would like to do, should do, and actually does” (Elangovan et al., 2010, p. 430). Importantly, their conceptualization does not include the focus on an external summons as proposed by Dik and Duffy (2009). They suggest (Elangovan et al., 2010) that callings have three fundamental features: (a) an action orientation reference to the course of action used to enact one's calling and not just being an attitude or perception if it; (b) a sense of clarity of purpose and personal mission; and (c) pro-social intentions.

As can be seen from these recent conceptualizations, there are some similarities, as well as significant differences, in what does or does not constitute a calling. All of the definitions seem to agree that a sense of calling entails a sense of purpose and meaning in work. However, they disagree over whether a calling stems from an external summons or can also come from within the individual as a result of intense self-reflection. Moreover, many see pro-social values and goals as a defining component. However, for Hall and Chandler, this only applies to a religious notion of calling and not to their proposed secular view, where callings might also serve the individual.

In an attempt to provide clarity to what people actually perceive as the meaning of a calling, Hunter, Dik, and Banning (2010) asked 435 U.S. undergraduate students how they would define “calling”, what it would mean for them to approach their career as a calling, and whether and how calling would apply to areas of life other than work. Their results showed that for many students, calling was defined as including a guiding force, personal fit, eudemonic well-being, and altruism. Students further reported that approaching their career as a calling meant following the guiding forces, pursuing their interests, talents and/or meaning, displaying altruism, and showing effortless dedication. Finally, they noted that a calling could apply not just to work but also to relationships, to meaningful activities, to one's lifestyle/character, or simply to everything in life. Hunter et al. (2010) interpret these results as confirming Dik and Duffy (2009) definition of a calling as including an external summons, meaning, and pro-social goals. However, the results also suggest that this might be true for some but not other participants, where calling might have a different meaning and connotation.

It seems clear that if we want to meaningfully proceed in the scientific investigation of calling and careers, we need a greater degree of conceptual clarity of the defining characteristics of callings that apply to all people, as well as the components that might be true for some but not others. The present study makes such an empirical investigation based on a person-centered typological approach. This approach assumes that study participants can differ significantly in the constructs of interest and that subgroups should be identified (Molenaar, 2004; Vondracek & Porfeli, 2002). Conversely, the dominant variable-centered approach (e.g., correlation, regression, factor analysis, and structural equation modeling) relies on mean patterns and relationships among variables that are true for the “average” participant of a study. Given the diversified nature of the conceptualization of calling in its current state, this approach might therefore blur important individual differences. Many studies on calling and career (Dobrow & Higgins, 2005; Hunter et al., 2010; Novak, 1996) have used qualitative methods to tap individual and diversified meanings of calling. However, these approaches are limited in that they cannot provide exact numerical and statistical analyses of common and

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diverging components of calling and are often more limited in their generalizability due to the typically much smaller number of participants compared to quantitative research studies. In the following, we will propose some theoretically important, sometimes disputed or neglected, key characteristics regarding a sense of calling in career and derive specific hypotheses of what they imply for a typological approach to calling. Table 1 provides an overview of the investigated concepts and their proposed relationship to the presence of calling.

Essential and optional dimensions of calling

Vocational identity status

A sense of calling in one's career should be closely related to one's vocational identity. Vocational identity can be defined as the conscious awareness of oneself as a worker in terms of the importance of work and one's perception of occupational interests, abilities, goals, and values and the structure of meanings in which such self-perception is linked with career roles (Ibarra & Barbulescu, 2010; Meijers, 1998; Skorikov & Vondracek, 2007). Therefore, the development of vocational identity is a process of constructing meaning regarding one's work (Ibarra & Barbulescu, 2010). As such, it shares a close conceptual relationship with calling, which is also defined as entailing meaning and purpose for one's career (Dik & Duffy, 2009; Elangovan et al., 2010; Hall & Chandler, 2005). Supporting the connection of identity and calling, the empirical study by Duffy and Sedlacek (2007) has shown among a large number of U.S. first-year college students that the presence of a calling correlated positively with career decidedness and self-clarity, which are defining components of one's vocational identity (Skorikov & Vondracek, 2007).

However, the identity status model proposed by Marcia (1980) as an elaboration of Erikson's (1968) theory of ego development states that identity is composed of not only self- and goal clarity (i.e., commitment) but also identity exploration and crisis. These two dimensions of exploration and commitment are proposed to be independent and result in four possible identity statuses, each defined by a unique combination of degree of exploration and commitment. Specifically, according to this model, *identity achievement* is reached after a thorough exploration of possibilities and successfully resolution of an identity crisis, resulting in a commitment to a self-chosen goal. This status is therefore represented by high commitment and high exploration. *Identity foreclosure* describes a state in which the commitment to an identity has been typically reached by a premature identification with a role model without prior exploration and crisis and is thus characterized by high commitment but low exploration. *Identity moratorium* refers to an active ongoing process of exploration and crisis and a lack of readiness to commit to a certain identity. This model is represented by high exploration but low commitment. Finally, *identity diffusion* refers to a lack of engagement in and concern about the identity construction process, represented by low exploration and low commitment. This model has been frequently and fruitfully applied to vocational identity development. Supporting its validity are studies that report positive relationships between more advanced identity statuses (i.e., achievement) in relation to well-being, vocational interest structure, personality, or work engagement (Fadjukoff, Pulkkinen, & Kokko, 2005; Hirschi, in press; Luyckx, Duriez, Klimstra, & De Witte, 2010; Solomontos-Kountouri & Hurry, 2008; Vondracek, Schulenberg, Skorikoc, Gillespie, & Wahlheim, 1995).

Table 1
Overview of the investigated constructs and their proposed relation to the presence of calling.

	Essential	Optional
Career decidedness		
Self-reflection	H1a ✓	H1b ✗
Career engagement	H2 ✓	
Career confidence	H3 ✓	
Work importance		H4a ✓
Religion importance		H4b ✓
Self-transcendence values		H5a ✓
Conservation values		H5b ✓
Openness to change values		H5c ✓
Self-enhancement values	H5d ✗	
Positive self-evaluations	H6 ✗	

Note. H1 to H6 refer to the proposed hypotheses in the text.
✓ : Hypothesis supported; ✗ : Hypothesis not supported.

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Therefore, it seems important to investigate identity dimensions, commitment and exploration in relation to the presence of calling. For example, Hall and Chandler (2005), as well as Elangovan et al. (2010), have suggested that discovering a sense of calling is based on intense self-reflection and exploration. Conversely, while Dik and Duffy (2009) have also stated that since callings are not defined once and for all but represent an ongoing process of evaluation, their notion of external summons implies that one's calling can be found from an outer source without intense self-exploration. Using Marcia's model, a calling would therefore necessarily imply a clear sense of clarity and commitment in one's career but might or might not be based on intense self-exploration. Therefore, calling could correspond to identity achievement or foreclosure but not to moratorium or diffusion.

Hypothesis 1a. People with a sense of calling in their career possess high clarity regarding and commitment to their career decisions and career goals.

Hypothesis 1b. Active self-reflection is related to a sense of calling for some people but not for others.

Career engagement

Elangovan et al. (2010) have proposed that an action orientation is a key element of a sense of calling. While this is not a common feature in the other definitions of the construct, it makes strong theoretical sense to assume that people who perceive their careers as callings are more engaged in their career development in order to enact their calling. Actively engaging in the development of one's career by means of environment exploration, information collection, or networking is a key component of career self-management (King, 2004; Kossek, Roberts, Fisher, & Demarr, 1998; Stickland, 1996) and the self-directed nature of protean careers (Hall, 2004). As outlined by Hall and Chandler (2005), a sense of calling in career choice could thus be a major driving force for enacting one's career plans in a self-directed manner. For the present purpose, we define career engagement as the combined efforts put into developing one's career.

Hypotheses 2. People with a sense of calling in their career show a high level of career engagement.

Career confidence

Hall and Chandler (2005) have proposed that a sense of calling should be closely related to a sense of competence. Because people with a calling are proposed to be enacting what they believe to be their purpose in life or reflecting their “true self”, they should also have a sense of confidence in their career development. Goldman and Kernis (2002) and Kernis (2003) demonstrated that self-esteem, a distinct but closely related construct to confidence (Betz & Klein, 1996; Chen, Gully, & Eden, 2004), related positively to authenticity, or acting as one truly is. Supporting these theoretical arguments, the empirical study by Duffy and Sedlacek (2007) showed positive correlations between career decision-making self-efficacy and the presence of calling. Conversely, within the present study, we will focus on career or occupational self-efficacy, which is not restricted to career decision-making but more generally refers to the competence that a person feels concerning the ability to successfully fulfill the tasks involved in his or her work and career (Betz, 2007). As such, we have a close proximity regarding the level of specificity between calling and confidence, both of which are not restricted to career choices but rather entail one's work and career in a more general manner.

Hypotheses 3. People with a sense of calling in their career possess high confidence regarding their work and career development.

Centrality of work and religion

Another critical variable that was assessed in relation to calling is work centrality, which refers to the degree of importance that working has in the identity of an individual (Judge, Cable, Boudreau, & Bretz, 1995). On one hand, we can expect that work would have a significant importance for people with a calling because a calling refers to one's purpose in life and would enable those with a calling to live out their purpose and create meaning in their lives. However, the qualitative data by Hunter et al. (2010) showed that a number of students reported that calling would not just apply to work but to many areas of life. Therefore, it is conceivable that some people enact their calling not within their careers but in other areas of life (e.g., family, community). For them, work (i.e., the job that they are paid for) might not be of utter importance. Therefore, we expect there to be no emergence of a clear pattern of work centrality and a sense of calling.

Hypothesis 4a. Work is important for some people with a sense of calling but not for others.

A second critical dimension is the centrality of religion. As outlined above, it is broadly acknowledged that callings do not need to have religious roots. Still, some definitions include a reference to God or external summons (Dalton, 2001; Davidson & Caddell, 1994; Dik & Duffy, 2009). Also, a large number of the U.S. undergraduate students included in the study by Hunter et al. (2010) reported that a calling for them is something stemming for a guiding force, which might have religious connotations. However, the empirical study by Steger et al. (2010) showed that the effects of religiousness on calling are mediated by meaning, supporting the notion that secular perceptions of callings are equally valid and that the source of the meaning might not be important. Given the acknowledged secularization of the calling construct, we expect that the importance of religion is not a generally defining component of people who have a calling.

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Hypothesis 4b. Religion is important for some people with a sense of calling but not for others.

Work values

Many notions of calling state that pro-social, other-oriented values and goals are key defining components of what constitutes a calling (Dik & Duffy, 2009; Elangovan et al., 2010; Wrzesniewski et al., 1997). However, Hall and Chandler (2005) propose that serving one's community is typical for a religious view of calling but that a secular notion of the concept can also entail serving the individual. In fact, pro-social values are only one type of value people can hold. Schwartz' circumplex model of universal values (Schwartz & Bilsky, 1987; Schwartz & Boehnke, 2004), which has been extensively evaluated and supported in empirical research, distinguishes four basic types of values, each of which consists of more specific values: (a) self-transcendence values (consisting of benevolence and universalism values); (b) self-enhancement values (achievement, power, and hedonism values); (c) openness to change values (self-direction and stimulation); and (d) conservation values (conformity, tradition, and security). Cable and Edwards (2004) have translated Schwartz's model into more specific work values, where self-transcendence values are represented by altruism (corresponding to universalism in Schwartz's model) and relationships with others (benevolence); self-enhancement values by pay (achievement/hedonism) and prestige (power); conservation values by security (security) and authority (conformity/tradition); and openness to change values by variety (stimulation) and autonomy (self-direction). Within this taxonomy, only self-transcendence values include other-oriented and pro-social values.

Based on a pro-social notion of calling, we would therefore expect that people with a sense of calling necessarily endorse self-transcendence values in their work. However, research has shown that values are systematically related to personality traits and vocational interests (Bilsky & Schwartz, 1994; Hirschi, 2008; Roccas, Sagiv, Schwartz, & Knafo, 2002; Rottinghaus & Zytowski, 2006). Therefore, linking callings exclusively with self-transcendence values would imply that we assume that all people with a sense of calling have similar personality traits and vocational interests. Because previous research has clearly shown that values, interests, and personality traits are systematically related to the type of work people do (Holland, 1997; Knafo & Sagiv, 2004; Segal, 1992), this would strongly contradict the proposition and empirical evidence that people in all kinds of work can experience a calling (Dik & Duffy, 2009; Elangovan et al., 2010; Wrzesniewski et al., 1997). Therefore, we assume that callings are not restricted to self-transcendence values.

However, we assume that a sense of calling represents an intrinsic motivation to work (Deci & Ryan, 1985; Elangovan et al., 2010). In reference to values, intrinsic values refer to values that are deemed to be important in their own right, while extrinsic values are deemed to be important because they allow some external rewards (Ros, Schwartz, & Surkiss, 1999). Within the framework applied herein, self-enhancement values (pay and prestige) represent extrinsic work values (Cable & Edwards, 2004). Therefore, we expect that people with a sense of calling do not strongly endorse self-enhancement work values.

It has to be remarked that by definition, values represent positive and desirable entities. Therefore, people usually endorse all types of values simultaneously (Hitlin & Piliavin, 2004). In order to provide meaningful distinctions between value endorsements, the importance of specific personal values has to be compared to the relative endorsement of other values by the same person. Therefore, we cannot assume that people with callings would not endorse self-enhancement values; rather, we can only say that, relative to the endorsement of the other types of values, they are less important. In sum, we assume that a sense of calling can entail strong self-transcendence, openness to change, or conservation values but that it cannot entail strong self-enhancement values.

Hypotheses 5a. Self-transcendence work values (altruism, relations with others) are relatively important for some people with a sense of calling but not for others.

Hypotheses 5b. Conservation work values (security, authority) are relatively important for some people with a sense of calling but not for others.

Hypotheses 5c. Openness to change work values (variety, autonomy) are relatively important for some people with a sense of calling but not for others.

Hypotheses 5d. Self-enhancement values (pay, prestige) are relatively unimportant for people with a sense of calling.

Personality

A final dimension that is considered in the present study is personality. The possibility that people with certain personality traits might be more or less predisposed to experience a sense of calling in their career has not been adequately addressed in the present literature. However, it has both theoretical and practical importance. From a theoretical perspective, the link between personality and one's calling would be important to get a clearer picture of what constitutes a calling and what might be possible antecedents of developing a calling. Importantly, this dimension will not become apparent if people are asked what they think constitutes a calling (Hunter et al., 2010) because it can be expected that most people are not consciously aware of their basic traits. From a practical perspective, one of the reasons why the notion of calling is interesting to counseling and organizational scholars is the possibility that a sense of calling might be enhanced by certain counseling interventions (Dik, Duffy, & Eldridge, 2009; Dik & Steger, 2008) in order to promote personal well-being and positive organizational outcomes. If, however, trait-like personality dispositions effect whether people are more or less likely to experience callings, this would have important implications for counseling interventions.

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Within the present study, we focus on the construct of core self-evaluations (CSE; Judge, Erez, Bono, & Thoresen, 2003), which represents the "basic, fundamental appraisal of one's worthiness, effectiveness, and capability as a person" (p. 304). The construct represents the trait-like common core of neuroticism, self-esteem, self-efficacy, and locus of control beliefs (Judge et al., 2003). These constructs encompass some of the most important personal dispositions proposed in the career literature, and they support for the validity and importance of the CSE construct, which comes from an increasing number of studies showing its relationship to work, career, and life outcomes (e.g., Judge, Bono, Erez, & Locke, 2005; Judge & Hurst, 2007).

Research has shown that one component of CSE, trait neuroticism, is largely unrelated to vocational interests (Gottfredson, Jones, & Holland, 1993). However, there is solid empirical support that neuroticism, trait anxiety, self-esteem, and locus of control beliefs are importantly related to vocational identity, career indecisiveness, and well-being (e.g., Diener, Suh, Lucas, & Smith, 1999; Holland, Johnston, & Asama, 1993; Luyckx, Soenens, & Goossens, 2006; Saka & Gati, 2007). Generally, those studies show that less favorable traits in terms of neuroticism, low self-esteem, or external control beliefs are related to career indecisiveness, a less clear identity, and a lower sense of well-being. Due to the close relationship between calling and those constructs, it is conceivable that people with less favorable CSE also face more difficulty in developing a clear sense of calling in their career. Having positive views about oneself can be expected to facilitate the development of a clear sense of one's career goals, identity, and purpose, which are important components of calling. Therefore, we expect the following:

Hypotheses 6. People with a sense of calling have positive core self-evaluations.

The context of the present study

We investigated the presence of calling and its proposed related dimensions among a group of German university students. It has been argued that this population, which faces emerging adulthood, is an important group in which to investigate the phenomenon of calling due to the fact that people face the task of developing a clear identity and career direction in this phase of life in many post-industrial societies (Arnett, 2000; Duffy & Sedlacek, 2007, 2010; Hunter et al., 2010). Moreover, by investigating college students, the present study can provide results that are comparable to previous research conducted in the U.S., but it also provides a different cultural background, which is important to enrich our understanding of callings (Dik & Duffy, 2009).

Method

Participants

A diverse group of undergraduate students from a medium-sized public university in northern Germany participated in the study ($N = 407$). Between them, they majored in 12 different areas ranging from engineering to social work. The largest groups were students of Applied Cultural Studies (8.6%), Business Administration (11.1%), and Business Psychology (20.4%). A slight majority were female (64.9%), 16 (3.9%) did not indicate their gender. The mean age was 23 years ($SD = 2.8$), and their mean semester of study was 4 ($SD = 2.1$). In accordance with university regulations, no data on race were collected.

Measures

Presence of calling

The presence of a sense of calling in one's career was assessed with the Brief Calling Scale—Presence of Calling: a two-item scale ("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") by Steger and Dik (2006). The answers to these items were indicated on a five-point Likert scale ranging from *not at all true of me* to *totally true of me*. As reported by Duffy and Sedlacek (2007), the actual source of a calling was purposefully absent from the items to allow participants to decide for themselves what, if anything, was the source of their calling. The two items were independently translated into German by two post-doctoral researchers with high proficiency in the English language, and a consensus was reached regarding the final version. This was then back-translated into English by graduate students in psychology with high English proficiency. The results were again compared, and a final German-language version was conceived. Previous research with the original scale has shown significant relationships between responses and career decision self-efficacy, intrinsic work motivation, religious commitment, and meaning in life (Dik & Steger, 2008; Duffy & Sedlacek, 2007; Steger et al., 2010). As in previous studies, the two items were significantly related within the present sample, $r = .66$, $p < .001$.

Career decidedness/commitment

Career decidedness/commitment was measured with a German-language adaptation of the *Vocational Identity Scale* (Holland, Daiger, & Power, 1980; Jörin, Stoll, Bergmann, & Eder, 2004). The seven items tapping the degree of identity clarity were selected for the present study, and students could indicate on a five-point Likert scale the degree to which the statements (e.g., "I'm not sure yet which occupations I could perform successfully") resembled their personal situation by ranking them from *not at all* to *completely*. The measure is well established in the international literature (Holland et al., 1993), and studies using the German language version show that the scale shows positive correlations with career decidedness, career planning, and career exploration

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among adolescents and college students (Hirschi, 2009a,b; Hirschi & Läge, 2007; Jörin Fux, 2006). Cronbach's alpha in the present sample was .91.

Self-exploration

The degree of self-reflection was assessed with the four items from the career exploration scale developed and validated by Hirschi (2009a). The measure asked students to indicate on a five-point Likert scale the degree to which they engaged in self-reflective behaviors (reflection about personal interests, skills, preferences, what makes one enjoy work), with answers ranging from *seldom/few* to *very much/a lot*. Previous studies have shown positive correlations between this scale and other measures of career exploration, career decidedness, career planning, and career choice congruence (Hirschi, 2010a,b; Hirschi, Niles, & Akos, 2011). Cronbach's alpha in the present sample was .84.

Career engagement

The degree to which students were actively engaged in advancing their career was assessed with eight items. Three questions were general in nature (e.g., "I am actively engaged in shaping my future career"), five tapped specific career behaviors (developing career plans, collecting information about possible employers, establishing professional contacts, voluntarily participating in professional training or education, taking assignments or positions that could promote one's career). Students had to indicate on a five-point Likert scale, ranging from *seldom/few* to *very much/a lot*, the degree to which they were engaged in those behaviors during the previous six months. Support for the construct validity comes from its significant correlations within the present sample to career decidedness, career self-efficacy, and self-exploration presented in Table 1. Cronbach's alpha was .88.

Confidence

The extent to which a student felt confident that she or he would be able to master different tasks in his or her career development was assessed with the short version of the vocational self-efficacy scale developed and validated by Rigotti, Schyns, and Mohr (2008) and based on the longer measure by Schyns and von Collani (2002). The scale consists of six items (e.g., "Whatever comes my way in my job, I can usually handle it"), and answers were indicated on a five-point Likert scale ranging from *not at all* to *completely*. The authors of the scale (Rigotti et al., 2008) report evidence for construct validity among a large group of German employees with significant relationships with job satisfaction, commitment, job performance, and job insecurity. Cronbach's alpha was .75 in the present sample.

Work and religion centrality

The relative importance of work and religion was assessed with the work importance measure introduced by Whitely and England (1977) for exploring the value systems of managers. The students were asked to distribute 100 points into 5 categories (i.e., leisure, community, work, religion, and family) representing the relative importance of each in their lives at the present time. The points given to the work domain were used to determine the relative level of work centrality. Similarly, the points given to the religion domain were used to determine the relative level of religion centrality. The work centrality measure has been applied by many studies (e.g., Carlson & Kacmar, 2000; Judge et al., 1995) that have supported its construct validity in terms of its significant relationships with career success and job satisfaction. Within the present sample, the points distributed to work ranged from 7 to 90 ($M = 32.9$, $SD = 12.2$) and those that were distributed to religion ranged from 0 to 30 ($M = 2.4$, $SD = 4.3$).

Work values

Work values were assessed with the measure developed by Cable and Edwards (2004), which is based on Schwartz's (Schwartz & Bilsky, 1987) circumplex model of values. Each work value (e.g., altruism) is assessed with three items (e.g., "Making the world a better place") on a five-point Likert scale asking students, "How important is this to you?" with responses ranging from *not important at all* to *extremely important*. The same procedure of double-blind translation and back translation as described above was applied to derive a German-language version. In order to account for the effect that value ratings promote positive correlations among theoretically opposing values, the scores were ipsatized by subtracting the individual average level of value endorsement from the sum score of the value (Hitlin & Piliavin, 2004). In this way, each value is represented as its relative importance compared to the other values, which enables a clear distinction between different value orientations among different people. Following the model of Schwartz, in accordance with Cable and Edwards, the degree of *self-transcendence* work values was then derived by taking the sum of altruism ($\alpha = .88$, $M = 10.7$, $SD = 2.9$) and the relationship to the other values ($\alpha = .78$, $M = 11.6$, $SD = 2.2$). *Conservation* work values are the sum of security ($\alpha = .86$, $M = 12.0$, $SD = 2.5$) and authority ($\alpha = .81$, $M = 9.4$, $SD = 2.6$). *Openness to change* work values are the sum of variety ($\alpha = .71$, $M = 11.4$, $SD = 2.0$) and autonomy ($\alpha = .74$, $M = 12.1$, $SD = 1.8$). Finally, *self-enhancement* values are the sum of pay ($\alpha = .90$, $M = 11.2$, $SD = 2.2$) and prestige ($\alpha = .68$, $M = 10.5$, $SD = 2.2$).

Core self-evaluations (CSEs)

CSEs were assessed with the German-language version of Judge et al. (2003), translated and validated by Stumpp, Hülsheger, Muck, and Maier (2009). The scale consists of 12 items (e.g., "I am confident that I will get the success I deserve in life"), which were answered on a 5-point Likert-type scale from *strongly disagree* to *strongly agree*. There are a numerous studies supporting the validity of the original scale by supporting, for example, its relationships with job satisfaction, career success, job stress, or commitment (Brunborg, 2008; Judge & Hurst, 2007; Kacmar, Collins, Harris, & Judge, 2009). Stumpp et al. (2009) have reported

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support for the validity of the German scale in terms of its factorial structure and significant relationships with job and life satisfaction and organizational commitment. Cronbach's alpha was .81 in the present sample.

Procedure

Data were collected through a larger online survey, which was posted on a secure server provided by the survey software company. Students were invited to participate through postings on the university's webpage and with two newsletters that were distributed four weeks apart by email to all registered undergraduate students inviting participation by providing a short description of the study intent (i.e., to investigate career preparation and planning) and the link to the survey. Participation was voluntary, and inclusion in a lottery with five vouchers for 60 Euros (approximately 75 USD) each was offered as an incentive. The first page of the questionnaire provided information about the study and asked students to indicate their consent by ticking the appropriate box. At the time of data collection, the university registered a total of approximately 4700 undergraduate students across all majors and semesters. In total, 802 people visited the first page of the questionnaire. Of these people, 561 (70%) continued to fill out the questionnaire. The full questionnaire consisted of different parts to which students were randomly assigned according to the three-form questionnaire plan described by Graham (2009). This procedure creates a systematic pattern of completely missing random values, which can then be estimated with full information maximization methods. Among those indicting their consent, 407 were randomly assigned to complete the form including the calling measures. Only these students were considered in the present study. All of them also completed the measures for core self-evaluations and for work and religion centrality, which were on the same questionnaire form. One third did not complete the form with decidedness, self-exploration, and confidence, and one other third did not complete the form with work values. Missing values on these scales were estimated with the expectancy-likelihood algorithm before the data analysis.

Results

Correlations

Table 2 presents the bivariate correlations among the assessed variables. The results show that for the average participant, the presence of calling correlated positively with career decidedness, engagement, confidence, work centrality, altruism, and transcendence values as well as core self-evaluations. It was negatively related to security and conservation values.

Types of callings

To derive a typology of callings, cluster analysis was applied. This is a person-centered and data-derived method used to identify different types of study participants based on a number of assessed variables. We applied cluster analysis with a two-step procedure as suggested by Gore (2000). First, hierarchical cluster analysis using Ward's method on squared Euclidian distances was applied, and the appropriate number of clusters was determined based on criteria of the theoretical meaningfulness of each cluster, parsimony, and explanatory power. Because the study wanted to explore what constitutes a calling, the focus was on the groups with above-average scores in the calling measure. The results showed that a seven-cluster solution, with three groups showing an above-average presence of calling and four groups showing a below-average presence of calling, would be most appropriate for the present purpose. The seven-cluster solution was deemed more meaningful compared to a six-cluster solution because it distinguished students of one group with slightly above-average callings into two groups, which respectively represented a below- and above-average presence of calling. Conversely, the eight-factor solution distinguished one group of students with an above-average presence calling into one with moderately above-average calling scores and one with extremely above-average calling scores, thus not adding substantial new meaningfulness. In the interest of parsimony and explanatory power, the seven-factor solution was selected. In the second step, the initial cluster centers of the seven groups were used as non-random starting points in an iterative k-means clustering procedure to make the final assignment of students to cluster groups. Table 3 shows the distribution of students in terms of gender, age and mean scores on the assessed variables across the derived seven clusters. A chi-square test showed no gender differences between cluster groups, $\chi^2(6, N=391)=8.25$, $p=.220$, $\varphi=.145$. A Univariate Analysis of Variance (ANOVA) showed that the seven cluster groups differed significantly in age, $F(6,383)=26.4$, $p=.003$, $\eta^2=.051$. Post-hoc Scheffé tests indicated that the differences were because the one group with the highest mean age (Group 1 of the calling clusters) had significantly higher age than the two clusters with the lowest mean age of its participants (Clusters 5 and 6; both groups with below average calling scores). Among all participants, the three clusters with above-average calling scores represented 42% of the sample. Fig. 1 shows the standardized means of the assessed variables for these three groups.

The results show that the three calling groups had between .5 and .7 standard deviations above-average calling scores. The results provide support for several hypotheses. First, there are some expected characteristics that are common across groups. Group 1 ($N=18$, 4.4% of the sample), Group 2 ($N=71$, 17.4%), and Group 3 ($N=82$, 20.1%) all reported above-average career decidedness (H1a), engagement (H2), and career confidence (H3). The results also confirmed that some characteristics are present in some but not other groups; these included work centrality (H4a), religion centrality (H4b), self-transcendence values (H5a), conservation values (H5b), and openness to change values (H5c). Some hypotheses were not confirmed. Contrary to expectations, self-exploration (H1b) was a common characteristic across all groups of callings. Furthermore, our results did not confirm that self-enhancement values (H5d) should not be present among students with a sense of calling; two groups rated these values to be

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Table 2
Bivariate correlations among the assessed constructs ($N = 407$).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Male gender	–													
2. Age	.120*	–												
3. Calling	.090	.129*	–											
4. Decidedness	.002	.210***	.489***	–										
5. Self-exploration	−.065	.110*	.065	−.003	–									
6. Engagement	−.010	.229***	.289***	.360***	.526***	–								
7. Confidence	.140**	.167**	.305***	.496***	.104*	.281***	–							
8. Work	.057	.068	.114*	.086	.040	.152**	.093	–						
9. Religion	−.077	−.063	.091	.023	.042	−.006	−.034	−.233***	–					
10. Transcendence	−.054	−.027	.216***	−.049	.000	.006	−.076	−.078	.092	–				
11. Conservation	−.031	−.018	−.193***	−.075	.073	−.062	−.101*	.054	−.044	−.277***	–			
12. Openness	.046	.029	.061	.075	−.043	.038	.120*	−.012	−.038	−.224***	−.678***	–		
13. Enhancement	.049	.041	−.040	.081	−.056	.040	.097*	.026	.002	−.505***	−.353***	.095	–	
14. CSE	.036	.025	.147**	.501***	−.045	.142**	.664***	−.027	−.111*	−.089	−.183***	.184***	.158***	–
M	(31.2%)	23.34	6.38	16.00	14.78	20.82	24.00	32.86	2.42	0.31	−0.54	0.02	0.26	43.95
SD		2.83	2.05	6.35	2.72	3.23	7.19	12.19	4.30	3.08	2.66	3.89	3.09	6.20

Note. Correlations for variable 1 (gender) are Spearman correlations, all other are Pearson correlations. Transcendence, Conservation, Openness and Enhancement values are ipsatized; CSE: Core self-evaluations.

* $p < .05$.
** $p < .01$.
*** $p < .001$.

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Table 3
Means and standard-deviations of the measures separated by cluster groups.

	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6		Cluster 7	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
N	18		71		82		91		44		45		56	
Male gender	33.3%		23.2%		35.4%		42.0%		30.2%		33.3%		24.5%	
Age	25.56	3.50	23.34	2.57	23.80	2.95	23.13	2.77	22.74	2.90	22.39	2.26	23.63	2.79
Calling	7.44	1.58	7.59	1.64	7.87	1.33	5.93	1.91	4.70	1.68	5.38	1.77	5.18	1.74
Decidedness	19.11	5.33	19.66	3.93	20.89	4.23	17.45	4.20	11.36	5.12	7.44	4.81	11.37	4.09
Self-exploration	14.90	3.15	15.68	2.08	16.02	2.07	13.09	2.54	13.33	2.57	14.08	2.73	16.23	2.40
Engagement	29.78	6.02	27.68	5.33	29.15	4.90	20.27	5.52	16.33	4.91	17.51	5.60	27.24	4.71
Confidence	21.43	2.46	21.17	2.36	23.15	2.63	22.42	2.29	17.65	2.37	17.77	2.99	19.14	2.55
Work	68.15	10.29	24.80	6.39	38.76	8.12	30.40	7.02	21.90	5.72	39.21	8.88	30.58	7.64
Religion	0.86	1.99	6.21	6.34	1.20	2.25	0.89	1.92	4.01	5.75	0.98	2.46	2.32	3.31
Transcendence	−0.61	2.92	2.21	2.77	−0.13	2.89	−0.98	2.70	−0.73	3.42	1.45	3.32	0.45	2.68
Conservation	−0.28	3.40	−1.10	3.87	0.26	3.97	−0.76	3.67	2.38	3.56	1.53	4.41	−0.67	3.05
Openness	−0.17	3.01	0.23	3.41	0.28	2.85	1.32	2.80	−1.24	3.05	−0.93	3.60	0.85	2.29
Enhancement	1.06	2.56	−1.34	2.63	−0.41	2.63	0.42	2.58	−0.41	2.50	−2.05	2.34	−0.64	2.45
CSE	41.34	4.39	44.20	4.38	47.36	5.24	49.07	3.64	39.00	5.14	38.22	5.28	39.66	4.47

Note: Cluster groups 1 to 3 represent the three calling groups.

more important than the average work value. Finally, it was not confirmed that all students with a sense of calling would show favorable core self-evaluations (H6): only two groups did.

The importance of the three common characteristics among the three calling clusters in terms of (1) vocational identity achievement (represented by high career decidedness and high career self-exploration), (2) high career confidence, and (3) high career engagement was further supported by looking at the four "non-calling" clusters. As indicated in Table 3, none of the "non-calling" groups had above average vocational identity achievement scores while some but not others had high engagement or high confidence. However, none of these four cluster groups simultaneously reported above average scores on all three of the identified essential components of calling.

When looking at the derived three groups of students with an above-average sense of calling, we identified the first group as students with clear goals and a very high importance of work. These students pursue their career primarily for self-enhancement. Conversely, they showed a comparatively lower level of self-exploration compared to the other two calling groups and were the only group among the three with below-average core self-evaluations. We label this group "negative career self-centered", representing students whose sense of calling seems to be primarily driven by the extreme importance of work in their lives with the goal of getting ahead in their careers while showing moderate levels of self-reflection and negative views about themselves. Group 2 reported a below-average work centrality but an above-average importance of religion. This group also showed above-average self-transcendence values. We thus labeled this group "pro-social religious", representing students whose sense of calling seems to have religious connotations and who are motivated by making the world a better place and have pro-social intentions.

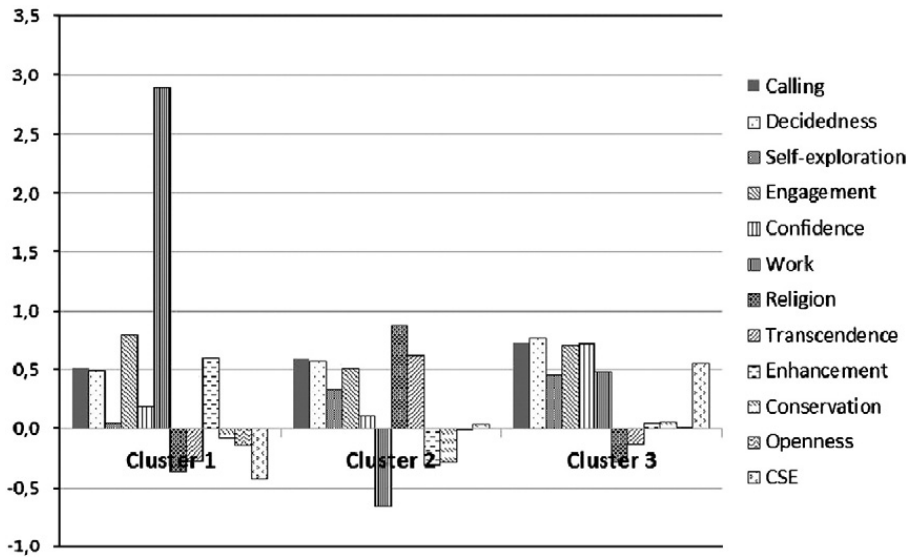

Fig. 1. Standardized mean scores of the assessed constructs across the three calling groups.

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Finally, Group 3 showed the most robust pattern in terms of decidedness, self-exploration, confidence, and engagement indicating a strong positive career orientation. Work but not religion was important to this group, while their work values did not show a distinguished pattern, indicating that this group pursued very different career goals. However, they also reported the highest level of core self-evaluation among the three calling groups. We label this group "positive varied work orientation", representing students with a generally very positive approach towards their careers and views about themselves while not endorsing any homogenous set of work values.

Discussion

The notion of calling in one's career and work has gained increased interest in career research due to its alleged importance for subjective career success, positive career development, and possible positive effects for organizations (Dik & Duffy, 2009; Duffy & Sedlacek, 2007; Elangovan et al., 2010; Hall & Chandler, 2005; Wrzesniewski et al., 1997). However, this emerging field of research is plagued with incongruent conceptualizations of what does or does not constitute a calling.

Investigating a diverse group of German undergraduate students, the results have shown that three distinct types of students with a sense of calling in their career could be identified: "negative career self-centered", "pro-social religious", and "positive varied work orientation". The existence of these groups provides support for the notion that some characteristics can be considered as defining components of calling while others are optional and do not apply to all people who have a sense of calling in their careers. Specifically, the results showed that all kinds of calling could be categorized as the achievement of vocational identity, that is, the possession of a high degree of career goal clarity/commitment, which is based on intense self-exploration. This contradicts our hypothesis that self-exploration is an optional component of callings, which we based on the notion that one's calling would stem from a perceived external summons (Dik & Duffy, 2009). However, the result supports notions of calling that stress that active self-reflection and continuing evaluation of one's calling are key components of discovering a calling (Dik et al., 2009; Elangovan et al., 2010; Hall & Chandler, 2005). It also supports secular conceptualizations of the construct (Elangovan et al., 2010; Hall & Chandler, 2005), which stress that a sense of calling can stem from within the individual and does not need to originate beyond oneself (e.g., a calling by God). In practice, this implies that helping clients engage in self-exploration about personal interests, values, and vocational preferences might be a necessary condition if they are to eventually achieve a sense of calling in their career. This opens up the important question of whether callings have incremental value beyond the relatively well-established positive effects of identity achievement on career development. It might be that calling has its alleged positive effects only because people with a sense of calling have successfully gained a vocational identity, and future research should investigate the incremental validity of calling to further to provide justification for its importance and additional value.

The results clearly support that calling entails an action orientation towards one's career (Elangovan et al., 2010). All groups of calling showed clearly above-average career engagement compared to the average study participant. This suggests that a sense of calling urges one to be pro-active and engaged in one's career development process, supporting its positive relationship with self-directed and protean career management. This increased engagement might also be an explanation as to why people with a sense of calling are supposed to reach more subjective and objective career success (Hall & Chandler, 2005).

Also clearly supported was the notion that calling entails a sense of confidence regarding one's career (Elangovan et al., 2010; Hall & Chandler, 2005). Having a sense of purpose and authenticity in one´s career might promote the confidence that personal career goals can be achieved as suggested by the close relationship between self-esteem and authenticity (Kernis, 2003). However, confidence might also promote a sense of clarity and purpose, as suggested by the positive effects of career decision-making self-efficacy on career decidedness (Lent, Brown, & Hackett, 1994). Therefore, the effects of calling and confidence could be reciprocally reinforcing over time. Longitudinal research would be necessary to investigate this proposition. The study also supported the notion that calling does not need to encompass a strong centrality of work or religion in people's lives. This confirms the notion that callings can be enacted in different life roles outside one's paid job (Hunter et al., 2010) and that callings do not have to have any religious connotations for many people (Elangovan et al., 2010; Hall & Chandler, 2005, Steger et al., 2010).

A further important contribution of the present study was that it supported the herein developed theoretical argument that people in all sorts of work and with all sorts of work motivation and values can have a sense of calling and that callings need not be restricted to pro-social and self-transcendence work values. Of the three groups, only one (encompassing 41.5% of all students with a calling) reported an above average relative importance of self-transcendence work values while the other two groups endorsed an array of values. Contrary to expectations, some students even endorsed self-enhancement values, which indicates that for some, callings serve the fulfillment of personal interests and are not primarily directed towards the greater good. Those findings contradict previous conceptualizations of callings (Dik & Duffy, 2009; Elangovan et al., 2010) and should receive further attention in empirical and theoretical work.

Finally, the study showed that the presence of calling does not need to be accompanied by positive core self-evaluation. This expected relationship was particularly contradicted by the minority of students in the "negative career self-centered" group, which had comparatively negative views about themselves. Apparently, this calling group consists of self-centered and insecure students whose primary goals in work are gaining personal benefits. This indeed constitutes a very peculiar type of calling, and it would be informative to investigate how this type of calling relates to individual and organizational outcomes in future studies. Regarding the external validity of a presence of calling for career success and organizational behavior, the results suggest several possibilities for how and why a sense of calling would lead to positive personal and organizational outcomes: people with a sense of calling (a) have reached vocational identity achievement, (b) are more engaged in their career development, and (c) have more career confidence, which in turn would lead to the desired outcomes. Future research should attempt to test this model.

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Limitations and conclusions

One limitation of the present study is that its results are very sample-dependent. The applied data-derived approach has the advantage of not pre-imposing a certain pattern on the data, but rather reflecting the actual nature of the data. However, this also implies that replication with other samples is important for supporting the generalizability of the present results. One limitation might be that we assessed a student population who is generally in a privileged position regarding the range and possibilities of their future career but who also did mostly not yet have substantial work experience in any field. Also, all measures were based on self-reports, which induce a shared-method bias that might inflate the true relationship among the assessed constructs. Moreover, the study did not attempt to investigate developmental processes of calling, which remain an important area for future research, and several avenues for this endeavor have been pointed out throughout the discussion.

For theory, the present results can provide important information regarding a more unifying definition of what constitutes a calling. Based on the present results, we propose that calling could, in accordance with Hall and Chandler (2005, p. 160), simply be defined as "work that a person perceives as her or his purpose in life". This simple definition seems specific enough to differentiate calling for similar constructs such as vocational identity achievement or career decidedness yet intentionally leaves out references to external summons or pro-social intentions which, according to our study, do not need to be present among people with a sense of calling. As we showed, a number of characteristics were not confirmed as necessary defining components: (a) a high centrality of work, (b) a high centrality of religion, (c) specific work value orientations (e.g., pro-social, self-enhancement), and (d) positive self-evaluations. However, we can propose that the presence of calling can be expected to be accompanied by a combination of (a) a state of vocational identity achievement, (b) a high degree of career engagement, and (c) a high level of career confidence.

For practice, the results imply that, when assisting clients in developing a sense of calling in career, one should focus on self-reflection in order to discover personal interests, values, and work preferences while not imposing any certain work orientation or focus on work or religion. This would allow clients to develop their own, unique sense of calling, which might not correspond to some definitions that have been proposed in the academic literature.

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