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Angel investor characteristics that determine whether perceived passion leads to higher evaluations of funding potential☆

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ABSTRACT

Despite interest in understanding the role passion plays in investor decision making, little is known about the conditions under which perceived passion is likely to play a significant role in the funding decision process. We first establish a relationship between perceived passion and evaluations of funding potential, then use affective reactivity as a theoretical framework to explore how several individual characteristics of angel investors impact the relationship between perceived passion and evaluations of funding potential. The results indicate that the relationship is stronger for angel investors who are older, more intuitive, have a high openness personality, or those who are motivated to mentor. Surprisingly, the relationship weakens for angels who are extraverted and those who have a promotion-dominated regulatory focus.

1. Introduction

Equity investors such as angel investors and venture capitalists (VCs) use various criteria when determining whether or not to invest in a new venture. These investment criteria involve aspects of the opportunity as well as criteria related to the entrepreneur (e.g., MacMillan et al., 1987; Sudek, 2006; Tyebjee and Bruno, 1984; Van Osnabrugge, 1998). One investment criteria receiving increasing attention is entrepreneurial passion. Although entrepreneurial passion can have cognitive and behavioral manifestations (Chen et al., 2009), passion itself is an intense positive affective feeling (Cardon et al., 2009c).

Scholars suggest that angel investors rate passion of the entrepreneur as an important investment criterion (Carter and Van Auken, 1992; MacMillan et al., 1987) and recent work finds that the passion displayed by the entrepreneur impacts the passion perceived by angel investors and ultimately evaluations of funding potential (Cardon et al., 2009b). Yet conflicting results suggest that the affective manifestation of passion is not important (Chen et al., 2009). Research in this area is in its infancy, and little is known about whether the relationship exists in the first place, much less the conditions under which passion is more or less likely to play a significant role in investors' decision making. Although angel investors, in general, have indicated that the passion of the entrepreneur is important to their decision-making (Sudek, 2006; Van Osnabrugge, 1998), there are a number of angel investors who claim to place less importance on entrepreneurial passion (Cardon et al., 2009b), saying for example that, "Passion is fine and necessary but is no replacement for planning, fact finding, execution and process." In this study we address these contradictory

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claims and explore individual characteristics of angel investors that make them more or less likely to consider passion when making evaluations of funding potential.

We first review literature on passion from psychology, management, and entrepreneurship, and articulate a distinction between felt, displayed, and perceived passion that might help shed light on the disparate empirical findings in the literature concerning passion and evaluations of funding potential. We then use literature on affective reactivity to explain what individual characteristics of angel investors are expected to impact their ability to process affective cues and translate stimuli (i.e. displayed passion) into an affective frame of reference to ultimately influence the weight that affective stimuli (perceived passion) exhibits in their evaluations of funding potential. We focus on actual decision criteria, by examining how individual characteristics increase or decrease the strength of the relationship between perceived passion and evaluations of funding potential when controlling for other important investment criteria. We test our hypotheses with a sample of angel investor evaluations of 241 real investment opportunities (entrepreneurial pitches).

We seek to contribute to the literature in several key ways. First, we add to the growing body of research regarding entrepreneurial passion. Although there is increasing work on how passion may impact the entrepreneurial process (cf. Cardon et al., 2009b), empirical evidence is sparse or newly emerging (e.g., Baum and Locke, 2004; Cardon and Kirk, 2010). We build on work by Chen et al. (2009) and make a clear distinction between the passion entrepreneurs feel (Cardon et al., 2009a, 2009c) and the passion that is displayed (Chen et al., 2009) to be perceived by others. Our focus on perceived passion by angel investors is distinct from Chen et al.'s (2009) work, because we focus specifically on angel investors and perceived passion, while they focused on displayed passion and evaluations made by MBA students (study 1) and VC firms, banks, and financial companies (study 2). We focus on how observers, specifically angel investors, perceive the passion that entrepreneurs display, and how such assessments of perceived passion impact angels' real-time assessments of the funding potential of new ventures as actual entrepreneurs pitch their new ventures. This is one of the first studies of actual investment decisions as they occur in the entrepreneurial context.

Second, by shifting the focus from the passion displayed by entrepreneurs to the passion perceived by angels, we contribute to research regarding angel investment decision-making. While the field has recognized that "personal chemistry" between the entrepreneur and potential investors can have a large impact on funding outcomes (e.g., Hisrich and Jancowicz, 1990), this chemistry has primarily been looked at by focusing on the entrepreneur's interpersonal style, skills, and social competence, for example, to explain the "investor fit" (Fried and Hisrich, 1994), rather than examining the other side of the relationship and focusing on the characteristics of angel investors that may impact funding outcomes. We argue that evaluations of funding potential depend not only on the attributes of the person being judged (i.e. the entrepreneur) but also on the attributes of the person making the judgment (i.e. the angel). Previous research typically does not examine how differences in the individual characteristics of angels impact their decision making (see Wiltbank et al., 2009 for an exception). We build on prior research on angel investors to explore such within group variation, specifically concerning the individual characteristics that may impact whether perceived passion leads to higher evaluations of funding potential.

2. Passion and angel investors

Historically, research in psychology and social psychology has looked at passion as unique to interpersonal relationships and in particular intimate relationships (e.g., Fletcher et al., 1994). However, more recently passion has been incorporated into other domains such as personal hobbies (e.g., Vallerand, 2008) and passion for work (Baum et al., 2001; Vallerand and Houlfort, 2003). Passion for work has been argued to be one of the most important factors in the success of individuals, managers, and leaders (Bass, 1990; House and Howell, 1992; Vallerand and Houlfort, 2003; Vallerand et al., 2003) because without passion, individuals cannot sustain the energy necessary to accomplish excellence and managers cannot motivate or inspire others (Boyatzis et al., 2002).

One of the most prolific streams of research on passion comes from psychology, where Vallerand and his colleagues (Vallerand, 2008; Vallerand and Houlfort, 2003; Vallerand et al., 2003) define passion as a strong inclination or desire toward a self-defining activity that one likes (or loves), finds important, and in which one invests time and energy. They distinguish between harmonious and obsessive passion, and examine how each impacts individual well-being and work performance. In entrepreneurship, passion has been defined as an "intense affective state that bears cognitive and behavioral manifestations of high personal value" (Chen et al., 2009: 199). It involves intense and positive feelings that entrepreneurs experience when they are engaged in key activities associated with roles (such as founder) that are critical to the self-identity of the entrepreneur (Cardon et al., 2009c; Hoang and Gimeno, 2010). The two key aspects of passion seem to be that 1) it involves positive and intense feelings, and 2) the object of these feelings is profoundly personally meaningful to the entrepreneur (Cardon et al., 2009c). While Chen and colleagues' definition argues that the intense feelings associated with entrepreneurial passion will often manifest themselves into cognitions and behaviors, such as greater planning, preparation, or commitment to one's venture, we maintain that such manifestations are potential outcomes of an entrepreneur feeling passion, rather than part of the passion experience itself. Entrepreneurial passion, just as more generalized passion (Vallerand, 2008; Vallerand et al., 2003) or passion for work (Perttula, 2004, 2010; Perttula and Cardon, 2011; Vallerand, 2008; Vallerand and Houlfort, 2003), is an intense positive affective feeling (Cardon et al., 2009c).

We make a further distinction between the passion that is experienced (i.e. felt) by entrepreneurs (e.g., Cardon et al., 2009c; Klaukien et al., 2008) and the passion they display to others, such as employees or other stakeholders of the firm (Brundin et al., 2008; Cardon, 2008). Further, when entrepreneurs display passion, such as appearing enthusiastic in their presentations, potential investors make assessments concerning *perceived passion*, or how passionate they think the entrepreneur really is. This is

distinct from displayed passion, because the emotion an entrepreneur displays may not be perceived by the investor. Potential investors may perceive an entrepreneur as passionate based on their display, regardless of what the entrepreneur actually feels (Cardon et al., 2009b). Because there is a key difference in what an entrepreneur feels and what they display, and because it can be difficult for outsiders to determine the personal meaning of activities or events to an entrepreneur, evaluations of perceived passion are often made based on the most observable aspect of passion, the intensity and positivity (or negativity) of the feelings that an entrepreneur displays (Cardon, 2008). Thus regardless of the experienced passion or the displayed passion, we suggest that what matters to funding is perceived passion, and ultimately which angel investors' characteristics influence how perceived passion translates into evaluations of funding potential.

The process of evaluating venture investment opportunities is complex and iterative (e.g., Hall and Hofer, 1993), and different types of equity investors, as well as different individuals within each type, may evaluate such opportunities differently. Scholars often focus on venture capitalists. We instead focus on angel investors who likely evaluate funding potential differently than venture capitalists due to several key differences. Angel investors are individuals who invest their own money into a venture (Benjamin and Margulis, 2000), sometimes alone and sometimes as part of an angel investment group. Because of this, they tend to make investment decisions more personally, performing less professional due diligence than VCs, investing more opportunistically, relying more on instincts, and without calculating internal rates of return (Baty, 1991; Mason and Harrison, 1996; Timmons, 1990; Van Osnabrugge and Robinson, 2000). Angel investors tend to be much more involved with the companies in which they invest, and are often involved in the day-to-day operations (Benjamin and Margulis, 2000; Van Osnabrugge, 2000) of those firms. An angel investor is typically motivated beyond return on investment (ROI), instead investing because they enjoy helping another entrepreneur build a business and giving back to the entrepreneurial community (Benjamin and Margulis, 2000; Van Osnabrugge, 2000). Because angels invest more personally and with different motivations, it is important to explore specific characteristics of angel investors that influence their decision criteria in choosing their investments.

The passion an angel perceives an entrepreneur to have may be important to their evaluations of funding potential because passion can lead investors to be more confident in the entrepreneur, particularly when the product or environment is ambiguous and uncertain (Zacharakis and Shepherd, 2001). Passion may provide a strong indication of how committed the entrepreneur is to putting in the time and effort needed to make the company a success (Vallerand et al., 2003). Passion may also lead to drive, tenacity, initiative, and willingness to work long hours (Bierly et al., 2000; Bird, 1989), which are viewed favorably by potential investors. Passion may also lead to greater investment from outsiders because entrepreneurs may be more persuasive when they demonstrate high levels of positive emotion (Baron, 2008), they may appear more confident. Perceived passion can also lead to emotional contagion, where others cannot help but get caught up in the excitement the entrepreneur appears to have (Cardon, 2008). Therefore, we hypothesize the following:

H1. Perceived passion increases evaluations of funding potential.

3. Affective reactivity

Just as there are differences between categories of equity investors, we anticipate there will be differences within the category of angel investors. Because individuals differ in the way they process and utilize information (Allinson and Hayes, 1996; Peterson and Deary, 2006; Riding and Cheema, 1992), they also vary in their propensities to rely on affect when making decisions (Cacioppo and Petty, 1982). Neurological evidence suggests that affective experience guides human behavior in an effortless manner (Barrett et al., 2007) and affective reactions to stimuli are often faster and better remembered than cognitive responses (LeDoux, 1996; Zajonc, 1980, 1984). Research examining the impact of affect on decision making has focused on how individuals' affective state influences their judgments (e.g., Foo, 2011; Seo and Barrett, 2007) or how individuals differ in the magnitude and type of affective reactions experienced in response to affective stimuli (Baumgartner et al., 1997; Hagemann et al., 2005; Lucas and Baird, 2004). Individuals appear to differ in their response to affective cues (Davidson, 1998; Gohm and Clore, 2000) and affective reactions have been found to impact the level of perceived risk (Peters et al., 2004) and perceived value of securities (MacGregor et al., 2000).

In the current study, we examine how the individual characteristics of angels impact their affective reactivity. Instead of defining affectivity reactivity in terms of changes in the level of affect experienced by the person making the judgment (e.g., Charles et al., 2009), we extend the definition of affective reactivity to examine the extent to which individuals respond to affective stimuli by incorporating affective cues into their decisions.

Affective reactions to stimuli are often the first reactions that occur automatically and they guide future information processing and judgments (Zajonc, 1980). Therefore, affective reactions serve as an orienting mechanism that helps individuals navigate quickly and efficiently through uncertain situations (Finucane et al., 2003). Research regarding affective reactivity suggests that individuals that are better able to process affective cues appear to have a clear preference for those cues when making decisions (Finucane et al., 2003). The more precise the affective impressions, the greater the weight affective cues exhibit in impression formation, judgment, and decision making (Hsee, 1996, 1998).

We utilize literature on affective reactivity as our overarching framework, and literature specific to each individual characteristic below, to develop hypotheses regarding how individual characteristics will impact the relationship between perceived passion and angel investors' evaluations of funding potential. We focus on the following individual characteristics because previous research has linked them to affect: social perception (e.g., Niedenthal et al., 2005), cognitive style (e.g., Slovic et al., 2002), extraversion (e.g., Lucas and Baird, 2004), openness (e.g., Costa and McCrae, 1984), regulatory focus (e.g., Brockner and Higgins, 2001),

motivation to mentor (e.g., Berscheid, 1994), and age (e.g., Peters et al., 2007). Because of the links made previously in the literature between these characteristics and affect, we expect these characteristics to impact the extent to which some angels can detect affective information more readily than others. In the sections that follow, we explain why we expect to observe differences in the strength of the relationship between perceived passion and evaluations of funding potential based on this ability as it relates to each angel characteristic.

3.1. Social perception

The social skills of angel investors likely impact their ability to accurately assess the affective cues demonstrated by entrepreneurs. In particular, we focus on the ability of angel investors to perceive others accurately, their social perception, because it is an important skill in a number of business contexts, and in particular in entrepreneurship (Markman and Baron, 2003). Social perception involves the ability to accurately recognize traits, intentions, and motives of others by observing them (Baron and Markman, 2003). Angel investors skilled at social perception may find it easier to process affective cues and likely find they do so with more accuracy than individuals with low social perception. Because individuals that are better able to process affective cues have a clear preference for those cues when making decisions (Finucane et al., 2003), we argue that perceived passion will have a greater impact on evaluations of funding potential for angel investors with a high degree of social perception because they have the ability to accurately assess the affective cues of the entrepreneur. We propose the following:

H2. Accuracy in social perception moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for angels with more accurate social perception than for angels with less accurate social perception.

3.2. Cognitive style

Cognitive style is an important determinant of individual behavior (Sadler-Smith and Badger, 1998) and refers to an individual's automatic way of organizing and processing information and situations to arrive at judgments (Riding and Rayner, 1998; Streufert and Nogami, 1989). Everyone has a preferred cognitive style and perceives themselves and others as existing along a continuum ranging from highly adaptive to highly innovative (Kirton, 1976, 2003). Adaptors (i.e. analysts) use a structured approach to problem solving and use rational thinking, basing judgment on mental reasoning; they process things analytically. In contrast, innovators (i.e. intuitivist) use an open-ended approach to problem solving and use intuition, basing judgment on feelings (Allinson and Hayes, 1996; Kirton, 2003). Innovators use an experiential, rather than analytical, processing system to understand reality. This experiential system is linked to emotion and affect (Slovic et al., 2002). Because individuals with an innovator cognitive style (a low cognitive style score) use the experiential processing system that is linked to affect, they will be more sensitive to affective stimuli and therefore more comfortable using this information when making decisions than individuals with a more adaptor cognitive style (analytical; a high cognitive style score). Therefore, perceived passion will be a stronger predictor of evaluations of funding potential for angels with an innovator cognitive style. We hypothesize:

H3. Cognitive style moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for intuitive angels (low cognitive style scores) than analytic angels (high cognitive style scores).

3.3. Personality

Research on the structure of personality has converged around a model of five factors — conscientiousness, extraversion, agreeableness, neuroticism, and openness (Digman, 1990; Judge et al., 2002). We focus on extraversion and openness since prior work has suggested they increase the likelihood of experiencing emotions (Costa and McCrae, 1984; Lucas and Baird, 2004). Individuals that score high on extraversion (i.e. extraverts) appear gregarious and sociable (Barrick and Mount, 1991). Research has found that extraverts are consistently happier than introverts across situations, and that extraverts seem to have a higher arousal level than introverts when exposed to positive stimuli (Lucas and Baird, 2004). Based on this research, we expect perceived passion will be a stronger predictor of evaluations of funding potential for angels high in extraversion because they are expected to react stronger to the affective stimuli of perceived passion than introverts (i.e. low extraversion). Therefore, we make the following hypothesis.

H4. Extraversion moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for extraverts (high extraversion scores) than for introverts (low extraversion scores).

Individuals scoring high in openness have a tendency to be creative, imaginative, perceptive, and untraditional (Judge and Bono, 2000; Zhao and Seibert, 2006). Openness has been found to be positively correlated with aspects of intelligence related to divergent thinking and creativity (George and Zhou, 2001; McCrae, 1987), and also to relate positively to positive affective states (Costa and McCrae, 1984; McCrae and Costa, 1991; Watson and Clark, 1992). We expect the relationship between perceived passion and evaluations of funding potential to be stronger for angel investors high in openness because they are more

likely than angel investors low in openness to experience an emotional reaction which increases their ability to translate the stimuli into an affective frame of reference. Thus,

H5. Openness moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for angels with high openness than for angels with low openness.

3.4. Regulatory focus

Individuals with similar goals possess different ways of achieving these goals due to their regulatory focus (Higgins, 1997). Regulatory focus theory explains how individuals choose the appropriate means to achieve a goal based on their regulatory focus. Although individuals experience both types of regulatory foci – promotion and prevention focus – they have a predisposition for one or the other (Higgins et al., 2001). Individuals high in promotion focus attempt to increase the likelihood of hits and ensure against errors of omission, making them more sensitive to the presence or absence of positive outcomes. In contrast, high prevention focus makes individuals more sensitive to the absence or presence of negative outcomes. These individuals attempt to ensure correct rejections and avoid errors of commission (Higgins, 1997).

Individuals' degree of promotion and prevention focus influences the nature and magnitude of their emotional reactions. Individuals that are promotion focused are more likely to respond positively when exposed to positive stimuli than prevention focused individuals (Brockner and Higgins, 2001). Therefore, when exposed to positive affective stimuli, we expect that individuals with promotion-dominated regulatory focus will be more likely to experience positive emotions towards the stimuli, and thereby increasing their ability to translate that stimulus into a positive affective frame of reference.

Entrepreneurship research suggests that at the earliest stages of the entrepreneurial process, individuals with promotion-dominated regulatory focus excel because they are better able to consider new possibilities and generate alternatives than individuals with high prevention focus (Brockner et al., 2004). For angel investors, we suggest that those with a promotion-dominated regulatory focus will react more positively emotionally to presentations in general, and especially those entrepreneurs perceived as passionate. These angels are more likely to the see the potential of the business opportunity; therefore they see their investment in that company as a means to which they can reach their goal of being successful angel investors. Due to the increased emotional response, the relationship between perceived passion and evaluations of funding potential will be stronger for angels with promotion-dominated regulatory focus because their regulatory focus increases their ability to translate the stimuli into an affective frame of reference. Accordingly,

H6. Regulatory focus moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for angels with promotion-dominated regulatory focus than for angels with regulatory focus dominated by prevention focus.

3.5. Motivation to mentor

Often individuals are motivated to become angel investors out of a desire to share the wisdom gained through their experience and expertise as entrepreneurs themselves (e.g., Benjamin and Margulis, 2000; Van Osnabrugge and Robinson, 2000); they are motivated to become angels in order to mentor others. Due to mentoring involving exchange behaviors between both individuals in the mentoring relationship, the extent to which the mentor perceives a commitment from the protégé is crucial in determining their willingness to engage in the mentoring relationship (Berscheid, 1994; Young and Perrewé, 2000). Commitment may be a behavioral manifestation of passion (Chen et al., 2009). Therefore, when angels are motivated to mentor entrepreneurs, they may be more likely to pay attention to the passion entrepreneurs display because they want to make sure they invest in passionate entrepreneurs because these entrepreneurs are likely to do whatever it takes to make the venture successful, including accepting good advice (Cardon et al., 2009b). Perceived passion will have a greater impact on evaluations of funding potential for angel investors that are motivated to mentor because it impacts their ability to mentor the entrepreneur. In addition, research has linked positive affectivity with the likelihood of becoming a mentor (Aryee et al., 1996), suggesting that perceived passion may be a stronger predictor of evaluations of funding potential for angels with a high motivation to mentor than those with low motivation because they are more likely to experience positive affect which research has shown increases an individual's ability to translate the stimuli into an affective frame of reference (Hsee, 1996, 1998). Thus,

H7. Motivation to mentor moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for angels with high motivation to mentor than for angels with low motivation to mentor.

3.6. Age

Research has found that age is associated with selective attention toward positive stimuli (Charles and Carstensen, 2007; Issacowitz et al., 2006; Mather and Carstensen, 2003) and an increased focus on emotional content (Peters et al., 2007). These results are due to differences in affective/experiential and deliberative processes at work when individuals make decisions (Mikels et al., 2010). Encoding of affective information appears to remain well preserved, resulting in affective processes taking on increased importance as deliberative functions decline in later life (Fung and Carstensen, 2003; Kensinger et al., 2005; Peters et

al., 2007). Because older adults focus more on emotional content than younger adults (Peters et al., 2007), we suggest that the impact of perceived passion on evaluations of funding potential will be stronger for older angels because they are more attuned to affective displays. Thus,

H8. Age moderates the relationship between perceived passion and evaluations of funding potential, such that the relationship will be stronger for older angels than for younger angels.

4. Methodology

4.1. Data source

The setting for this study was a chapter of one of the largest angel organizations in the United States based in California that has invested over $108 million in more than 168 companies since 1997. This sample involves angels that do not invest as a group; rather each angel in the group decides independently whether to invest in a firm. Entrepreneurs apply via a web application and are initially screened by a small group of angels who have domain expertise. The objective of this pre-screen is to coach the entrepreneur on their PowerPoint presentation and to determine if the entrepreneur is ready to make the screening presentation. The screening involves a 15-minute presentation and a 15-minute question and answer session (Tech Coast Angels, 2011). From August 2006 through July 2010, 64 angels screened 241 companies producing 3502 evaluations. All the angels did not evaluate all the companies. The number of angels attending each screening ranged from 5 to 23 with an average of 14. Angel investors were assigned an identification number to enable us to match individual characteristics with evaluations in the dataset. Angel investor demographic and cognitive data were collected prior to actual investment evaluations and as angels joined the angel group.

Forty-one (17%) of the 241 companies were eventually funded and represented 16 different industry categories. The industry with the largest representation was the software industry with 92 companies, 34 companies operate in consumer product and services, 25 in medical devices, and 21 in business products and services. The companies were distributed across stages of development: good idea (2), product development (48), initial marketing (62), revenue (111), profitable (13), and turnaround/restart (4). Based on a comparison with the largest dataset of accredited angel investors known to date (Wiltbank and Boeker, 2007), the companies in this sample appear to be more heavily concentrated in software than is the norm (38% in this sample compared to 19% in Wiltbank and Boeker's sample).

Three (4.7%) of the 64 angels were female, with 68.8% having earned a PhD or masters degree, and 42 (65.6%) had startup experience. The angel investor's demographic information appears to be comparable with Wiltbank's sample that was predominately males (86%), with more than 50% of the angel investors holding graduate degrees. Entrepreneurial experience appears to be the norm in angel investing (a specific percentage was not provided in Wiltbank and Boeker's study, but 22% had never worked in a corporation).

4.2. Measures

4.2.1. Evaluations of funding potential

Angels evaluated the funding potential of a new venture at the end of the entrepreneur's presentation by indicating whether the entrepreneur should proceed to due diligence using a single item measure with a five-point Likert scale (1 = disagree, 2 = partially disagree, 3 = neutral, 4 = partially agree, 5 = agree).

4.2.2. Perceived passion

Using a 5 point Likert type scale, angel investors assessed the passion and the enthusiasm demonstrated by the entrepreneur at the time of their presentation with two items, "The CEO is passionate about the company" and "The CEO is very enthusiastic." These items were correlated .783 ($p<.001$) justifying averaging these items to determine a single measure of perceived passion.

4.2.3. Individual characteristics

Social perception (Baron and Markman, 2003) was measured using the following items: "I'm a good judge of other people", "I can usually recognize others traits accurately by observing their behavior", "I can usually read others well and tell how they are feeling in a given situation", "I can tell why people have acted the way they have in most situations", and "I generally know when it is the right time to ask someone for a favor." Respondents used a five-point Likert scale (1 = disagree, 5 = agree) for all items and we calculated the mean of these items. Our alpha of .731 is comparable to Baron and Markman's results across two samples (.77 and .83).

We measured cognitive style using the cognitive style index developed by Allinson and Hayes (1996). Angels responded to 38 items using a trichotomous response scale ranging from 0 to 2 (true–uncertain–false). A sample of the items used include: "In my experience, rational thought is the only realistic basis for making decisions", "I am more at home with ideas rather than facts and figures", and "I find that 'too much analysis results in paralysis'." The last two items are reverse coded. A high score indicates a more analytical and less intuitive cognitive style. Our alpha of .885 falls in the range achieved by Allinson and Hayes (.84–.92).

Personality of the angel was measured using a Big Five Personality Instrument (Saucier, 1994). This scale uses forty unipolar adjective markers of the big-five factor structure — conscientiousness, extraversion, agreeableness, neuroticism, and openness developed by Saucier (1994). We used the measures of extraversion and openness from that instrument. Some of the words

pertaining to extraversion include energetic, talkative, bashful (reverse coded), and quiet (reverse coded), whereas the words creative, deep, and philosophical, among others, were coded as openness. The endpoints of this scale indicate "very inaccurate" (1) and "very accurate" (5). Our reliabilities (extraversion alpha = .875 and openness = .818) are comparable to Saucier's reliabilities which ranged from .67 to .87.

The regulatory focus measurement consisted of an 18-item scale developed by Lockwood et al. (2002). This scale was developed to measure the extent to which individuals vary on the two subscales of promotion and prevention focus theorized by Higgins (1997). We amended some of the items to pertain to the investing context instead of the academic context used in the original scale. A sample of items include: "In general, I am focused on preventing negative events in my life" and "I frequently imagine how I will achieve my hopes and aspirations ". An example of the items amended include: original "I often worry that I will fail to accomplish my academic goals" and the new "I often worry that I will fail to accomplish my goals". The endpoints of this scale are "not at all true of me" (1) and "very true of me" (5). We calculated a measure for strength of promotion focus and a measure for strength of prevention focus by averaging the items belonging to each of these subscales. We were able to achieve alphas close to Lockwood and colleagues' .82 for their promotion focus scale and .75 for their prevention focus scale (our alpha = .732 for promotion and .855 for prevention). We calculated the degree to which someone is more promotion focused than prevention focused by subtracting the prevention score from the promotion score. Therefore positive scores on this scale reflect a greater promotion focus than prevention focus.

Angels indicated their motivation for becoming a member of the angel organization by splitting 100% among five categories. The categories consisted of "to make money", "to educate yourself about investing", "to interact with entrepreneurs and other angels", "to mentor entrepreneurs", and "to help build or create startup companies". For this study we focused only on the responses regarding motivation "to mentor entrepreneurs" because this was the only motivation category expected to moderate the relationship between perceived passion and evaluations of funding potential. The value for this variable represents the allocation of 100% angels made specific to the motivation to mentor entrepreneurs category, which ranged from 0 to 40% (the average was 11.93). We also collected demographic data, including the angel's age (in years).

4.2.4. Control variables

Evaluations of funding potential may depend on the strength of the opportunity, the strength of the entrepreneur, as well as the education and startup experience of the angel investor, so we controlled for these variables in our analysis.[3] Opportunity strength was determined by averaging the responses of all angels attending the screening. Angels used a 5 point agree–disagree Likert scale to rate the strength of the opportunity using six items: "the business model is strong," "the market has a large growth potential," "the product/service development risk is low," "the company's revenue potential is large," "the company has a reasonable exit plan," and "there are reasonable barriers to entry." The Cronbach alpha for this variable was .762. Entrepreneur strength was determined by averaging the responses to 5 items: "the domain expertise of the presenter is strong," "the presenter has a proven track record," "the presenter appears trustworthy," "the presenter appears honest," and "the presenter appears coachable." The Cronbach alpha for this variable was .821. Education was coded as 1 if no high school had been completed, 2 if the angel completed high school, 3 if a bachelor's degree was completed, 4 if a masters degree was completed, and 5 if the angel had obtained a PhD. We used a dichotomous variable for startup experience with a 1 indicating an angel that has started a new venture and 0 if the angel has not started a new venture.

4.3. Results

Table 1 provides means, standard deviations and correlations for all variables. Fairly low correlations among the independent variables indicate multicollinearity was not an issue. In order to examine the direct relationship between perceived passion and evaluations of funding potential and how individual characteristics moderate this relationship, we applied a multilevel (i.e. mixed-model) approach to data analysis. This approach accounts for the nested nature of the data — multiple evaluations nested within each angel, nested within each company screening. We had three levels of random variation: variation among decisions within angels (level 1), variation among angels within company screenings (level 2), and variation among company screenings (level 3). We estimated the unconditional model (with no predictors involved) and found significant level 2 and level 3 variances which confirmed that the multilevel approach was the correct data analysis technique to use (see Table 2).

We grand-mean-centered all of the individual characteristics and used −2 log likelihood (−2LL) to assess model fit. The smaller the −2LL value, the better the model fit (Tabachnick and Fidell, 2006). To assess the significance of the change in −2LL from one model to the next we performed a series of chi-square tests with the degrees of freedom equal to the difference in the number of parameters for the pair of nested models (Bryk and Raudenbush, 1992). Table 2 shows that the addition of variables in each model significantly improved the fit of the model. To test for interaction effects, control variables were entered into the model first, followed by the two-way interaction terms to create a full model (Cohen and Cohen, 1983). The significant interactions were plotted to further explore their exact nature. Following the procedure suggested by Cohen and Cohen (1983), values of individual characteristics and perceived passion were set at 1 standard deviation above and below the mean to determine the range of values for the dependent variable.

The control variable model in Table 2 shows that the strength of opportunity and strength of entrepreneur were significant ($b = 1.074$ and $b = .365$, $p < .001$ respectively). This is consistent with previous research showing that criterion related to the

[3] Gender may also impact evaluations of funding potential; however due to the focal angel organization being predominately male, we were not able to include gender in our analysis.

Table 1
Descriptive Statistics and Correlations.

	Mean	Minimum	Maximum	s.d.	n
1. Funding potential	3.23	1	5	1.18	3501
2. Opportunity strength	3.20	1	5	.65	3502
3. Entrepreneur strength	3.76	1	5	.69	3502
4. Education	3.73	2	5	.68	3502
5. Startup experience	.57	0	1	.50	3502
6. Perceived passion	4.07	1	5	.77	3502
7. Social perception	3.81	2.40	5	.38	3502
8. Cognitive style	38.93	4	65	12.26	3502
9. Extraversion	3.64	1.88	5	.71	3502
10. Openness	3.94	2.25	5	.71	3502
11. Regulatory focus	1.58	−.33	3.67	.99	3502
12. Motivation-mentor	11.93	0	40	10.33	3489
13. Age	59.26	34	81	10.57	3489

	1	2	3	4	5	6	7	8	9	10		
1. Funding Potential												
2. Opportunity Strength	.668**											
3. Entrepreneur Strength	.416**	.434**										
4. Education	.066**	.067**	.054**									
5. Startup Experience	−.137**	−.149**	−.153**	−.202**								
6. Perceived Passion	.387**	.384**	.623**	.059**	−.227**							
7. Social Perception	−.102**	−.111**	−.115**	−.036*	.160**	−.128**						
8. Cognitive Style	.034*	.107**	−.003	−.174**	−.368**	−.011	−.112**					
9. Extraversion	−.096**	−.107**	.098**	.058**	−.058**	.067**	.222**	−.312**				
10. Openness	−.033*	−.060**	−.057**	.164**	.247**	−.029	.397**	−.376**	.101**			
11. Regulatory Focus	−.046**	−.195**	.046**	.105**	.116**	.010	.155**	−.394**	.462**	.301**		
12. Motivation-Mentor	−.039*	−.034*	−.061**	.102**	−.107**	−.034*	−.040*	−.005	.004	−.164**	.132**	
13. Age	.005	.006	−.034*	.027	−.029	−.013	.201**	.031	.197**	−.109**	.252**	.154**

* p<.05; ** p<.01.

Table 2
MLM Results for the moderating effect of individual characteristics on the relationship between perceived passion and evaluations of funding potential.

	Unconditional	Control variable	Predictor	Full
	Model	Model	Model	Model
Fixed effects parameter				
Intercept	3.265***	3.258***	3.259***	3.268***
Perceived opportunity strength		1.074***	1.051***	1.054***
Perceived entrepreneur strength		.365***	.288***	.289***
Education		.025	.024	.022
Startup experience		−.101	−.105	−.144
Perceived passion			.141***	.152***
Social perception				−.080
Cognitive style				−.004
Extraversion				−.156*
Openness				.020
Regulatory focus				.032
Motivation-mentoring				−.004
Age				.005
Social Perception * perceived passion				−.048
Cognitive style * perceived passion				−.005**
Extraversion * perceived passion				−.098**
Openness * perceived passion				.104**
Regulatory focus * perceived passion				−.056*
Motivation-mentoring * perceived passion				.005*
Age * perceived passion				.006***
Covariance parameter				
Company	.324***	.049***	.046***	.045***
Angel	.110***	.131***	.132***	.111***
Residual variance	.931***	.578***	.574***	.567***
Model information criteria				
−2 log likelihood (−2LL)	10218.171	8346.755	8316.276	8264.274
Change in −2LL	10218.171***	1871.416***	30.479***	52.002***
Akaike's information criterion (AIC)	10226.171	8362.755	8334.276	8310.274
Schwarz's Bayesian criterion (BIC)	10250.814	8412.041	8389.723	8451.973

3502 decisions at level 1; 64 angels at level 2; 241 companies at level 3; *p<.05; **p<.01; ***p<.001.

market potential of the opportunity and competence of the entrepreneur are important when investors are evaluating the funding potential of new ventures (e.g., Hall and Hofer, 1993; MacMillan et al., 1987; Van Osnabrugge, 1998). Although research has linked prior startup experience (e.g., Wiltbank et al., 2009) and education (Haines et al., 2003) with angel decision making, we did not find evidence that they impact evaluations of funding potential in our study (b = .025 and b = −.101, p > .05 respectively).

H1 states that perceived passion will be positively related to evaluations of funding potential.

Results presented in the predictor model indicate support for this hypothesis (b = .141, p < .001). This is an important finding because recent research has concluded that passion is not important (Chen et al., 2009). Although Chen et al. (2009) call their measure passion, we argue it is more specifically displayed passion (presenter varies tone and pitch of their voice, for example), not perceived passion as assessed by investors. This distinction may be why we find support for perceived passion leading to higher evaluations of funding potential but when researchers use displayed passion they do not (Chen et al., 2009). We therefore provide evidence supporting the argument that it is important to distinguish perceived passion from displayed passion.

Support for the remaining hypotheses would be found if the individual characteristic strengthened (with the exception of cognitive style which would weaken) the relationship between perceived passion and evaluations of funding potential. Results indicate six significant interaction terms (see Full Model in Table 2). We did not find support for hypothesis H2 regarding the moderating effect of social perception (b = −.048, p > .05). Hypothesis H3 proposed that cognitive style would weaken the relationship between perceived passion and evaluations of funding potential. Support for this hypothesis was found due to the significant negative interaction term (b = −.005, p < .01). As illustrated in Fig. 1a, perceived passion is positively related to evaluations of funding potential, especially for intuitive angels (low cognitive style).

Extraversion (H4) was hypothesized to positively moderate the relationship between perceived passion and evaluations of funding potential. However, our results suggest a negative moderating effect instead (b = −.098, p < .01). Fig. 1b shows that the relationship is stronger for angels with low extraversion than those with high extraversion. To test this interpretation of the surprise finding, we followed procedures for testing simple slopes in multilevel models (Bauer and Curran, 2005; Preacher et al., 2006). We tested the simple slopes of low extraversion (one standard deviation below the mean) and high extraversion (one standard deviation above the mean). The relationship between perceived passion and evaluations of funding potential was stronger when extraversion was low ($\gamma = .22$, s.e. = .04, t = 5.82, p = .000) than when extraversion was high ($\gamma = .08$, s.e. = .04, t = 2.28, p = .0234). Thus H4 was not supported.

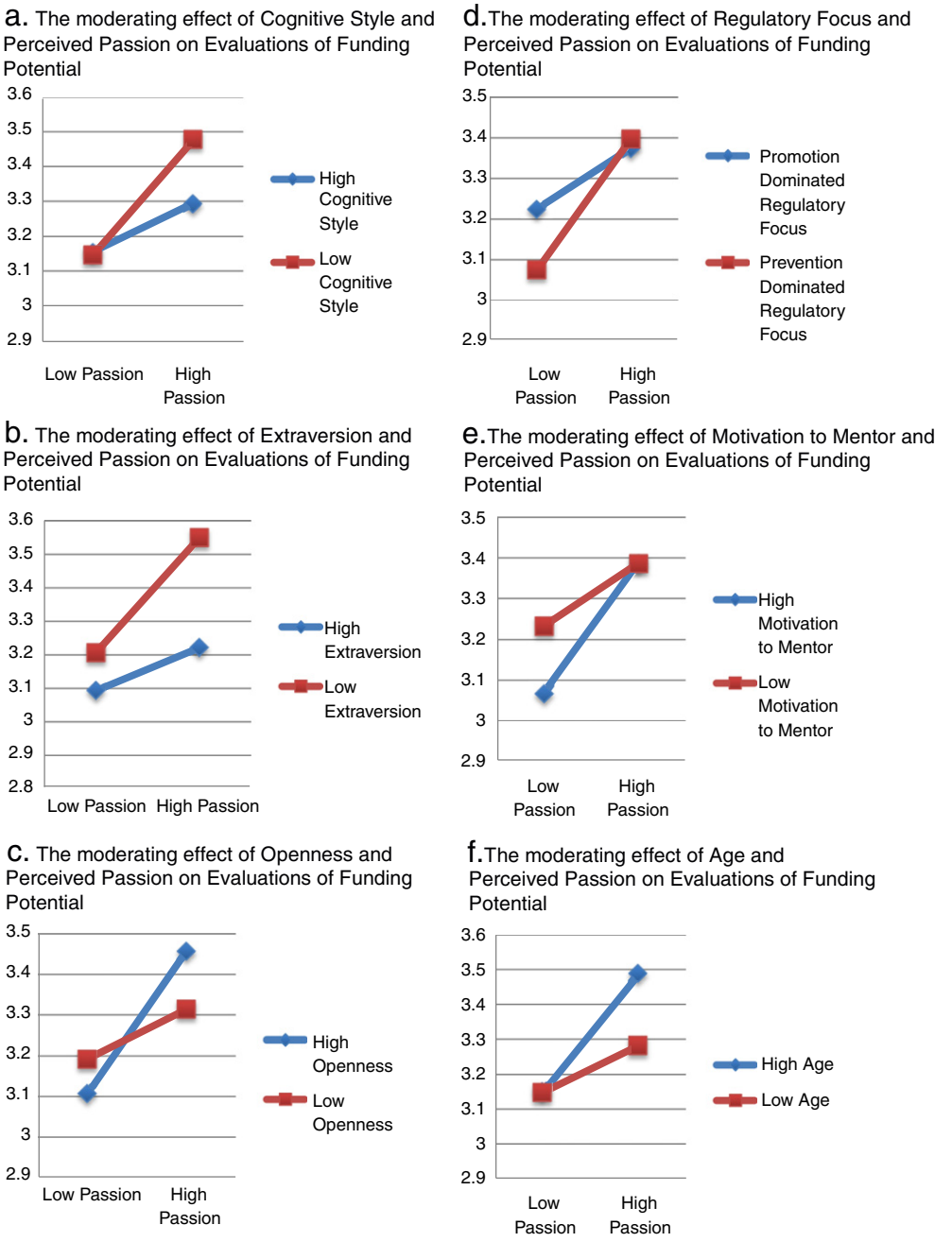

Fig. 1. Interaction plots for the moderating effect of individual characteristics on the relationship between perceived passion and evaluations of funding potential. a. The moderating effect of Cognitive Style and Perceived Passion on Evaluations of Funding Potential. b. The moderating effect of Extraversion and Perceived Passion on Evaluations of Funding Potential. c. The moderating effect of Openness and Perceived Passion on Evaluations of Funding Potential. d. The moderating effect of Regulatory Focus and Perceived Passion on Evaluations of Funding Potential. e. The moderating effect of Motivation to Mentor and Perceived Passion on Evaluations of Funding Potential. f. The moderating effect of Age and Perceived Passion on Evaluations of Funding Potential.

As hypothesized in H5 and illustrated in Fig. 1c, openness positively moderates the relationship between perceived passion and evaluations of funding potential ($b = .104$, $p < .01$). The slope is steeper for angels high in openness than those low in openness, suggesting that the relationship between perceived passion and evaluations of funding potential is stronger for angels high in openness than for angels low in openness.

Hypothesis H6 suggested that the relationship between perceived passion and evaluations of funding potential would be stronger for angels with promotion dominated regulatory focus than angels with regulatory focus dominated by prevention focus. Surprisingly, results indicate a negative moderating effect ($b = -.056$, $p < .05$). Fig. 1d shows that relationship between

perceived passion and evaluations of funding potential was stronger for angels with prevention dominated regulatory focus ($\gamma = .21$, s.e. = .04, $t = 5.75$, $p = .000$) than for angels with promotion dominated regulatory focus ($\gamma = .10$, s.e. = .03, $t = 2.85$, $p = .005$).

We hypothesized that motivation to mentor (H7) would have a positive moderating effect on the relationship between perceived passion and evaluations of funding potential, which was supported ($b = .005$, $p < .05$). As illustrated in Fig. 1e, perceived passion leads to higher evaluations of funding potential, especially for angels with a high motivation to mentor. Angels with a high motivation to mentor are especially critical of entrepreneurs they perceive as being low in passion. Finally, support was found for H8, that age would positively moderate the relationship between perceived passion and evaluations of funding potential ($b = .006$, $p < .001$). Fig. 1f indicates that age does not seem to matter when entrepreneurs are perceived as being low in passion; however, older angels have higher evaluations of funding potential than younger angels when they perceive high levels of passion.

5. Discussion and implications

Researchers have argued that passion is a critical component of entrepreneurship (e.g., Bird, 1989; Cardon et al., 2009c), and an important part of angel investing (Cardon et al., 2009b; Sudek, 2006), although conflicting results also have been found (Chen et al., 2009). We add to this literature by clarifying the distinctions between the passion that is experienced and displayed by entrepreneurs and passion that is perceived by others, and suggesting that perceived passion involves enthusiasm and excitement, and is distinct from how prepared or committed an entrepreneur may be to their venture. Building on this distinction, we provide evidence of a significant relationship between perceived passion and evaluations of funding potential for angel investors considering live deals, as well as an empirical assessment of the individual characteristics of angel investors that impact the relationship between perceived passion and evaluations of funding potential. There are several academic and practical implications of our findings.

5.1. Research implications

First, our findings provide some evidence that perceived passion does make a difference when angels evaluate the funding potential of new ventures. This finding is in direct contrast to the conclusions drawn by Chen et al. (2009: 201) who found in their studies that preparedness (defined as a cognitive manifestation of passion, such that "I can't stop thinking about the business venture idea") mattered to potential investors rather than passion (an affective manifestation of passion). There are a number of potential reasons for the apparent contradiction. First, we focus on passion as perceived by angel investors, rather than by representatives from "VC firms, banks, and financial companies" (Chen et al., 2009: 208), which as we note above may have very different motivations and evaluations of potential investments. Secondly, our investors were specifically angel investors evaluating live deals that had the potential for them to invest their own money. In contrast, the Chen investors were making evaluations for a business plan competition, where they did not have a personal financial stake in the outcome. And third, rather than evaluating preparedness in terms of the presentation itself, as Chen and colleagues did, we included investor evaluations of the quality of the idea and quality of the entrepreneur, regardless of the presentation, as control variables. We believe our study is a more robust and direct test of the impact of perceived passion on angel investor decision-making.

The implication of these findings is that perceived passion does appear to matter to equity investors, at least to angel investors, in addition to evaluations of the quality of the opportunity and quality of the entrepreneur in terms of their experience or confidence. Future research on passion and investment is needed that explores how different investment groups (VCs, government grant agencies, independent angel investors, for example) incorporate passion in their decision-making processes, not only in terms of whether or not it matters, but also in terms of where in the decision process it is considered more relevant. We could also consider how investors balance their assessments of perceived passion with assessments of the quality of the opportunity or entrepreneur during this process. For example, prior work suggests that the focus on the strength of the entrepreneur versus the opportunity varies depending on the stage in the funding process (Sudek et al., 2008). Longitudinal research is needed to explore how perceived passion impacts various stages of the funding decision process, as well as how this might differ for different types of investors.

Future research is also needed to determine whether investor assessments of perceived passion are accurate or not. Are angel investors really astute observers, able to tell which entrepreneurs are more passionate than others? Does skill in delivering the business plan presentation, such as making eye contact or varying one's tone and pitch indicate an entrepreneur who feels more passion or just an entrepreneur more skilled with making presentations or engaging in emotional labor? Research is needed that assesses the passion experienced by entrepreneurs, the facial and body expressions they display in their presentations, and the passion investors perceived to determine the extent to which these factors are correlated.

Our results also have implications for research on entrepreneur–investor relationships (e.g., Fried and Hisrich, 1994; Hisrich and Jancowicz, 1990) because we provide a perspective on differences in the extent to which perceived passion matters within the angel investment group. We examined how individual characteristics of angel investors influence the cues they attend to when evaluating the funding potential of a new venture, and in particular, we find that perceived passion is a stronger positive predictor of evaluations of funding potential for angel investors that are older, have an intuitive cognitive style, score high in openness, and for those that have a high motivation to mentor. These findings suggest while broad generalizations about what angel investors find important in their evaluations of funding potential are insightful, there is also a different story to be told.

There appear to be differences among angel investors in terms of how strongly perceived passion impacts their evaluations of funding potential based on their unique individual characteristics.

We found some surprising results when examining the moderating effect of both extraversion and regulatory focus on the relationship between perceived passion and evaluations of funding potential. We anticipated that extraversion would enhance the relationship between perceived passion and evaluations of funding potential since extraverts tend to react to stimuli with higher activation levels. Instead our results indicated a mitigating effect where the relationship was stronger for angels low in extraversion than for those high in extraversion. One possible explanation for this finding is that angel investors who are extraverted typically display a lot of enthusiasm and excitement about most things in their lives due to their extraverted personalities, and therefore may be more careful in their assessments of the extent to which entrepreneurs are truly passionate about this particular venture versus being enthusiastic in general. Extraverted angels may also want to invest in entrepreneurs who balance out their own extraversion by being more reserved or appearing less enthusiastic and passionate. Alternatively, these angels may see extraverted entrepreneurs that are displaying a lot of passion when it appears to be unwarranted as insincere, judging the entrepreneur as trying too hard.[4] In addition, while extraverts typically seek assertiveness, activity, and excitement in their own activities, they also experience more variability in their affect than individuals who are low in extraversion (Hepburn and Eysenck, 1989). This suggests that further research is needed on the relationships between extraversion, affective reactivity, and perceived passion in the angel investment context.

We were also surprised to find a negative moderating effect for regulatory focus. Angels with a prevention dominated regulatory focus are more sensitive to the presence or absence of negative outcomes (Higgins, 1997). Due to the expected positive relationship between perceived passion and evaluations of funding potential, entrepreneurs lacking passion would be considered as the presence of something negative. Therefore, as is illustrated in Fig. 1d, angels with prevention dominated regulatory focus would be more critical of entrepreneurs they perceive as low in passion. In addition, studies have found that promotion focus elevates feelings of certainty (Kluger et al., 2004), suggesting that individuals with prevention dominated regulatory focus are likely to perceive more risk than individuals with promotion dominated regulatory focus. This increased perception of risk may make passion even more important to angels. Further research is needed on how extraversion and regulatory focus impact perceptions of passion, as well as evaluations of funding potential for angels.

We also contribute to the literature on affect. Angel investing represents an interesting context to examine perceptions of affect because affect has a greater impact on cognition in environments that are highly unpredictable and filled with rapid change, which is quite true of entrepreneurship (Baron, 2008; Forgas, 1995). Our results support the perspective that affective perceptions direct and drive decisions (Peters et al., 2004). These findings suggest that the affective-decision process differs not only based on characteristics of entrepreneurs exhibiting that affect, but also based on the characteristics of angel investors perceiving and reacting to it. Future research can further examine why the affective information gathered impacts decisions, whether through processes of lowering risk perceptions (e.g., Peters et al., 2004), or through the use of an "affect heuristic" (Slovic et al., 2002), where people base their judgments not only on what they think but also on how they feel. The literature suggests that when the judgment is positive, risks are seen as low and benefits high, and when the judgment is negative, risks are seen as high and benefits low. Empirical research is needed to see if this prediction is borne out in the angel investment decision-making context.

5.2. Limitations

The most important limitation of this study derives from a research design based on one angel group, which raises questions regarding whether similar results would be obtained utilizing a different angel group. Organization characteristics such as size, age, industry focus, or those with more female angel investors may impact the funding screening process. One of the principle objectives of this research was to advance the development of angel investing research. Therefore, the decision was made to first focus on gaining an in-depth understanding of one angel group, leaving open the possibility to replicate this research in additional angel groups in the future.

In addition, some researchers may consider the fact that we focused on perceived passion (the affective manifestation of passion) as a limitation since the experience of passion may manifest itself affectively, cognitively, and behaviorally (Chen et al., 2009). Again we focused on the most readily visible manifestation of passion, the enthusiasm displayed by an entrepreneur, and how angels perceive this enthusiasm. We acknowledge that future research should also consider how angels perceive and weigh in their investment decisions cognitive and behavioral manifestations of passion that entrepreneur may demonstrate, and whether and how the relationship between these types of perceived passion and evaluations of funding potential are impacted by angel characteristics.

5.3. Practical implications

The results of this study suggest there are practical implications for both entrepreneurs and angel investors with regard to the funding decision process. Entrepreneurs should consider how individual characteristics of investors may impact their ability to get funding. Entrepreneurs who shy away from enthusiastic displays may want to consider how to express more energy and richer body language when presenting their venture so that they are perceived as more passionate, especially for older,

[4] We thank an anonymous reviewer for this suggestion.

introverted angels who appear creative and intellectual (i.e. who have high openness) and who are motivated to mentor but don't appear too analytical. Although determining the age of an angel is easier than determining whether they are introverted, creative or intelligent, entrepreneurs can likely infer these individual characteristics by the questions the angels ask, how the angels interact with each other, and the angels' past career choices. In addition, entrepreneurs may find it helpful to ask questions about the makeup of an angel group in advance of the presentation or ask questions during the presentation that may provide cues to help the entrepreneur understand the characteristics of the angels. This information could be used to adapt their presentation and style.

In addition, angels should become more aware of how their characteristics may impact their evaluations of funding potential. This study suggests that angels that belong to angel groups may want to profile their members and attempt to create more heterogeneous screening groups when evaluating investment opportunities. Some angels groups screen with small initial committees (1–3 angels), before they have the entrepreneur present to the broader membership. The composition of this initial committee could impact the deals that eventually make it to the group. In addition, angels are motivated to invest for different reasons. This study shows that motivation may impact how angels evaluate opportunities. Becoming more aware of their motivation to invest and how their characteristics may impact their investment decisions may lead some angels to strive to be more objective or seek input regarding a specific company from other angels who have different individual characteristics.

Altogether, this study reminds us that the interaction between entrepreneurs and angels is not just about the objective components of the business and return on investment, but rather how characteristics of each party play into the evaluation of funding potential. The interaction and relationship that starts to develop in the screening process appears to impact entrepreneurs' ability to get funding, and our results suggest that perceived passion is an important part of this interaction.

6. Executive summary

Researchers have argued that passion is a critical component of entrepreneurship and an important part of angel investing. However, recent work suggests that the certain manifestations of passion are not important. Research in this area is in its infancy, and little is known about whether a relationship between passion and evaluations of funding potential exists or whether certain individual characteristics of angel investors make them more or less likely to consider passion when evaluating entrepreneurs and their firms. We use literature on affective reactivity to explore which individual characteristics of angel investors are expected to impact their ability to process affective cues and translate stimuli (i.e. displayed passion) into an affective frame of reference to ultimately influence the weight that affective stimuli (perceived passion) exhibits in their evaluations of funding potential. We test our hypotheses with a sample of 64 angel investor evaluating 241 real entrepreneurial pitches over an almost four year period for a total of 3502 evaluations.

Our findings provide evidence that perceived passion does make a difference when angels evaluate the funding potential of new ventures. This finding is in direct contrast to the conclusions drawn by Chen et al. (2009: 201) who found in their studies that preparedness (a cognitive manifestation of passion) mattered to potential investors rather than passion (an affective manifestation of passion). Below we explain why we believe our study is a more robust and direct test of the impact of perceived passion on angel investor decision-making. The results also indicate that the relationship between perceived passion and evaluations of funding potential are stronger for angel investors who are older, more intuitive, have a high openness personality, or those who are motivated to mentor. Surprisingly, the relationship weakens for angels who are extraverted and those who have a promotion-dominated regulatory focus. We offer some possible explanations for these surprise findings in our discussion section.

Our study add to the growing body of research regarding entrepreneurial passion by clarifying the distinctions between the passion that is experienced and displayed by entrepreneurs and the passion that is perceived by others. We argue that perceived passion involves enthusiasm and excitement, and is distinct from how prepared or committed an entrepreneur may be to their venture. Building on this distinction, we provide evidence of a significant relationship between perceived passion and evaluations of funding potential for angel investors considering live deals, as well as an empirical assessment of the individual characteristics of angel investors that impact the relationship between perceived passion and evaluations of funding potential. The implication of these findings is that perceived passion does appear to matter to equity investors, at least to angel investors, when controlling for the quality of the opportunity and quality of the entrepreneur.

Our results also have implications for research on entrepreneur–investor relationships, which tends to focus on the entrepreneur's interpersonal style, skills, and social competence to explain the “investor fit”. We provide empirical evidence that evaluations of funding potential depend not only on the attributes of the person being judged (i.e. the entrepreneur) but also on the attributes of the person making the judgment (i.e. the angel). These findings suggest that while broad generalizations about what angel investors find important in their evaluations of funding potential are insightful, there is also a different story to be told. There appear to be differences among angel investors in terms of how strongly perceived passion impacts their evaluations of funding potential based on their unique individual characteristics.

The results of this study suggest there are practical implications for both entrepreneurs and angel investors with regard to the funding decision process. Entrepreneurs should consider how individual characteristics of investors may impact their ability to get funding. Entrepreneurs may find it helpful to ask questions about the makeup of an angel group in advance of the presentation or ask questions during the presentation that may provide cues to help the entrepreneur understand the characteristics of the angels. From the angel perspective, our results suggest that angels should become more aware of how their characteristics may impact their evaluations of funding potential. This study suggests that angels that belong to angel groups may want to profile their members and attempt to create more heterogeneous screening groups when evaluating investment opportunities. Becoming

more aware of how their characteristics may impact their investment decisions may lead some angels to strive to be more objective and seek input from other angels who have different individual characteristics.

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