Feeling capable *and* valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions

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Abstract

Empathy is a key trait distinguishing social entrepreneurs from traditional entrepreneurs, and an important antecedent of social entrepreneurial (SE) intentions. Yet, little research explains the mechanisms through which empathy motivates SE intentions. We argue that studying the link between the prosocial trait of empathy and the prosocial outcome of SE intentions requires a prosocial lens that traditional entrepreneurial intent theories cannot offer. Building on prosocial motives research, we propose that empathy explains SE intentions through two complementary mechanisms: self-efficacy (an agentic mechanism), and social worth (a communal mechanism). We find support for our hypotheses in a study of 281 university students.

Keywords: Dispositional empathy; Entrepreneurial intentions; Self-efficacy; Social entrepreneurship; Social worth

Executive summary

Empathy is regarded as an essential trait of social entrepreneurs (Dees, 2012) and, as such, as an important antecedent of the "social" aspect of social entrepreneurial (SE) intentions (Mair and Noboa, 2006), especially compared with more traditional commercial entrepreneurial intentions. However, two limitations characterize our current understanding of the "social" in SE intentions. First, not all empathic individuals find the prospect of starting a social enterprise attractive, and in any case not all intend to start such an enterprise (Ernst, 2011; Tiwari et al., 2017). This raises

the question of what mechanisms link empathy to SE intentions. Second, the little we know about this link is based on research on traditional entrepreneurial intentions, which are mostly self-oriented (Miller et al., 2012a) and miss on the prosocial nature of SE intentions.

Heeding recent calls for more entrepreneurship research building on the insights of prosocial motives literature (Shepherd, 2015), and following on the empathy focus of leading practitioners in the SE ecosystem (e.g., Ashoka, 2016), in this study we ask: If a person's ability to feel and react to others' experiences can potentially spark positive social change, what mechanisms help catalyze that individual's disposition into intentions to engage in social entrepreneurship?

To address that question, we build on prosocial motives research (e.g., Grant, 2007; Grant and Gino, 2010), and we propose that empathy explains intentions to engage in social entrepreneurship through two complementary mechanisms: an agentic mechanism, and a communal mechanism. Specifically, the agentic mechanism refers to self-oriented feelings of personal competence (self-efficacy), and the communal mechanism refers to other-oriented feelings of connection to and regard by others (social worth) (Grant and Gino, 2010).

We test our model on a sample of 281 university students who participated in two types of social entrepreneurship courses: one taught at a university in the northeastern United States, and one taught in South Africa. Data were collected via online questionnaire surveys between May 2014 and August 2016 (response rate > 90%) using validated scales adapted from the literature. Our analyses, using Structural Equation Modeling Partial Least Squares (Wold, 1985), support our model explaining the mechanisms that link empathy to SE intentions.

This study thereby contributes to the SE and traditional entrepreneurial intent literature in important ways. First, we extend our understanding of the prosocial nature of SE intentions by showing that they may be driven not only by self-oriented motives of self-efficacy, but also by

other-oriented motives of social worth. Second, by considering that individuals see themselves in terms of agency and communion, we highlight the duality of self-views in the social world (Bakan, 1966) as a relevant framing to entrepreneurship research. Thus, we reveal the communal mechanism of social worth as a missing piece in the research aiming at illuminating the "social" in social entrepreneurship. Third, we shed light on the motivating mechanisms through which empathy raises SE intentions. By considering that empathy can drive both agentic (self-efficacy) and communal (social worth) views of oneself, not only do we improve our understanding of the relationship between empathy and SE intentions, but we also contribute by suggesting a new antecedent to self-efficacy in entrepreneurial intent models. Finally, this study offers practical insights for social entrepreneurship educators into the importance of recognizing empathy in the classroom, and into which interventions can channel students' specific empathic dispositions into SE intentions, through experiences that enable the self-views of agency and communion.

1. Introduction

Social entrepreneurial (SE) intentions are a subject of growing interest in the entrepreneurship literature (Liñán and Fayolle, 2015). In contrast to traditional entrepreneurial intentions—"the intent to start a business, to launch a new venture" (Krueger, 2009: 55)—SE intentions can be generally understood as the intent to pursue a social mission by starting a business or launching a social venture. Looking to explain the "social" aspect of SE intentions, researchers build on a long tradition in psychology research that links empathy, or responsivity to the experiences of another (Davis, 2015), to the display of helping behaviors (Davis et al., 1999; Eisenberg et al., 1989). Indeed, social entrepreneurs, in their pursuit of a social mission, aim to assist others in need rather than serve their self-interests (Miller et al., 2012a; Santos, 2012). Following this rationale, social entrepreneurship scholars propose that empathy is a key

distinguishing trait of social entrepreneurs compared with their commercial counterparts (Dees, 2012), as well as an additional antecedent in traditional models of entrepreneurial intent (Forster and Grichnik, 2013; Hockerts, 2017; Mair and Noboa, 2006).

However, this current approach to understanding the "social" in SE intentions has two limitations. First, not all empathic individuals find the prospect of starting a social enterprise attractive, nor do all intend to do so (Ernst, 2011; Tiwari et al., 2017); hence it is important to understand how empathy translates into SE intentions. Yet, we know little about the mechanisms through which empathy motivates SE intentions. Second, current models explain SE intent through the self-oriented lens of traditional entrepreneurship research (Miller et al., 2012a). Whereas the pro-self nature of traditional entrepreneurial intent calls for feelings of personal competence and capability (i.e., agentic motives), the prosocial nature of SE intentions also requires feelings of connection to and regard by others (i.e., communal motives).

To address these limitations, we draw on prosocial motives research (e.g., Grant, 2007; Grant and Gino, 2010) and propose that empathy—defined as a disposition to understand others' points of view (perspective-taking) and to experience feelings of warmth and compassion for others (empathic concern) (Davis, 1983)—explains SE intentions through two complementary motivating mechanisms: an agentic mechanism and a communal mechanism.

Agency and communion are the two dimensions along which individuals view themselves in the social world (Bakan, 1966; Fiske et al., 2007). On the one hand, agency refers to perceptions of self-efficacy, that is, "judgements of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982: 122). On the other hand, communion refers to feelings of social worth, that is, "a sense of being valued by others" (Grant and Gino, 2010: 947).

As empathy shapes how one responds to the experiences of another (Davis, 2015), we argue that it influences individuals' feelings of SE self-efficacy—which we define as one's confidence in one's competences and abilities to perform SE activities—and social worth. In turn, SE self-efficacy motivates empathic individuals to develop SE intentions by facilitating the appraisal of information that they may use to judge their personal capabilities (Bandura, 1982) to become social entrepreneurs, while social worth raises SE intentions by enabling empathic individuals to envision the likely impact of their work on potential targets of help (Grant and Gino, 2010).

This study contributes to the social entrepreneurship and traditional entrepreneurial intent literature in important ways. First, we heed recent calls for entrepreneurship studies to build on insights from prosocial motives research (Bolino and Grant, 2016; Renko, 2013; Shepherd, 2015), and consider that SE intentions may be driven not only by agentic motives of self-efficacy, but also by communal motives of social worth. Second, by considering that individuals see themselves in terms of agency and communion, we highlight the duality of self-views in the social world (Bakan, 1966) as a relevant framing to entrepreneurship research. This framing complements traditional entrepreneurial intent research, which frames self-efficacy as a sign of the perceived feasibility of starting a venture (Krueger and Brazeal, 1994; Krueger et al., 2000). Further, it reveals the communal mechanism of social worth as a missing piece of the puzzle in research aiming at illuminating the "social" in social entrepreneurship. Third, we shed light on the motivating mechanisms through which empathy raises SE intentions. By considering that empathy can drive both agentic and communal views of oneself, not only do we improve our understanding of the relationship between empathy and SE intentions, but we also contribute by suggesting a new antecedent to self-efficacy in entrepreneurial intent models.

In the remainder of this paper, we start by examining what links empathy to SE intentions, and then discuss the importance of SE self-efficacy and social worth in this relationship, followed by our proposed research model. Next, we detail our methodology and results, based on unique data collected on a sample of 281 university students. We conclude with a discussion of our findings, and of our contributions and implications for social entrepreneurship theory, practice and education, as well as the avenues that our study generates for future research.

2. Theoretical foundations

2.1. Empathy and social entrepreneurial intentions

Empathy is regarded as an essential personality trait of social entrepreneurs (Dees, 2012) and, as such, as an important antecedent of SE intentions. Specifically, Mair and Noboa (2006) suggest that empathy leads to SE intentions because empathic individuals are more likely to behave in ways that benefit others. This insight builds on numerous psychology studies that have linked high levels of empathy[1] to greater helping behavior—that is, the voluntary actions undertaken to benefit other individuals or groups (Davis et al., 1999; Eisenberg et al., 1989; see Davis, 2015 for a review). Indeed, the goal of social entrepreneurship, defined as "the innovative use of resource combinations to pursue opportunities aiming at the creation of organizations and/or practices that yield and sustain social benefits" (Mair and Noboa, 2006: 122), is not to serve self-interests but rather to improve the welfare of others in need (Santos, 2012). The "other-orientation" (Miller et al., 2012a: 618) of social entrepreneurs can thus be seen as a form

[1] In this research, we investigate the relationship between empathy as a trait (or dispositional empathy) and SE intentions. Dispositional empathy is not to be confounded with situational empathy. While the former captures a stable measure of empathy as a personality trait, the latter measures expressions of empathy that vary according to the situation (Davis, 1980; see Duan and Hill, 1996 for a review). Although dispositional empathy can evolve over time, consistently with the work of Hoffman (1976) on the developmental progression of empathy in children, dispositional empathy scores are considerably stable over time (Davis and Franzoi, 1991). Dispositional empathy is thus unlikely to vary over short periods of time, except through targeted empathy training interventions (e.g., Hatcher et al., 1994).

of sustained helping behavior—that is, helping over a continuous period of time. It follows that individuals with high levels of empathy may develop intentions to become social entrepreneurs as a way of helping others overcome social problems (Mair and Noboa, 2006)—a proposition that has recently received some empirical support (Forster and Grichnik, 2013; Hockerts, 2017).

We claim that two dimensions of empathy are especially likely to be associated with SE intentions: perspective-taking and empathic concern (Davis, 2015). Perspective-taking represents the cognitive "ability to adopt different perspectives, or points of view" (Davis, 1980: 5), whereas empathic concern refers to the affective "tendency for…feelings of warmth, compassion and concern for others undergoing negative experiences" (Davis, 1980: 6). Individuals with high levels of perspective-taking and empathic concern are thus "likely to have previously internalized norms and values related to helping and the importance of others' needs" (Eisenberg et al., 1989: 63), which may translate into SE intentions. Furthermore, as empathic individuals tend to anticipate positive emotions and satisfaction when considering whether to offer help, past research demonstrates that such individuals show higher intentions to enter helping situations (Davis et al., 1999), such as SE intentions. From a cognitive perspective, being capable of understanding the points of view of others is important to inspire the intention to lead a career in social entrepreneurship. From an affective perspective, being able to react emotionally to the suffering of others in need is also important to stimulate the intention to help through social entrepreneurship (Dees, 2012; Miller et al., 2012a).

We argue, however, that although both perspective-taking and empathic concern have the potential to spark positive social change, not all empathic individuals will intend to engage in social entrepreneurship (Ernst, 2011; Tiwari et al., 2017). It is therefore important to understand

the mechanisms through which individuals' empathic dispositions can be channeled into SE intentions. Yet, we still know little about how empathy can motivate SE intentions.

Extant studies offer some insight into this question by adding empathy to traditional models of entrepreneurial intent (Forster and Grichnik, 2013; Hockerts, 2017; Mair and Noboa, 2006), which combine Ajzen's (1991) theory of planned behavior and Shapero and Sokol's (1982) entrepreneurial event model (e.g., Krueger and Brazeal, 1994; Krueger and Carsrud, 1993). Specifically, Mair and Noboa (2006) liken empathy to an affective and cognitive attitude toward social entrepreneurial behavior (in line with the theory of planned behavior), which raises the degree to which an individual feels attracted to become a social entrepreneur (perceived desirability), then resulting in SE intentions (in line with the entrepreneurial event model).

Conversely, we argue that by drawing on only traditional entrepreneurial intent research to explain the link between empathy and SE intentions, the primary and central motive in social entrepreneurship, its *raison d'être*, is overlooked—namely, the social mission (Bacq and Janssen, 2011; Dees, 1998). In other words, individuals contemplating an engagement in social entrepreneurship are likely driven by prosocial motivations as much as, if not more than, by a "traditional" business impetus or general perceptions of the attractiveness of becoming a social entrepreneur. Hence, current models of SE intent are limited by the self-oriented lens of traditional entrepreneurship research (Miller et al., 2012a).

In this study, we adopt a prosocial motives approach (Shepherd, 2015) and ground our hypotheses on the distinction, in psychology, between individual agency and communion motives (Grant and Gino, 2010). Agency and communion are the two dimensions along which individuals view themselves in the social world (Bakan, 1966). Specifically, "agency refers to feelings of personal competence or self-efficacy," and communion refers to feelings of

"interpersonal warmth or connectedness to others" (Grant and Gino, 2010: 947). We argue that whereas the pro-self nature of traditional entrepreneurial intent calls for agentic motives, the prosocial nature of SE intentions also calls for communal motives, and that examining both mechanisms is essential to shed light on the drivers of SE intentions. Next, we expound on the role of an agentic mechanism and a communal mechanism in explaining the relationship between empathy and SE intentions.

2.2. Empathy, social entrepreneurial self-efficacy, and social entrepreneurial intentions

We propose that both the cognitive and the affective dimensions of empathy positively relate to SE self-efficacy, which we define as one's confidence in one's competences and abilities to perform SE activities. Specifically, SE self-efficacy captures a different kind of entrepreneurial confidence than that captured by traditional entrepreneurial self-efficacy. Whereas traditional entrepreneurial self-efficacy boosts individual confidence in performing roles and tasks generally associated with commercial innovation and risk-taking (Chen et al., 1998), SE self-efficacy boosts confidence in performing entrepreneurial tasks associated with social innovation and benefitting others, such as identifying social problems and creating new products/services to solve these problems.

First, we argue that high levels of perspective-taking trigger higher levels of SE self-efficacy by facilitating the cognitive appraisal of vicarious information derived from potential targets of help—i.e., information obtained via observation of others' coping strategies, or imagined participation in others' actions (Bandura, 1982). By being able to understand others' viewpoints, in an SE context, individuals are better equipped to learn how potential targets of help deal with challenging situations, and the kind of help they may need. This learning, in turn, raises individuals' awareness about their own capabilities to address the needs of potential targets of

help. Hence, individuals who display high levels of perspective-taking may feel more confident in their competences and abilities to engage in social entrepreneurship. In contrast, individuals who are less able to put themselves in the shoes of potential targets of help are likely missing on important information about the challenges at hand, which may decrease their confidence in their abilities to help others in need through social entrepreneurship.

Second, we argue that high levels of empathic concern generate higher levels of SE self-efficacy by reducing individuals' levels of visceral arousal (Bandura, 1982) when presented with challenging circumstances, such as those experienced by potential beneficiaries of social entrepreneurship. Indeed, individuals who are more able to feel warmth and compassion for others in need, are less prone to experience personal distress in the face of others' experiences (Davis, 1980; Hoffman, 1976). As a result, individuals who display high levels of empathic concern for others may feel more confident in their ability to help them through social entrepreneurship. In contrast, individuals who are less prone to feel warmth and compassion for others in need will experience higher levels of visceral arousal, which will increase their sense of vulnerability and hence reduce their SE self-efficacy (Bandura, 1982).

Therefore, we argue that the two dimensions of empathy are conducive to SE self-efficacy. From a cognitive perspective, being capable of understanding others' points of view is important to the helper's learning experience and confidence in his or her ability to help others. From an affective perspective, being able to feel warmth and compassion for others is important for assuaging distress and promoting confidence in one's competence in engaging in social entrepreneurship. We therefore hypothesize the following:

Hypothesis 1a. *Perspective-taking is positively related to social entrepreneurial self-efficacy.*

Hypothesis 1b. *Empathic concern is positively related to social entrepreneurial self-efficacy.*

Entrepreneurial self-efficacy is widely regarded as a key antecedent of the intention to create a new venture (e.g., Boyd and Vozikis, 1994; Bullough et al., 2014; Fitzsimmons and Douglas, 2011; Kickul et al., 2009; McGee et al., 2009; Wilson et al., 2007; Zhao et al., 2005). The majority of studies examining the relationship between entrepreneurial self-efficacy and entrepreneurial intentions refers to either the theory of planned behavior (Ajzen, 1991) or the entrepreneurial event model (Shapero and Sokol, 1982), framing entrepreneurial self-efficacy as an indicator of the degree to which one considers the prospect of starting a business feasible (Fitzsimmons and Douglas, 2011; Krueger and Brazeal, 1994; Krueger et al., 2000).

Extant SE intent studies build on this premise, and likewise argue that SE self-efficacy allows individuals to see the feasibility of starting a social venture, thus contributing to the development of SE intentions (Hockerts, 2017; Mair and Noboa, 2006). While we follow past evidence to link SE self-efficacy to SE intentions, we add to previous studies by offering an alternative complementary framing to the role of self-efficacy in explaining SE intentions.

Prosocial motives research (e.g., Grant and Gino, 2010) highlights that feelings of personal competence or self-efficacy represent one of the two self-views that individuals may have in the social world—the second one being the communal view of the self (Bakan, 1966). From a prosocial motives perspective, self-efficacy can be seen as an agentic understanding of the self, which is centered on the individual. Feeling capable and competent is a basic human motivation (Ryan and Deci, 2000), and when these motives are satisfied in an SE context, we suggest that individuals will feel more confident to become social entrepreneurs. Indeed, a number of prosocial motives studies has shown that self-efficacy is linked to a higher prosocial orientation (Bandura et al., 1996, 1999, 2001), thereby providing support for our proposition of linking SE self-efficacy to SE intentions, per the following hypothesis:

Hypothesis 2. *Social entrepreneurial self-efficacy is positively related to social entrepreneurial intentions.*

Having established the linkages between empathy and SE self-efficacy (H1a and H1b), and between SE self-efficacy and SE intentions (H2), we now turn to the question of how empathy raises SE intentions through its influence on SE self-efficacy. Central to our argument is the idea that individuals who develop SE intentions will not necessarily be those who simply display high levels of perspective-taking and empathic concern, but rather those who direct their empathic dispositions to attaining SE self-efficacy. It is precisely because of the fact that empathic individuals may not necessarily gain confidence in identifying new business opportunities for social change, among other tasks, that SE intentions ultimately depend on individuals' levels of SE self-efficacy, as opposed to their underlying empathic dispositions.

In other words, we propose that SE self-efficacy, through providing individuals with greater confidence in their capabilities to carry out SE-related tasks, is responsible for transmitting the effects of empathy on individuals' intentions to become social entrepreneurs. Through an increase in SE self-efficacy, empathy affects SE intentions because it enables the appraisal of information related to social problems and orients individuals' feelings of agency toward intentions to help others. Put differently, SE self-efficacy is a central process that indirectly channels the influence of perspective-taking and empathic concern into SE intentions, and without which empathic individuals will not develop intentions to become social entrepreneurs. Thus, we propose the following hypotheses:

Hypothesis 3a. *Social entrepreneurial self-efficacy mediates the relationship between perspective-taking and social entrepreneurial intentions.*

Hypothesis 3b. *Social entrepreneurial self-efficacy mediates the relationship between empathic concern and social entrepreneurial intentions.*

2.3. Empathy, social worth, and social entrepreneurial intentions

If self-efficacy represents an agentic view of the self that is centered on the individual, social worth represents a communal view of the self that contextualizes the individual as a participant in the social world (Bakan, 1966). Specifically, social worth is a psychological process that represents an experience of the "self as valued in interpersonal relationships" (Grant, 2007: 405), or "a sense of being valued by others" (Grant and Gino, 2010: 947). We argue that feelings of social worth are more likely to be experienced by individuals who display high levels of empathy, particularly when carrying out SE-related tasks that offer positive experiences with potential targets of help (Berg et al., 2010). Because empathic individuals perceive their social interactions as more meaningful (Grühn et al., 2008), they are likely to experience a heightened sense of social worth in their helping relationships.

Furthermore, we suggest that empathy triggers social worth by allowing individuals to envision the potential impact of their future actions. Individuals with high levels of perspective-taking may feel more valued by beneficiaries of SE-related tasks. Because these individuals are capable of understanding the viewpoints and needs of potential targets of help, they are likely to have a better sense of what actions are needed and valued. Likewise, individuals with high levels of empathic concern may feel more valued by beneficiaries of SE-related tasks. Because these individuals are able to connect to the suffering of others, they are more likely to feel that their intentions to alleviate others' suffering are appreciated (Miller et al., 2012a). The following hypotheses encapsulate those ideas:

Hypothesis 4a. *Perspective-taking is positively related to social worth.*
Hypothesis 4b. *Empathic concern is positively related to social worth.*

We further argue that individuals' feeling of being valued by others—in particular, by potential targets of the help provided through SE initiatives—can spur individual intentions to

become social entrepreneurs, as a type of sustained helping behavior. Indeed, prosocial motives research has highlighted the positive relationship between social worth and helping (Grant, 2008; Grant and Gino, 2010). Feeling valued by others is a basic human motivation (Baumeister and Leary, 1995; Ryan and Deci, 2000), and when individuals perceive that others appreciate their intentions, they experience a sense that their future work can be meaningful and necessary (Wrzesniewski et al., 2003). Hence, if individuals feel valued by potential beneficiaries, we suggest that they will feel more prone to become social entrepreneurs. In this context, we argue that individuals will be more motivated to engage in social entrepreneurship because experiences of social worth foreshadow the positive impact that social entrepreneurs can have, per the following hypothesis:

Hypothesis 5. *Social worth is positively related to social entrepreneurial intentions.*

Having established the linkages between empathy and social worth (H4a and H4b), and between social worth and SE intentions (H5), we now turn to the question of how empathy raises SE intentions through its influence on social worth. Central to our argument is the idea that individuals who develop SE intentions will not necessarily be those who simply display high levels of perspective-taking and empathic concern, but rather those who direct their empathic dispositions to experiencing social worth. It is precisely because of the fact that empathic individuals may not necessarily feel like they are making a positive difference in the lives of potential beneficiaries, that SE intentions ultimately depend on individuals' experiences of social worth, as opposed to their underlying empathic dispositions.

In other words, we propose that social worth, through providing individuals with stronger feelings of being valued in SE-related tasks, is responsible for transmitting the effects of empathy on individuals' intentions to become social entrepreneurs. Through an increase in social

worth, empathy affects SE intentions because it enables meaningful connections to others experiencing social problems and orients individuals' communal feelings of appreciation by socially disadvantaged others toward intentions to help through social entrepreneurship. Put differently, social worth is a central process that indirectly channels the influence of perspective-taking and empathic concern into SE intentions, and without which empathic individuals will not develop intentions to become social entrepreneurs. Thus, we propose the following hypotheses:

Hypothesis 6a. *Social worth mediates the relationship between perspective-taking and social entrepreneurial intentions.*

Hypothesis 6b. *Social worth mediates the relationship between empathic concern and social entrepreneurial intentions.*

Fig. 1 illustrates our proposed model.[2]

< INSERT FIG. 1 ABOUT HERE >

3. Methodology

3.1. Survey participants

To investigate our proposed hypotheses, it was important to survey individuals who were currently facing major career decisions, like university students between the middle and the end of their curriculum (Hockerts, 2017; Krueger, 1993). In line with the purpose of this study and our prosocial motives lens, we surveyed students who took part in two different social entrepreneurship courses at a research university located in the northeastern United States: one semester-long introductory course to social entrepreneurship taking place on campus, and one five-week long course sponsored by the research university but taking place in South Africa. We

[2] In addition to the above hypothesized relationships, our model displayed in Fig. 1 also includes a positive relationship between perspective-taking and empathic concern. Indeed, as it is established in the psychology literature, perspective-taking acts as an antecedent to empathic concern (e.g., Davis, 1980; Oswald, 1996). This positive relationship was confirmed in our study (see Fig. 2, $\beta = 0.39$, $p < 0.001$). However, as this link is well established and is not new to the literature, we do not hypothesize it nor do we directly relate it to the contributions of our study.

chose these two contexts for our empirical testing because of the fact that this study examines two mechanisms—SE self-efficacy and social worth—along which individuals view themselves in the social world (Bakan, 1966). In other words, individuals experience these mechanisms in context, in this case, an SE context. As such, the students we surveyed in this study were offered opportunities to experience SE self-efficacy and social worth in both course settings. Both courses provided students with the opportunity to perceive, on the one hand, their own capabilities to address challenging situations faced by potential targets of help and, on the other hand, whether their SE endeavors were appreciated and valued by the potential targets of their help. More specifically, in the course taught on campus, students engaged in a semester-long project aimed at developing a viable business solution to a social problem (e.g., sanitation, air pollution) affecting a specific target population. As part of the South Africa course, students consulted newly launching and existing social enterprises located in Cape Town townships, and they helped social entrepreneurs better address the needs and improve the well-being of their target users. In addition, the selection of two types of courses taught in different contexts increased the generalizability of our results beyond the context of one particular course.

We collected data via online questionnaires over several semesters between May 2014 and August 2016. As detailed in Table 1, a total of 281 students took the survey: 145 were enrolled in the on-campus course, and 136 were enrolled in the South Africa course. The overall response rate exceeded 90%. Survey respondents differed in terms of age, gender, ethnicity (see Table 1) and majored in subjects that included: architecture; international affairs; health sciences; business; arts, media, and design; engineering; psychology; criminal justice; economics; journalism and communications; and sociology, anthropology, and history.

< INSERT TABLE 1 ABOUT HERE >

Each enrolled individual was contacted by email at the beginning *and* after the course. Indeed, to minimize the risk of common method bias, we captured measures of our independent variables (perspective-taking and empathic concern) and controls (personality traits, proactive personality, and demographic information) at the start of the course ("pre"-course questionnaire), whereas we measured SE self-efficacy, social worth, and SE intentions at the end of the course ("post"-course questionnaire), several weeks later.[3] The use of questionnaires was consistent with our research objective and further contributed to reducing the gap of quantitative studies in social entrepreneurship research noted by Short and colleagues (2009).

Three established social entrepreneurship scholars and five non-participating students reviewed the pre- and post-questionnaires to ensure clarity of the wording and face validity of the constructs. To evaluate the quality of our questionnaires, we further piloted the study with a distinct group of students who traveled to the Dominican Republic to receive a similar curriculum to the one taught in the South Africa course. Based on feedback obtained from this pilot group, we refined the phrasing of some questions, and added and removed some others.

3.2. Measurement of latent variables

Our research model as represented in Fig. 1 comprised 5 latent variables assessed by a total of 31 items, as displayed in Table 2 (adaptations from original scales appear in italics). The 5 variables were as follows: (1) perspective-taking and (2) empathic concern (which for the sake of concision we combine and describe under a single heading, below); (3) social entrepreneurial self-efficacy; (4) social worth; and (5) social entrepreneurial intentions. For each of the scales, we averaged the items to form the overall measure.

[3] We did not take post-measures of empathy in our study as the courses taken by the students we sampled were not designed as interventions in empathy training—in contrast to Hatcher et al.'s (1994) study, for example.

3.2.1. Perspective-taking and empathic concern. We assessed empathy by means of two complementary scales as suggested by Davis (1980)—perspective-taking and empathic concern—consisting of five and four items, respectively. We asked respondents to indicate how well different statements described them on a scale ranging from 0 (does not describe me well) to 4 (describes me very well).

3.2.2. Social entrepreneurial self-efficacy. In line with prior research on self-efficacy (Zhao et al., 2005), we asked our respondents how confident they were in successfully carrying out a series of interrelated tasks specifically related to social entrepreneurship. As measures of SE self-efficacy were not available when we were administering the questionnaires, we adapted scales from past research on entrepreneurial and SE intentions. More specifically, we adapted and complemented Zhao et al.'s (2005) highly validated four-item scale with a series of six items capturing the respondents' confidence in applying a set of competences which were found to be important in social entrepreneurship (Miller et al., 2012b). All items were measured on a 7-point Likert scale ranging from 1 (not at all confident) to 7 (completely confident).

3.2.3. Social worth. To measure social worth, we used six indicators from a scale developed by Grant and Gino (2010). Respondents indicated the degree to which they agreed (1 = strongly disagree; 7 = strongly agree) with a series of statements in relation to the SE projects they had carried out in their respective course.

3.2.4. Social entrepreneurial intentions. To measure SE intentions, respondents were asked the extent to which they agreed with six statements adapted from Liñán and Chen (2009). A seven-point Likert scale was used, ranging from 1 (strongly disagree) to 7 (strongly agree).

3.3. Measurement of control variables

We controlled for a number of variables that may influence SE intentions. They fall into four main groups. First, we controlled for the effect of gender (1 = male; 2 = female), past volunteering experience (number of months), and past work experience (number of years). Indeed, prior research suggests that females are more likely to become social entrepreneurs (Bacq et al., 2016), and prior experience with social problems and community service, such as volunteering, has been shown to influence SE intentions (Hockerts, 2017). Past work experience, in turn, could affect SE intentions in different ways: the longer one has worked, the more s/he may value the comfort of remaining employed or, alternatively, the more s/he may intend to become a social entrepreneur, given the difficulty of changing the status quo from an employed position. Second, we controlled for the year and type of course students attended: on campus (0), or in the field—i.e., South Africa (1). Indeed, field-based social entrepreneurship education may have a stronger influence on SE intentions than addressing potentially remote social problems from campus. Third, we controlled for the influence of personality traits on SE intentions. Because individuals with a proactive personality tend to exhibit higher levels of entrepreneurial intentions (Crant, 1996), we measured respondents' proactive personality with Parker and Sprigg's (1999) scale. Finally, prior research suggests that the "Big 5" personality traits (extraversion, agreeableness, conscientiousness, neuroticism, intellect) influence support for social entrepreneurial ventures and SE start-up intentions (Nga and Shamuganathan, 2010). We thus controlled for the effect of personality, measured with the "Mini Big 5" scale (Donnellan et al., 2006), on SE intentions.

3.4. Data analysis

In order to test our hypotheses and to examine how SE self-efficacy and social worth mediate the relationship between empathy and SE intentions, we used the Partial Least Squares approach

to Structural Equation Modeling (i.e., PLS-SEM). PLS-SEM was developed by Wold (1985) as a general method for estimating path models involving latent constructs indirectly measured by multiple indicators, in contrast to covariance-based SEM.[4]

Several reasons motivated our choice of PLS-SEM to test our hypotheses in this study. First, PLS-SEM is a suitable method for prediction-oriented research focused on explaining endogenous constructs intended to theory building rather than theory testing. Second, our data is not normally distributed, which violates covariance-based SEM assumptions. The use of PLS-SEM addresses this concern as it does not assume normality of data distribution. Third, in the case of small sample sizes, PLS-SEM has higher levels of statistical power than its covariance-based counterpart (Lu et al., 2011; Reinartz et al., 2009). In PLS-SEM analysis, the recommended minimum sample size is ten times the number of indicators of the scale with the largest number of indicators (Chin and Newsted, 1999); our sample meets this requirement. Finally, PLS-SEM is a more rigorous method to analyze our model compared with regression analyses that assume error-free measurement.

In PLS-SEM, two models are subsequently assessed. First, the *measurement model*, also called the outer model, describes relationships between a latent variable and its associated observed measures (i.e., items or indicators). Second, the *structural model*, also called the inner model, specifies the relationships between the different latent variables (Edwards and Bagozzi, 2000). In line with conventions (Anderson and Gerbing, 1982), we proceeded in two steps. In the first step, we assessed the measurement model (five latent + control variables) using the PLS

[4] PLS-SEM tests the *relationships* among latent variables and between the latent variables and their indicators, by attempting to minimize the error variance between exogenous and endogenous variables (Meznar and Nigh, 1995). In contrast, covariance-based SEM aims to assess a theoretical *model* by testing the fit between the latent variable path model and the covariance matrix structure, while controlling for measurement error. As such, PLS-SEM can be seen as a combination of both path analysis and latent variable model, of which the significance of the relationships is tested, and not the overall model itself.

algorithm. In the second step, the structural model (or Model A, as shown in Fig. 1) was estimated using the bootstrap resampling procedure (Chin, 1998). Means, standard errors and *t*-statistics for each of the parameters were estimated using the bootstrapping procedure (Bias Corrected and Accelerated (BCa) Bootstrap) with 281 cases, 2,500 samples, and the "no sign changes" option to assess the significance of the path coefficients (Davidson and MacKinnon, 2000; Hair et al., 2011, 2012), including all direct effects, and indirect effects' significance via the mediators (Preacher and Hayes, 2008; Zhao et al., 2010). We used SmartPLS Version 3.2.6 software (Ringle et al., 2005) to conduct our analyses.

To test for the amplitude of the hypothesized mediating effects (H3a, H3b, H6a, H6b), we then engaged in a "competing models analysis" of our structural model (Singh et al., 1994), which required us to estimate and compare subsequent models (Singh et al., 1994). Model B and Model C (*partial mediation models*) tested the effects of the agency mechanism (SE self-efficacy) and the communal mechanism (social worth), separately. Model D (*direct effects model*) only contained the direct effects, that is, the effects of perspective-taking and empathic concern on SE intentions in the absence of any mediating variable. The hypothesized mediating effects were supported if, *compared with the direct effects model D*, the *partial mediation* models B and C yielded (1) significant effects of empathy on each mediator, (2) substantially diminished or insignificant effects of empathy on SE intentions, (3) highly significant effects of each mediator on SE intentions, and (4) higher percentages of variance explained (R^2). Indeed, as a measure of predictive power, R^2 values can be interpreted in the same way as those obtained in a multiple regression analysis. Such a quantifying approach of mediating effects offered a useful complement to the full/partial mediation dichotomous distinction (Shrout and Bolger, 2002). In the next section, we present our main results.

4. Results

4.1. Quality of the measurement model

Before testing the relationships between our latent variables, it is important to assess the risk of common method bias, as well as toestablish the internal reliability and validity of our measures.

4.1.1. Assessment of common method bias

Given that the use of self-reported variables exposes the data to the risk of common method bias (Krishnan et al., 2006), we followed Podsakoff et al.'s (2003) recommendations and adopted both *ex ante* and *ex post* strategies to reduce the risk of such bias. *Ex ante*, to prevent common method bias, we guaranteed for response confidentiality to reduce respondents' apprehension, counterbalanced the order of questions in the questionnaire (Krishnan et al., 2006; Podsakoff et al., 2003), and collected data to measure our independent and dependent variables at two different points in time (Chang et al., 2010). *Ex post,* we assessed the presence of common method bias by performing an additional post-hoc test. Drawing on Lindell and Whitney (2001), we included an additional latent variable to our measurement model called "marker variable," which we did not expect to correlate with the other latent variables. Since the correlations between this marker variable and our other variables were not higher than 0.30, we conclude that common method bias is unlikely to be present in our data.

4.1.2. Internal consistency reliability

We assessed the reliability of our measurement scales in two complementary ways. First, we calculated their composite reliability (Fornell and Larcker, 1981), which is comparable to Cronbach's α and should be higher than 0.70 (Nunnally, 1978). Second, we analyzed the outer standardized factor loadings to assess individual item reliability for each indicator. These should

be above 0.70, or close (Henseler et al., 2009). As shown in Table 2, our reflective constructs exceed this threshold with composite reliability (CR) values ranging from 0.79 to 0.96.

< INSERT TABLE 2 ABOUT HERE >

4.1.3. Convergent and discriminant construct validity

To guarantee convergent validity of one construct, its average variance extracted (AVE) should be superior to 0.50, indicating that the latent variable explains at least 50% of the variance of its indicators (Götz et al., 2009; see Table 2). To assess discriminant construct validity, we used the Fornell-Larcker (1981) criterion that a latent variable should share more variance with its assigned indicators than with any other latent variables. This criterion is verified if the square root of the AVE for each latent variable is considerably greater than the corresponding inter-construct Pearson zero-order correlations (see Table 3). As reported in Tables 2 and 3, the results support both convergent and discriminant validity of each of our constructs, with the exception of empathic concern, although close (AVE=0.49). However, according to Ping (2009), "an AVE slightly below 0.50 might be acceptable if it does not produce major discriminant validity problems," and if any significant effects involving the latent variable with the low AVE "are held to a higher significance requirement (e.g., |t| >= 2.2 rather than |t| >= 2.0)," which were both the case in our study. Furthermore, since these approaches may fail to reliably detect the lack of discriminant validity in common research situations (Henseler et al., 2015), we followed these authors' recommendations to confirm discriminant validity by calculating the heterotrait-monotrait ratio of correlations (HTMT). Since all HTMT values were well below the threshold value of 0.90 (the highest was 0.79 for the link between intellect and agreeableness, two of our control variables), discriminant validity among our constructs can be established.

< INSERT TABLE 3 ABOUT HERE >

At the indicator level, based on Chin (1998), we verified that the loading of each indicator to its corresponding latent variable was greater than all its cross-loadings.[5] Therefore, we conclude that each construct of our study is unique and captures phenomena that other measures do not.

4.2. Analysis of correlations and descriptive statistics

From Table 3, we find that the majority of Pearson zero-order correlations among our latent variables are significant. As predicted, our focal construct, SE intentions, is positively and strongly correlated with the other four variables in our model (perspective-taking, empathic concern, SE self-efficacy and social worth). Inter-construct Pearson zero-order correlations range from 0.27 ($p < 0.01$) for empathic concern, to 0.47 ($p < 0.01$) for SE self-efficacy.

Regarding the relationships between the control variables and SE intentions, the latter positively correlates with having a proactive (0.31, $p < 0.01$) and extraverted (0.14, $p < 0.05$) personality, whereas all the other personality traits (agreeableness, conscientiousness, neuroticism, intellect) are not significantly correlated with SE intentions. As expected, taking part in the field-based course (South Africa) positively correlates with SE intentions (0.15, $p < 0.05$). In addition, there is a negative significant correlation between the length of past volunteering experience and SE intentions (-0.20, $p < 0.05$).[6] However, there is no significant correlation between SE intentions and gender nor past work experience. Table 4 reports the means, standard deviations, medians, minima, and maxima for the latent variables of interest.

< INSERT TABLE 4 ABOUT HERE >

4.3. Test of the structural model and mediating effects

[5] For parsimony reasons, the tables containing the cross-loadings are not displayed here but can be obtained from the authors.

[6] A closer examination revealed that the relationship between volunteering experience and SE intentions changed subject to the amount of time volunteered: below the median (6 months of volunteering or less: 0.21, $p < 0.05$), and above the median (more than 6 months of volunteering: -0.30, $p < 0.01$), suggesting that individuals with longer volunteering experience in our sample could be satisfied with their volunteering work (Davis et al., 1999), and less interested in engaging in social entrepreneurship.

To establish the extent to which each predictive variable contributes to the explained variance of the endogenous variables, we evaluated the significance, magnitude, and sign of individual path coefficients β, which can be interpreted similarly to standardized beta of ordinary least square regressions. Fig. 2 and Table 5 report coefficients β for each path of our structural model, along with their p values, as well as the significance of the indirect and total effects.

< INSERT FIG. 2 ABOUT HERE >

< INSERT TABLE 5 ABOUT HERE >

As illustrated, neither the direct effect of perspective-taking ($\beta = 0.09$, $p = 0.141$) nor the direct effect of empathic concern ($\beta = 0.01$, $p = 0.913$) on SE intentions are significant. Among control variables, only past volunteering experience negatively influences ($\beta = -0.14$, $p = 0.003$) SE intentions: the longer the volunteering experience, the lower the respondent's SE intentions.

Empathic concern has a highly significant positive effect on SE self-efficacy ($\beta = 0.24$, $p = 0.000$), whereas the positive effect of perspective-taking on SE self-efficacy is only moderately significant ($\beta = 0.14$, $p = 0.059$), providing strong support for Hypothesis 1b but only moderate support for Hypothesis 1a. We also find that SE self-efficacy has a significant positive effect on SE intentions ($\beta = 0.32$, $p = 0.000$), which thus supports Hypothesis 2.

Additionally, whereas perspective-taking is positively and significantly related to social worth ($\beta = 0.25$, $p = 0.000$; Hypothesis 4a supported), empathic concern is not significantly related to social worth ($\beta = 0.02$, $p = 0.755$; Hypothesis 4b rejected). Furthermore, our findings indicate that social worth has a significant positive effect on SE intentions ($\beta = 0.26$, $p = 0.000$), which confirms Hypothesis 5. Next, to test the mediation effects of SE self-efficacy (Hypotheses 3a and 3b) and social worth (Hypotheses 6a and 6b) *separately*, we ran two post-hoc models,

Model B and Model C, which we then compared with a *direct effects model* (Model D; see Table 6).

< INSERT TABLE 6 ABOUT HERE >

Starting with SE self-efficacy as a mediator, our comparison of Model B with Model D yields (1) significant effects of perspective-taking ($\beta = 0.14$, $p = 0.067$) and empathic concern ($\beta = 0.23$, $p = 0.001$) on SE self-efficacy; (2) substantially diminished or insignificant effects of empathy on SE intentions (perspective-taking: $\beta = 0.14$, $p = 0.035$; empathic concern: $\beta = -0.001$, $p = 0.988$); (3) a highly significant effect of SE self-efficacy on SE intentions ($\beta = 0.37$, $p = 0.000$); and (4) a higher percentage of variance explained ($R^2 = 0.33 > R^2 = 0.23$). Looking at the indirect effects column in Model B, we also find significant indirect effects of perspective-taking ($\beta = 0.08$, $p = 0.040$; Hypothesis 3a supported) and empathic concern ($\beta = 0.09$, $p = 0.006$; Hypothesis 3b supported) on SE intentions through SE self-efficacy as a mediator. Altogether, these results indicate that SE self-efficacy partially mediates the relationship between perspective-taking and SE intentions while it fully mediates the relationship between empathic concern and SE intentions.

Next, turning to social worth as a mediator, our comparison of Model C with Model D yields (1) a significant effect of perspective-taking on social worth ($\beta = 0.25$, $p = 0.000$) but an insignificant effect of empathic concern on social worth ($\beta = 0.01$, $p = 0.903$); (2) substantially diminished or insignificant effects of empathy on SE intentions (perspective-taking: $\beta = 0.13$, $p = 0.057$; empathic concern: $\beta = 0.07$, $p = 0.381$); (3) a highly significant effect of social worth on SE intentions ($\beta = 0.33$, $p = 0.000$); and (4) a higher percentage of variance explained ($R^2 = 0.32 > R^2 = 0.23$). Looking at the indirect effects column in Model C, we also find a significant indirect effect of perspective-taking on SE intentions via social worth as a mediator ($\beta = 0.11$, p

= 0.004; Hypothesis 6a supported) but not for empathic concern (β = 0.003, p = 0.904; Hypothesis 6b rejected). Altogether, these results indicate that social worth fully mediates the relationship between cognitive empathy and SE intentions, but does not serve as a mechanism to channel affective empathy into SE intentions.

Finally, we used non-parametric bootstrapping procedures to test the significance of the indirect effects of empathy on SE intentions via the *simultaneous* presence of our two mediators ("net" mediation; see Table 5). We find that whereas neither perspective-taking nor empathic concern directly relate to SE intentions, their indirect effects on SE intentions through the set of both agentic and communal mechanisms are particularly strong (Table 5, line 2: β = 0.14, p = 0.001; Table 5, line 3: β = 0.08, p = 0.031, respectively), leading us to conclude that together, the duality of agentic and communal self-views fully mediates the relationship between empathy and SE intentions. In addition, our hypothesized model A (Fig. 1) yields the highest percentage of variance explained (R^2 = 0.39) compared with the other models, which further substantiates the predictive validity of our SE intentions model (Hair et al., 2012).

5. Discussion

5.1. Discussion of results

With this paper, we are providing a novel explanation of the mechanisms through which empathy, both cognitive and affective, motivates SE intentions by building on the prosocial motives literature and, more specifically, on the psychological distinction between individual agency and communal motives. Several of our results are worth discussing.

First, we find support for a fully mediated relationship between empathy and SE intentions. That is, our findings reject the hypothesis of a direct relationship between empathy and SE intentions, rather providing strong empirical support that empathy indirectly affects SE intentions

through two mediating mechanisms: SE self-efficacy and social worth. This is not to suggest that empathy plays no role in determining SE intentions. Indeed, in order to consider a career in social entrepreneurship, individuals need a degree of other-orientation that traditional entrepreneurship or mainstream careers do not require (Miller et al., 2012a). At the same time, however, no matter how empathic individuals are, their empathy will not directly predict their intentions to become social entrepreneurs. The multiple ways in which individuals can pursue responsible careers (Tams and Marshall, 2011) are likely to result in considerable variation in how individuals express their empathic dispositions in their career intentions and choices. In order to channel their empathy into SE intentions, individuals must experience SE self-efficacy and social worth. Thus, while individuals would be unable to develop SE intentions in the absence of perspective-taking and empathic concern, it is the SE self-efficacy and social worth that they derive from their empathic dispositions that will ultimately determine their SE intentions.

In particular, we find that the agentic mechanism of SE self-efficacy fully mediates the relationship between affective empathy (empathic concern) and SE intentions. That is, individuals who are more able to experience feelings of warmth, compassion, and concern for others are more likely to favorably judge their personal capabilities to carry out social entrepreneurship-related tasks, which then nurtures their SE intentions. These findings complement evidence from past studies of entrepreneurial intent based on Ajzen's (1991) theory of planned behavior and Shapero and Sokol's (1982) entrepreneurial event model (e.g., Forster and Grichnik, 2013; Hockerts, 2017), by suggesting affective empathy as a new antecedent to self-efficacy in entrepreneurial intent models.

Second, we find that, in addition to feeling self-efficacious, feeling valued by others (i.e., social worth) is another important mechanism that conveys cognitive empathy (perspective-taking) into SE intentions. That is, individuals with increased ability to put themselves "in other people's shoes" are likely to perceive greater certainty about whether their help would be valued by beneficiaries. Because perspective-taking allows individuals to envision the potential impact of their actions on others, they are likely to feel greater social worth and, as a result, form higher intentions to engage in social entrepreneurship. These findings are all the more interesting given that, despite alluding to the fact that both the cognitive and the affective dimensions of empathy are important for the development of SE intentions (Hockerts, 2017; Mair and Noboa, 2006), past studies of SE intentions do not simultaneously measure nor explain the specific role of each dimension in enabling SE intentions. This is particularly relevant given that "prosociality [may be] ineffective when perspective-taking fails" (Bolino and Grant, 2016: 648).

The strong associations between the affective dimension of empathy and the agentic mechanism, on the one hand, and between the cognitive dimension of empathy and the communal mechanism, on the other hand, deserve to be underlined. These associations could indicate that individuals with high levels of perspective-taking and individuals with high levels of empathic concern may require different mechanisms to channel their empathy into SE intentions. That is, the former may need to "feel valued" while the latter may need to "feel capable" in order to form intentions to engage in SE.

5.2. Contributions

This study contributes to the social entrepreneurship and traditional entrepreneurial intent literature in several important ways. First, we heed recent calls for entrepreneurship studies to build on insights from prosocial motives research (Bolino and Grant, 2016; Renko, 2013;

Shepherd, 2015) by offering a novel framing that considers that SE intentions may be driven not only by traditional self-oriented motives of self-efficacy, but also by other-oriented motives of social worth. Specifically, our evidence adds to traditional entrepreneurial intent models by showing that both individuals' self-views in the social world are important in explaining entrepreneurial intent. Put differently, knowing one's help is being valued by others (i.e., social worth) matters as much as feeling capable of providing such help (i.e., SE self-efficacy).

Second, by proposing that individuals see themselves in terms of agency and communion, we highlight the duality of self-views in the social world (Bakan, 1966) as relevant to entrepreneurial intent research, particularly as it sheds light on new arguments as to why self-efficacy relates to entrepreneurial intentions. Indeed, whereas self-efficacy is usually regarded as a sign of an individual's perceived feasibility of starting a venture (Krueger and Brazeal, 1994; Krueger et al., 2000), our proposed framing complements traditional explanations of entrepreneurial intent by considering self-efficacy as a self-oriented motive that spurs feelings of personal competence and drives an individual's intentions to act entrepreneurially. Furthermore, this complementary framing reveals a missing piece of the puzzle in research aiming at illuminating the "social" in social entrepreneurship and SE intentions through the concept of social worth. That is, while "feeling capable" has been traditionally suggested as a key antecedent of entrepreneurial intent, our study shows that "feeling valued" by others may be equally important, especially in the context of social entrepreneurship.

Third, in contrast to extant SE intent research that treats empathy as an ad hoc antecedent of the "social" aspect of SE intentions (Forster and Grichnik, 2013; Hockerts, 2017), we shed light on the motivating mechanisms through which empathy raises SE intentions. By considering that empathy is likely to influence individuals' self-views in the social world—thus driving both

agentic and communal views of oneself (Grant and Gino, 2010)—we improve our understanding of the relationship between empathy and SE intentions. Furthermore, our evidence suggests that empathy (and even more significantly, the affective dimension of empathy rather than the cognitive one) is a significant antecedent to SE self-efficacy, thereby providing a different theoretical explanation of the link between empathy and SE self-efficacy than traditional entrepreneurial intent theories have offered thus far.

Our study also contributes to prosocial motives research in noteworthy ways. As social entrepreneurship encompasses "consistently acting in a pro-social manner over a sometimes considerable period of time" (Davis, 2015: 293), it can be considered as a form of sustained helping behavior. By illuminating the motives that convey empathy into the development of SE intentions, our study thus contributes to prosocial motives research examining the link between dispositional empathy and sustained forms of helping (e.g., Finkelstein et al., 2005; Penner et al., 2005). It is our hope that our proposed framing of social entrepreneurship as a form of sustained helping will inspire prosocial motives researchers to explore this new context, adding to the more traditional research settings of community volunteering (Penner, 2002; Unger and Thumuluri, 1997) and organizational citizenship behaviors (Joireman et al., 2006).

Finally, our study offers practical insights for social entrepreneurship educators, particularly with regard to how educational experiences may channel empathy toward social entrepreneurship. Our analysis of the two dimensions of empathy—cognitive and affective—could inspire educators to recognize both types among students in their classes, and design interventions to raise SE intentions accordingly. This could be done by channeling students' specific empathic dispositions through experiences that enable the self-views of agency and communion as shown in our study. For instance, as our findings suggest, the communal

mechanism of social worth can channel an individual's high disposition of perspective-taking into SE intentions. Social entrepreneurship educators could thus present their students displaying high levels of perspective-taking with opportunities to experience social worth by interacting with potential targets of help through SE-related tasks.

5.3. Limitations and future research avenues

We acknowledge three main limitations in our study. First, our model may be viewed as painting an overly positive picture by focusing on the positive effect of empathy on SE intentions. Second, our study does not account for contextual or institutional influences. Third, our data were collected from a sample of university students in the northeastern United States, which could suffer from self-selection bias and could cause generalizability challenges. We discuss each of these limitations below, as well as the rich avenues they open for future research.

First, building on prior prosocial motives research in social entrepreneurship (e.g., Miller et al., 2012a), we framed and studied empathy as a source of motivation in encouraging SE intentions. While it could be assumed that high levels of empathy may increase feelings of anxiety and discomfort resulting from observing and connecting emotionally to another's negative experiences—i.e., increase personal distress (Davis, 1983), extant evidence suggests this is the case mainly among populations of children. For instance, Hoffman (1976) found that while empathic children tend to experience the distress of others as their own, as they develop the skill of role-taking and the ability to differentiate between the self and others, their distress gives way to other-oriented concern. Hence, among adults, both empathic concern and perspective-taking tendencies are associated with less personal distress to the experiences of others (Davis, 1980).

Nevertheless, negative emotions such as personal distress have been associated with situations of helping others when it is easy not to get engaged (Davis, 2015)—such as in the case

of social entrepreneurship, which requires sustained commitment, in contrast to one-off helping episodes. Future research should therefore investigate the effect of negative emotions that emerge from responsivity to the negative experiences of others on SE intentions.

Our interest in complementing traditional self-oriented research with a prosocial perspective converges with the work of Miller and colleagues (2012a), who developed a theoretical model explaining how the emotion of compassion could be transformed into the choice to found a social enterprise. While our findings complement their theoretical model, overall, future research should also look at the role of emotions, such as situational empathy, in predicting SE intentions. Does situational empathy vary after exposure to concepts, stories, and knowledge related to social entrepreneurship, thereby raising SE intentions? Is this effect contingent on the type of course—lecture vs. experiential—or on the context—on-campus vs. field-based? One could think, for instance, that experiential education in more sensitive field environments affects the levels of situational empathy to a greater extent. Further, can social entrepreneurship courses raise dispositional empathy through targeted empathy training interventions (Hatcher et al., 1994)? Experimental or quasi-experimental designs could help shed light on these questions.

Second, in an attempt to inform the microprocesses that channel an individual's empathy trait into intentions to engage in social entrepreneurship, our model does not account for any contextual or institutional influences. Given the importance of the embeddedness of agentic behaviors when it comes to SE actions (Grimes et al., 2013), future research in this area is especially warranted. Such future avenues could further lead to better integration of the prosocial motives approach and the theory of planned behavior, particularly regarding the role of social/institutional norms in influencing SE intentions.

In addition, a new key motive in social entrepreneurship research revealed by our study is social worth. Given the critical role played by social worth in explaining an individual's intentions to engage in social entrepreneurship, it would be valuable for future research to investigate the antecedents of social worth beyond the empathic dispositions of individuals. For instance, could SE self-efficacy trigger perceptions of social worth by reducing the uncertainty about whether potential SE beneficiaries would value the help that is offered? Extant evidence suggests that an individual's work self-efficacy contributes to feelings of social worth in work settings (Chen et al., 2004). Future studies could extend this work to the field of social entrepreneurship by examining the role of SE self-efficacy in enabling social worth. Future research could also explore social worth as a fertile construct for the development of future metrics of non-economic outcomes and phenomena not easily monetized (e.g., Cohen et al., 2008; Kroeger and Weber, 2014). Indeed, by capturing feelings such as being valued, trusted, important, and making a positive difference in the lives of people targeted by one's helping, social worth may illuminate new ways to capture social impact, and how it drives SE intentions and future actions.

Third, our analysis is based on a sample of students from a university located in the northeastern United States, limiting the generalizability of our results. While the fact that our respondents were students, and their decision to enroll in a social entrepreneurship course could be indicative of higher levels of empathy and of SE intentions (i.e., potential selection bias), our choice of sample was purposeful and beneficial in two ways. It enabled us, first, to survey individuals facing important career decisions, and second, to capture their perceived social worth as they were presented with opportunities to experience situations in which they could envision the benefits for the potential targets of their help. In addition, we found evidence of the

heterogeneity of our sample in terms of empathy levels and SE intentions scores, independently of the major topic of study.[7] The fact that we collected data from students enrolled in two very different types of courses further suggests that our results could be generalized beyond the context of one particular course. Methodological directions for expanding the scope of our design in future research point to the inclusion of externally collected measures that capture behaviors and demonstrate actual engagement in social entrepreneurship (vs. intention to do so).

Additionally, it would be interesting for future studies to explore different settings in which individuals get to interact with and feel valued by potential beneficiaries, not only in terms of the geographical setting, but also in terms of the length of interaction with potential beneficiaries, as well as contrasting individual work to teamwork. An experimental design may suit that type of research objective. Furthermore, future research could elaborate on the development of SE intentions in light of recent work indicating a generational decline in empathy among North American university students (see Konrath et al., 2011).

Nevertheless, these limitations call for future research on the contingencies of the antecedents of SE intentions across contexts, respondents other than students, settings other than North American universities, and impact fields other than South Africa. Replication should be facilitated by the fact that our variables are not student-specific and were taken or adapted from previously published research. Replications of our study using our adapted measures will help further establish their reliability and usefulness for future research.

6. Conclusion

In sum, we learned from our study that empathy does not directly affect SE intentions but that it does so indirectly, through the joint mechanisms of agency and communion. As we keep

[7] To mitigate the threat of selection bias, we ran additional descriptive statistics on our sample. Results are available from the authors upon request.

looking for innovative and sustainable ways to address intractable social and environmental issues which only gain in prevalence, it is our hope that this study paves the way toward new streams of research that consider multiple facets of empathy other than the affective one (i.e., cognitive), and mechanisms other than agency (i.e., communion), in addressing the important question of how empathic individuals form intentions to engage in social entrepreneurship. Given the key role played by prosocial traits and motives in individuals contemplating that type of career, studying social entrepreneurship from a prosocial motives perspective promises to yield more novel and complex insights than extant studies may have offered so far.

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Figures and Tables

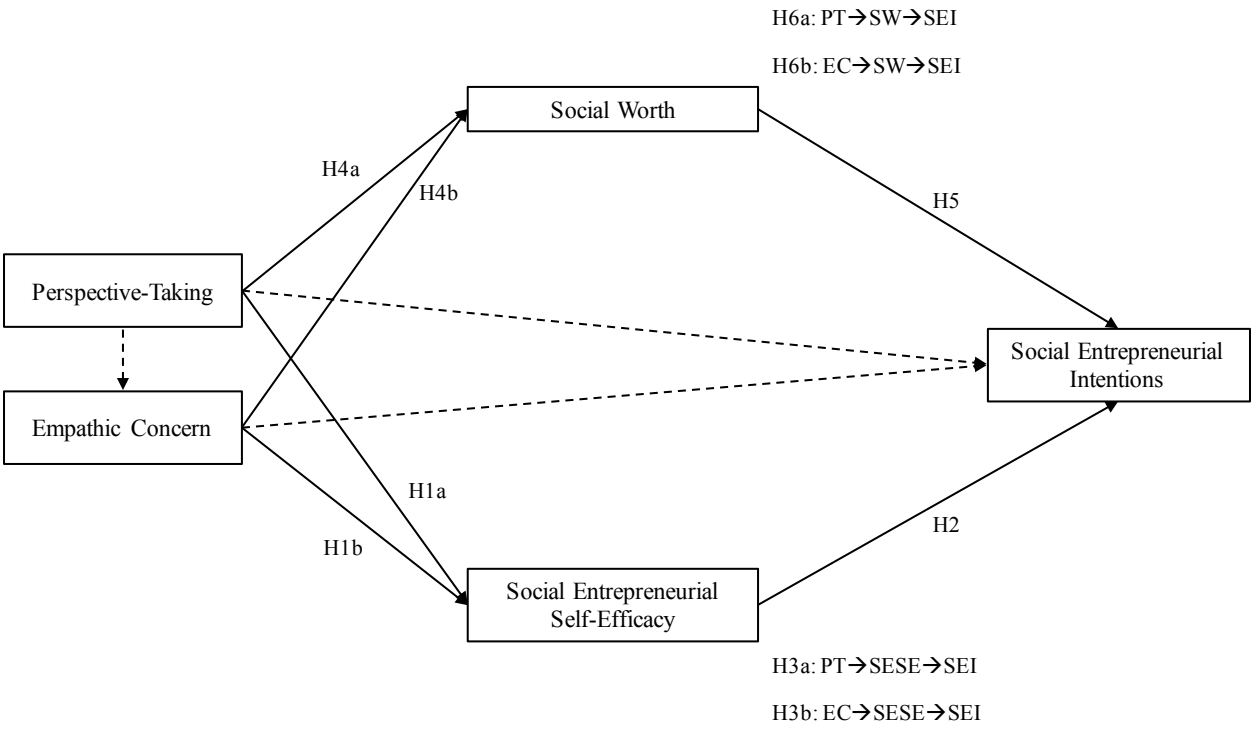
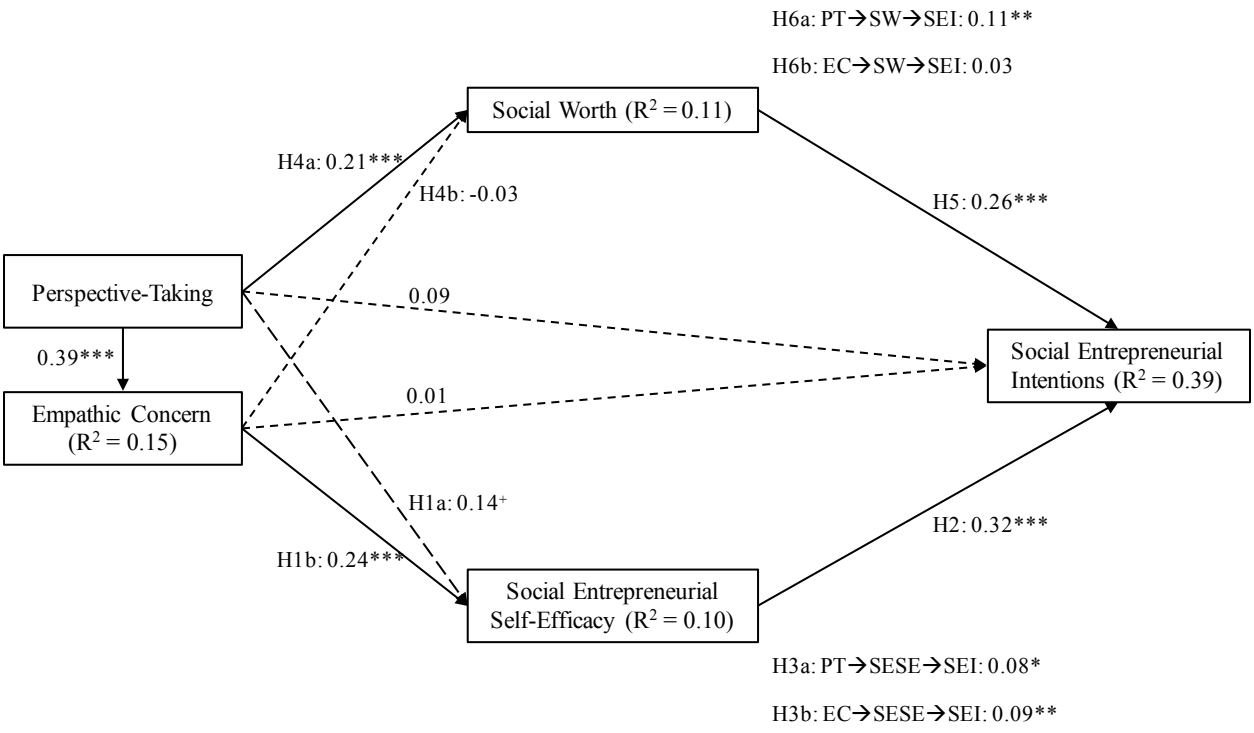


Fig. 1. Proposed research model.[8]
Dashed lines represent relationships that are not included in the hypotheses development.

[8] H stands for hypothesis; PT stands for Perspective-Taking; EC stands for Empathic Concern; SESE stands for Social Entrepreneurial Self-Efficacy; SW stands for Social Worth; SEI stands for Social Entrepreneurial Intentions.



+ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (2-tailed t-test).

Fig. 2. Structural model with both mediators (Model A).

Table 1. Descriptive statistics of the sample.

	On-campus course	**South Africa course**
N 2014	40	44
N 2015	0	45
N 2016	105	47
Age, mean	20.14	20.79
Age, median	20	21
% female	60%	75%
Ethnicity: Asian	13%	9%
Ethnicity: Black/African	7%	3%
Ethnicity: Hispanic/Latino	16%	11%
Ethnicity: White/Caucasian	52%	68%
Ethnicity: Other	12%	9%

Table 2. Latent variables measurement properties: Internal reliability tests.

Latent variables (in bold) and measurement items	**Outer standardized factor loadings***	**CR**	**AVE**
Perspective-taking (Davis, 1980)		0.85	0.54
How well do the following statements describe you?			
1. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	0.80		
2. I sometimes try to understand my friends better by imagining how things look from their perspective.	0.78		
3. I believe that there are two sides to every question and try to look at them both.	0.66		
4. I try to look at everybody's side of a disagreement before I make a decision.	0.65		
5. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	0.76		
Empathic concern (Davis, 1980)		0.79	0.49
How well do the following statements describe you?			
1. When I see someone being taken advantage of, I feel kind of protective toward them.	0.49		
2. I often have tender, concerned feelings for people less fortunate than me.	0.77		
3. I would describe myself as a pretty soft-hearted person.	0.78		
4. I am often quite touched by things that I see happen.	0.72		
Social entrepreneurial self-efficacy (Adapted from Zhao et al., 2005; and Miller et al., 2012b)		0.91	0.51
How confident are you in successfully carrying out the following tasks?			
1. Identifying new business opportunities *for social change*	0.73		
2. Creating new products/*services to solve social problems*	0.66		
3. Thinking creatively *to benefit others*	0.77		
4. Commercializing an idea *for social enterprise*	0.54		
5. Creating a significant social impact	0.77		
6. Building community support	0.71		
7. Challenging traditional ways of thinking	0.73		
8. Committing to a collective purpose	0.77		
9. Committing to helping people	0.72		
10. Identifying social problems	0.68		

Latent variables (in bold) and measurement items	**Outer standardized factor loadings***	**CR**	**AVE**
Social worth (Grant and Gino, 2010) *Thinking of the projects you have carried out in this program, to what extent do you agree or disagree with the following statements?* 1. I felt valued as a person by the people I helped. 2. I felt appreciated as an individual by the people I helped. 3. I felt that I made a positive difference in the lives of the people that I helped. 4. I felt close to the people I helped. 5. I felt strong trust from the people I helped. 6. I felt important to the people I helped.	 0.86 0.91 0.85 0.91 0.88 0.92	0.96	0.79
Social entrepreneurial intentions (Liñán and Chen, 2009) *How strongly do you disagree or agree with the following statements about yourself?* 1. I am ready to do anything to *apply my business skills to have a significant impact in reducing social inequities*. 2. My professional goal is to *work in a setting where I can use my business skills to craft solutions to social problems*. 3. I will make every effort to *use my business acumen to bring about social change*. 4. I am determined to *have a direct social impact through my work in the future*. 5. I have very seriously thought of *working in a social enterprise*. 6. I have the firm intention to start a *social enterprise* some day.	 0.85 0.89 0.91 0.82 0.79 0.68	0.93	0.68

Adaptations from original scales are italicized. CR stands for Composite Reliability; AVE stands for Average Variance Extracted.

* All significant at the $p < 0.001$ level (2-tailed).

Table 3. Correlations and discriminant validity test.

	1	2	3	4	5
1. Perspective-taking	**0.73** [a]				
2. Empathic concern	0.36**	**0.70**			
3. SE self-efficacy	0.26**	0.31**	**0.71**		
4. Social worth	0.28**	0.12	0.27**	**0.89**	
5. SE intentions	0.36**	0.27**	0.47**	0.38**	**0.83**
Control variables					
Gender	0.15*	0.27*	0.09	0.01	0.05
Volunteering experience	-0.01	0.07	-0.02	-0.01	-0.20*
Work experience	0.17*	0.08	0.02	0.03	0.01
Academic year	-0.06	-0.06	0.10	-0.08	0.15*
Type of course	0.23**	0.14*	0.03	0.35**	0.15*
Proactive personality	0.21**	0.29**	0.42**	0.16*	0.31**
Extraversion	0.06	0.14*	0.17*	0.08	0.14*
Agreeableness	0.29*	0.37**	0.09	-0.02	0.13
Conscientiousness	0.08	0.14*	-0.03	0.13	0.05
Neuroticism	-0.19**	-0.02	-0.15*	-0.15*	-0.09
Intellect	0.01	0.03	-0.03	-0.17*	-0.02

N=281

[a] The diagonal of the matrix displays the square root of each construct's Average Variance Extracted (in bold); inter-construct Pearson zero-order correlations are displayed off-diagonal.

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Table 4. Means, standard deviations (s.d.), medians, minima (Min.) and maxima (Max.).

Latent variable name	Valid N	Mean	s.d.	Median	Min.	Max.
1. Perspective-taking	243	2.93	0.68	3.00	0.60	4.00
2. Empathic concern	243	3.13	0.63	3.25	1.25	4.00
3. SE self-efficacy	220	5.49	0.75	5.64	3.36	7.00
4. Social worth	217	5.27	1.14	5.50	1.00	7.00
5. SE intentions	223	5.41	1.23	5.67	1.00	7.00

Table 5. Structural model assessment with both mediators.

Path between two latent variables		*Direct effects*	*Indirect effects*	*Total effects*
From	**To**			
Perspective-taking	→ Empathic concern	0.39***		0.39***
Perspective-taking	→ SE intentions	0.09	0.14***	0.23***
Empathic concern		0.01	0.08*	0.09
Perspective-taking	→ SE self-efficacy	H1a: 0.14+	0.09** (via EC)	0.23***
Empathic concern		H1b: 0.24***		0.24***
SE self-efficacy	→ SE intentions	H2: 0.32***	0.06	0.32***
Perspective-taking	→ Social worth	H4a: 0.25***	0.01 (via EC)	0.25***
Empathic concern		H4b: 0.02		0.02
Social worth	→ SE intentions	H5: 0.26***		0.26***
Control variables				
Gender	→ SE intentions	-0.01		
Volunteering experience		-0.14**		
Work experience		-0.07		
Academic year		0.08		
Type of course		0.01		
Proactive personality		0.09		
Extraversion		-0.01		
Agreeableness		0.10		
Conscientiousness		0.04		
Neuroticism		-0.05		
Intellect		-0.07		

+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (2-tailed *t*-test).

Table 6. Separate analysis of hypothesized mediating effects.

	***Partial mediation* model B mediator = SE self-efficacy**			***Partial mediation* model C mediator = social worth**			**Model D**
Path between 2 latent variables	***Direct effects***	***Indirect effects***	***Total effects***	***Direct effects***	***Indirect effects***	***Total effects***	***Direct effects***
	$R^2 = 0.33$			$R^2 = 0.32$			$R^2 = 0.23$
Perspective-taking → *mediator*	0.14^{+}			0.25***			
Empathic concern → *mediator*	0.23***			0.01			
Mediator → SE intentions	0.37***			0.33***			
Perspective-taking → SE intentions	0.14*	H3a: 0.08*	0.22***	0.13*	H6a: 0.11**	0.24***	0.20**
Empathic concern → SE intentions	-0.001	H3b: 0.09**	0.09	0.07	H6b: 0.003	0.07	0.06
Control variables							
Gender	-0.01			0.03			0.02
Volunteering experience	-0.14**			-0.15***			-0.16**
Work experience	-0.09^{+}			-0.07			-0.10^{+}
Academic year	0.07			0.12*			0.12*
Type of course	0.08			-0.01			0.08
Proactive personality	0.08			0.18***			0.19***
Extraversion	0.01			0.01			0.04
Agreeableness	0.09			0.07			0.04
Conscientiousness	0.07			0.02			0.05
Neuroticism	-0.05			-0.08			-0.09
Intellect	-0.08			-0.04			-0.05

$^{+}$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (2-tailed *t*-test).