

ENTREPRENEURS' NEGOTIATION BEHAVIOR

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ABSTRACT

This study provides first empirical results on entrepreneurs' negotiation behavior. In a series of incentivized negotiation tasks, we compare owners of small and medium-sized businesses with a group of employed non-entrepreneurs. Analyzing negotiation outcomes, behavioral data, and coded conversations, we show that entrepreneurs make extensive use of emotions and arguments as tools of persuasion. Their assertive behavior leads to fewer agreements but higher profits when they close a deal. Our results suggest that the strategic use of emotions plays an important role in entrepreneurs' negotiations and that entrepreneurs take higher risks in negotiations.

Keywords: Negotiation, Entrepreneurial Skill Set, Persuasion, Emotion, Strategic Uncertainty Taking

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1. Introduction

Negotiation is central to entrepreneurship. It is the process in which conflicting parties aim to reach an agreement (Bazerman and Neale 1994) and occurs whenever people cannot achieve their goals without the cooperation of others (Thompson et al. 2010). When founding, running, and growing a venture, entrepreneurs constantly need to negotiate. They are obliged to settle agreements with various stakeholders to acquire human and financial resources. The way they act and communicate determines their outcomes, making negotiation skills inevitable for entrepreneurial success. *How* entrepreneurs succeed in negotiations is thus important for entrepreneurship education and theory.

To be successful, entrepreneurs' negotiation strategies have to be adapted to uncertainty, asymmetric information and fast changes in their environment (Aldrich 1999). Once strategies conducive to achieving profitable agreements in an entrepreneurial context are identified, they can be taught to those interested in pursuing an entrepreneurial activity. Such an approach follows the notion of *entrepreneurship as a method* where entrepreneurship is regarded as a set of skills to find, make and realize opportunities (Sarasvathy and Venkataraman 2011). Currently, psychological and sociological approaches to entrepreneurship focus on either the individual or the team as the unit of analysis (Packalen 2007, Ruef 2003). Theories and empirical results on the intersubjective interactions between entrepreneurs and their numerous stakeholders are lacking (Sarasvathy and Venkataraman 2011). Investigating how entrepreneurs negotiate will improve our understanding of stakeholder interactions and stimulate theory development in this field.

So far, negotiation research remains silent about entrepreneurs' behavior and venture creation in general. In fact, comprehensive reviews of the negotiation literature do not even include the

words “entrepreneur” or “venture” (e.g., Bazerman et al. 2000, Thompson et al. 2010)¹. The vast majority of negotiation research relies on student subjects. Only a small fraction of it studies professional experts such as sales people and corporate real estate negotiators (e.g., Neale and Northcraft 1986, Herbst et al. 2011). Although these groups outperform novices in comparable tasks, their outcomes have been found to be influenced by framing and performance constraints, as are those of students (Neale and Northcraft 1986)². Whether their negotiation behavior is adapted to their specific professional context has not been studied. Other authors have investigated managers’ bargaining strategies in specific cultural contexts, e.g., international business negotiations, or negotiations in Arabic countries (e.g., Harnett et al. 1973, Simintiras and Thomas 1998, Khakhar and Rammal 2013). By comparing strategies that are used in different cultural contexts, these studies aim to identify success factors for international and intercultural negotiations. Neither entrepreneurs as a group of expert negotiators nor negotiations in the entrepreneurial process have not been studied.

Like negotiation research, entrepreneurship research has also widely neglected entrepreneurs’ negotiation behavior or treated it like a black box, studying how input factors such as the market type or the entrepreneurs’ experience impact on negotiation outcomes (e.g., Rea 1989, Zhang 2011). Other related research examines the influence of costly negotiation (Hellmann and Wasserman 2011) and perspective taking (Ramesh and Sarasvathy – unpublished

¹ Negotiation research is conducted by psychologists, sociologists, and economists and has experienced several phases. From an active field within social psychology in the 1960s and 1970s to a blooming and fast growing domain of teaching and research in management schools in the 1980s to an explosion of research on the negotiator as a decision maker in the 1990s, negotiation research has become decidedly cognitive in flavour since 2000 (Bazerman et al. 2000, Thompson et al. 2010). It can be divided into normative and descriptive approaches, whereby the normative perspective is mostly covered by game theory and economic theory (see Samuelson 2005) while the descriptive perspective is promoted by psychologists, sociologists, and behavioural economists (for overviews see Bazerman and Neale 1994; Lax and Sebenius 1986). Economists’ research predominantly uses the term “bargaining” instead of “negotiating” when referring to the same subject.

² The authors explain this performance gap with experts’ greater process expertise and suggest that experts might *not* be immune to framing effects and cognitive biases. Their results do not allow for any conclusions on whether experts might be less susceptible to cognitive biases in their own domain where they are confronted with constraints specific to their profession (Neale and Northcraft 1986, p. 316).

manuscript) on founder equity splitting. The actual *process* of negotiating has not received much attention (Hellmann and Wasserman 2011, Sarasvathy and Venkataraman 2011). The only exception is the study by Maxwell and Levesque (2011), who investigate the role of entrepreneurs' trustworthiness in initial interactions with business angels in the reality TV show *Dragons' Dan*. They find a strong relationship between entrepreneurs' trust-building behavior and their chances of receiving angel funding. These results demonstrate the value of studying entrepreneurs' interactions with stakeholders and suggest that entrepreneurs' intersubjective interactions are a fruitful subject for further investigation.

In this paper, we approach entrepreneurs' negotiation processes by comparing negotiation behaviors of small and medium-sized business owners in a series of different negotiation tasks to those of employed non-entrepreneurs. We test whether entrepreneurs use arguments and expressed emotions more extensively as persuasion techniques than non-entrepreneurs do and whether they are more willing to take strategic risks. Thereby, we respond to Cardon et al.'s (2012) call for research that explores how entrepreneurs use expressed emotions to shape the interaction with others. Based on the assumption of strategic fitness (Aldrich 1999), we test whether entrepreneurs outperform non-entrepreneurs in negotiations that involve constraints characteristic of the entrepreneurial context: uncertain, asymmetric information and changing negotiation tasks.

Negotiations were conducted via an online platform. A chat tool enabled live communication while assuring anonymity. Depending on their performance, participants could earn up to 350 GBP (547 USD). We recorded outcomes, process data and all messages exchanged between the parties. Using content analyses techniques to analyze the chat messages allowed a detailed analysis of the negotiation process and behaviors.

Our study represents a first step in establishing entrepreneurs' negotiation behavior as an important research topic. More generally it contributes to understanding entrepreneurs'

intersubjective interactions, a topic that is currently underrepresented in psychological and sociological approaches to entrepreneurship and that builds a corner stone in identifying strategies that facilitate finding, making, and executing opportunities (Sarasvathy and Venkataraman 2011). As such it adds to behavioral, process-oriented research in entrepreneurship (Bird and Jelinek 1988).

2. Theoretical background and hypotheses

2.1 Strategic fitness, the entrepreneurial context, and entrepreneurs' negotiation performance

The evolutionary approach to entrepreneurship suggests that there are two major mechanisms that lead to differences between entrepreneurs and non-entrepreneurs: selection and adaptation (Aldrich 1999). On the one hand, people with specific characteristics / a specific skill set are more likely to self-select into and succeed in entrepreneurship (selection). On the other hand, entrepreneurs learn successful strategies in their job (adaptation). Both mechanisms are assumed to lead entrepreneurs' behavior to fit the requirements of their specific environment.

Entrepreneurs' environment is fundamentally shaped by uncertainty, information asymmetries, and the need to interact with numerous different stakeholders (Knight 1921, Kirzner 1973, Hayek 1945, Bird and Jelinek 1988). Entrepreneurs use information asymmetries and act upon opportunities that others might not perceive – thereby bearing substantial uncertainty. At the same time, capitalizing on entrepreneurial opportunity requires accessing human and financial resources from various stakeholders who need to be convinced of the venture: the list reaches from investors, partners, and employees to suppliers, retailers, and customers. Unlike other business negotiations where managers, lawyers, or professional sales people act as agents to the owners of their company, entrepreneurs typically negotiate their deals themselves.

In this study, we test whether entrepreneurs outperform non-entrepreneurs in the presence of uncertain, asymmetric information and whether they better adapt to changing negotiation scenarios and roles. Furthermore, we test whether entrepreneurs who are confronted with negotiations involving these factors on a regular basis exhibit different negotiation behaviors and strategies than those of people who are not used to these conditions.

Uncertain and asymmetric information

Uncertainty is a key element of the entrepreneur's environment. Entrepreneurs' willingness to accept uncertain payoffs is a cornerstone in entrepreneurship theory (Knight 1921; Kihlstrom and Laffont 1979).

Uncertainty impacts on negotiation processes and outcomes through its influence on social cognition and perception. It makes negotiators susceptible to a variety of cues that shape their thoughts and behavior, such as emotions or the power relationship between the conflicting parties (Neale and Fragale 2006). The social cognition approach discerns that different negotiators may exhibit different behaviors when faced with the same situation because they perceive the situation differently (Fiske and Taylor 1991). Assuming that entrepreneurs' perception of uncertain situations differs from that of non-entrepreneurs (Simon et al. 2000) their strategies to deal with incomplete information might also differ. Incomplete, asymmetric information is a central element of entrepreneurs' negotiation. Typically, the conflicting parties do not know the maximum or minimum offer their opponent is willing to accept. Often entrepreneurs possess relevant information to which their strategic environment has no access. Information asymmetries like this play an important role in entrepreneurship theory: being able to use and exploit information asymmetries is one of the major explanations for entrepreneurial activity (Kirzner 1973). Entrepreneurs' different perceptions of uncertain situations, i.e., their cognitive and behavioral fit with their environment, might also underlie supposed advantages in exploiting asymmetric information through appropriate strategies

(Kirzner 1973). Empirical evidence supports such a relationship, showing, for instance, that entrepreneurs categorize business situations more positively and see more opportunities where others only see risky ventures with little potential (Palich and Bagby 1995). Assuming that entrepreneurs' negotiation strategies are adapted to exploiting uncertainty and using asymmetric information, we hypothesize that they outperform non-entrepreneurs in negotiations involving incomplete, asymmetric information.

H1: Entrepreneurs outperform non-entrepreneurs in negotiations with incomplete, asymmetric information.

Changing negotiation situations

As the central figure in their organization, entrepreneurs have to negotiate with numerous stakeholders. Thereby, the role in which they interact with others necessarily varies. Be it negotiating with employees about their employment contracts, forming strategic alliances, or bargaining over the price at which they sell their product to a customer, entrepreneurs constantly need to switch perspectives and adjust to different opponents and negotiation situations. Often they need to adapt to a new negotiation context very quickly. An entrepreneur's typical work day might easily involve negotiating with an employee about a pay raise, settling the conditions for a new sales channel, re-negotiating input prices with an existing supplier, and bartering over the price at which to sell their service to a potential customer. Dealing with constantly changing negotiation situations requires adaptability. Indeed, Baron and Markman (2003) find that adaptability is positively related to entrepreneurs' profits. Based on the assumption of strategic fitness (Aldrich 1999), our hypothesis is that entrepreneurs who frequently need to switch perspectives and to adapt to a new negotiation context outperform non-entrepreneurs across changing negotiation situations.

H2: Entrepreneurs outperform non-entrepreneurs across changing negotiation scenarios, demonstrating higher adaptability.

2.2 Entrepreneurs' negotiation behaviors

When negotiating, people engage in a dialog to resolve a conflict. Their interaction during negotiation engenders changes in their goals and the way they perceive the issue. The aim is to produce an agreement or compromise. Typically negotiators make offers and counteroffers, and try to convince the other party of making concessions until an agreement is reached or until the parties realize that they cannot reach an agreement.

Negotiation behavior refers to the way negotiators act in this process – involving persuasion techniques and their general strategies in the negotiation process. We assume that entrepreneurs' negotiation behaviors and strategies differ from those of non-entrepreneurs because the former are adapted to be effective under specific constraints associated with an entrepreneurial activity.

Persuasion techniques

Persuasion is the ability to influence others to change their view or behavior and reach personal goals. It is a key competence in the negotiation process. Entrepreneurs need to be particularly skilled in persuading others when important information is not available or risky. The survival of their ventures depends on their skill to persuade stakeholders; often already at stages of the entrepreneurial process where the future value of the product or service provided is still an unknown. Thus, persuasion techniques are thus of particular importance for entrepreneurs. Persuasion techniques can appeal either to reason or emotion.

Persuasion appealing to reason

Using arguments as a means of persuasion appeals to reason. The persuader aims to convince the persuadee to shift his/her position by logical argument, empirical evidence or rhetoric. Persuasive arguments substantiate the position of a negotiator and can help to significantly strengthen that person's bargaining power.

Arguments generally have a positive impact on negotiators' outcomes. Negotiators with strong arguments defend their position and are better equipped to fight others' attempts at persuasion. Presenting such arguments can help negotiators limit their own concessions and to claim higher profits.

At the same time, arguments can also have a negative effect on profits (Maaravi, Gonzach and Pazy 2011). This can occur when arguments accompany a first offer because people tend to use the first offer in a negotiation as an anchor, i.e., a salient standard of comparison to which they adjust their claims (Benton et al. 1972, Chertkoff and Conley 1967, Liebert et al. 1968). Maaravi et al. (2011) propose that when negotiators hear arguments for why the anchor is correct, they may think of counter-arguments and diverge from the anchor more extensively than they would do otherwise.

Under uncertainty and asymmetric information, providing "good reasons" for the opponent to make a concession can help reduce the perceived risk that is involved in the transaction. Persuasive arguments can assure stakeholders and build up confidence. For example, entrepreneurs who provide reasons for a certain salary plan might be able to reduce the employees' perceived risk and enhance trust in the actual reliability of salary payments. Similarly, providing reasons for the pricing of a new product can help to increase perceived adequacy of its price in customers.

Given that entrepreneurs constantly negotiate on the basis of uncertain and asymmetric information, we expect them to make pronounced use of arguments and reasoning. Based on these assumptions, we hypothesize that entrepreneurs use arguments and reasoning more extensively than non-entrepreneurs do to persuade their opponent and to convince them to make concessions.

H3: In negotiations, entrepreneurs use arguments more extensively than non-entrepreneurs do.

Persuasion appealing to emotion

Another way of “getting to yes” is appealing to the opponents’ emotions³. The affect infusion model assumes affect influence cognitive and judgmental processes (Forgas 1995). Positive and negative affects are thus assumed to have important consequences for negotiator strategies and outcomes (Lanzetta 1989). Indeed, researchers find evidence that a positive mood increases negotiation performance and decreases evasive and equivocal communication (Forgas 1998, Forgas and Cromer 2004). Strong emotions might also lead negotiators to act impulsively and to make mistakes (Li and Roloff 2006).

An important interaction between the influence of power and affect also exists: positive and negative affects of high-power negotiators are more influential than those of low-power negotiators (Anderson and Thompson 2004). This might be related to the impact of expressing emotions. Negotiators’ expressed emotions influence their opponent and can be used strategically to persuade conflicting parties to make concessions (Li and Roloff 2006). The persuader might strategically express emotions such as aggression, happiness, or sadness, to provoke emotional reactions in the persuadee and to pressure him/her to make a concession (Li and Roloff 2006). Anger expressions, for instance, have been shown to produce concessions from negotiators presumably because the angry negotiator signals “toughness” (Sinaceur and Tiedens 2006).

Under uncertainty people are particularly responsive to emotional cues and cues of power relations that shape their thoughts and behavior (Neale and Fragale 2006). For example, in situations where the relative bargaining power of negotiators is unclear, entrepreneurs who signal “toughness” through aggressive behavior might produce the impression that their

³ Following Cardon et al. (2012) we use the terms “emotion” and “affect” interchangeably and as a broad label for subjective feelings (Barsade 2002) of pleasure or displeasure (Barrett et al. 2007).

relative bargaining power is higher than that of their opponent. This in turn might help them to claim higher profits. Moreover, positive emotions can be expressed to reduce perceived uncertainty in a negotiation and to lead to superior outcomes. For instance, entrepreneurs might express positive emotions to evoke trust and sympathy in their opponents and help them settle difficult agreements.

The role of emotional display and appealing to stakeholders' emotions in the entrepreneurial process has been emphasized in previous research: for example, managers' displaying of positive emotions such as confidence in and satisfaction with employees' the entrepreneurial projects has been shown to enhance employees' willingness to act entrepreneurially while displayed negative emotions such as frustration, worry, and bewilderment have the opposite effect (Brundin et al. 2008). Furthermore, appealing to feelings of blame and concern in microloan investment processes has been shown to lead to more rapid funding (Allison et al. 2013). Cardon et al. (2012) use the term "emotional labor" for the deliberate display of emotions and call for more research on how entrepreneurs can use emotional labor to shape interactions with stakeholders.

On the basis of these assumptions and previous research, we hypothesize, that entrepreneurs express emotions more frequently in negotiations than do non-entrepreneurs.

H4: In negotiations, entrepreneurs express emotions more frequently than non-entrepreneurs do.

Strategic uncertainty taking

When negotiators aim to maximize their profits in a distributive negotiation they will ask for the highest share of the profit that they think their opponent will agree to give up. In this situation, negotiators experience what is called "strategic uncertainty"; i.e., uncertainty that stems from the interaction with another decision maker. In our example, negotiators

experience strategic uncertainty stemming from their ignorance about the lowest profit share their counterpart will accept. The higher the profit share a negotiator claims for herself/himself, the higher the likelihood of making a large profit, but also the higher the likelihood of failing to reach an agreement and making zero profit.

People's behavior in the described scenario, e.g., their asking level, has been extensively studied in behavioral economics within the framework of the Ultimatum Game (Güth et al. 1982) and in similar form in bargaining tasks such as the Nash Demand Game (Nash 1953) or the Rubinstein-Stahl Alternating Offers Game (1994).

Recent experimental results show that in comparison to non-entrepreneurs, entrepreneurs are more willing to accept strategic uncertainty in a competitive task (Holm et al. 2013). This suggests that they might also cope with more strategic uncertainty in negotiations. Doing so might help entrepreneurs to get “top deals” – only if a negotiator is willing to risk an impasse might he/she be able to claim high profit shares in a distributive negotiation.

Whereas individual attitudes towards strategic uncertainty cannot easily be measured due to the interdependence of decisions and the influence of potentially flawed beliefs about their counterparts' behavior, people's minimum asking level can be viewed as a proxy for their attitude towards strategic uncertainty (Rubinstein 1982, Osborne and Rubinstein 1994). On the basis of Holm et al.'s (2013) results, we hypothesize that entrepreneurs reject higher profit shares than do non-entrepreneurs. Another proxy for strategic uncertainty taking in negotiations is the variance of profits. Negotiators who aim to hit a “top deal” will have to accept that their high claims might be rejected and that their assertive behavior will potentially lead to an impasse where no agreement can be reached. In this case, entrepreneurs forgo the chance of making any profit. However, if their high claims and assertive behavior succeed, they are likely to make a top deal. Hence, when negotiators follow a “tough guy” strategy, their profits will show a higher variance than those of negotiators who follow a fifty-

fifty approach where negotiators aim at splitting the pie equally. On the basis of these assumptions, we hypothesize that entrepreneurs reject higher profit shares than do non-entrepreneurs and that their profits exhibit a greater variance than those of non-entrepreneurs.

H5a. Entrepreneurs reject higher profit shares than non-entrepreneurs do.

H5b. Entrepreneurs' profits exhibit a greater variance than those of non-entrepreneurs.

4. Methods

4.1 Recruitment

Because data on effect sizes for the differences between entrepreneurs' and non-entrepreneurs negotiation behavior from previous studies is not available and behavioral differences between entrepreneurs and different group of non-entrepreneurs have been shown to exhibit medium to large effects (e.g., Busenitz and Barney 1997), we assumed a medium effect size to determine a sufficient sample size. Power analysis for a Wilcoxon rank sum test was conducted in G*Power using an alpha of 0.05, a power of 0.80 as recommended by Cohen (1988), a medium effect size ($d_z = 0.5$), and one tail (Faul et al., 2009). Based on these assumptions, the desired sample size is 106.

We investigate the behavior of small and medium-sized business entrepreneurs who founded, own and manage their companies. In our view, this group of entrepreneurs is most suitable for studying entrepreneurs' negotiation behavior because small and medium-sized business owners are frequently leading negotiations at all levels of their business themselves. Owners of larger businesses, by contrast, often employ specialized experts, e.g., lawyer or sales managers, to execute negotiations on their behalf, while intrapreneurs do not put their own money at risk and might not be involved in negotiations at all.

Our comparison group consists of employees without entrepreneurial experience from a wide range of industries. Employees are a more representative comparison group than the frequently used comparison group of students, given that they more closely match our entrepreneur sample with regards to age and educational background.

Entrepreneurs were recruited via the entrepreneurship center of a major university in the UK, which has access to a large, country-wide data base of business contacts. From this database we identified entrepreneurs who started and owned small and medium-sized businesses, had been running their business for at least one year at the time of the study, and had 5 or more employees. From the complete list of entrepreneurs meeting these criteria, we randomly selected 60 to be invited to our experiment. Thirty-four of them registered for the study, which equals a response rate of 56.7%. The non-entrepreneurs were recruited via the experimental participant database of the university. This database contains a high percentage of non-student subjects from a wide range of backgrounds. First, we compiled list of all employed people without entrepreneurial experience in the database. After indentifying those on the list who had no or very little experience with experiments we randomly selected 100 participants to be invited to our study. Ninety-four of them registered, which equals a response rate of 94%. The difference in response rates between the two groups is most likely to be explained by entrepreneurs' severe time restrictions and the circumstance that the non-entrepreneurs in the experimental database had already agreed to be invited to participate in research at some point whereas the invitation came unexpectedly for the entrepreneurs.

4.2 Experimental design and procedure

The study was conducted using an interactive online platform. Participants were randomly assigned a time slot at which they were asked to sign in on the platform. Although online studies can have some drawbacks, such as drop-outs, this procedure had the advantage that

intensely time-restricted entrepreneurs could participate from their work or home computer, which significantly enlarged our recruitment outreach.

To ensure that the negotiation tasks included the essential conflicts of entrepreneurs' negotiations while allowing the non-entrepreneurs to easily relate to them, we based the scenarios on the most generic negotiation situation entrepreneurs encounter in their everyday business: buying and selling.

The study was conducted in six sessions with 16 to 34 participants each. After being given instructions, participants were randomly matched in pairs to negotiate the price at which a good would be exchanged between them. One party acted as a buyer, and the other party as a seller. Monetary incentives were real. Participants knew that they had a fair chance to actually receive the amount they were negotiating: after the study two participants would be randomly selected to receive their profit from one of the scenarios as a real payment via check. This amount could be up to 350 GBP (547 USD), depending on the bargaining success of the respective participant and depending on the scenario that was randomly selected for the payout. We preferred this way of incentivizing the negotiations to paying out a small amount of money to each participant because a high amount gives more room for meaningful alternating offers and because entrepreneurs might not take a negotiation about a small sum seriously or might even feel shoddy about doing so (Sandri et al. 2010)⁴. Bargaining took place in a chat room via instant messaging (see appendix A for a screenshot). That way, participants could communicate with each other while preserving their anonymity. None of the participants had information about the age, gender, or profession of their counterpart. To make negotiation as realistic as possible and to analyze behavioral differences, we allowed for

⁴ Since we did not provide information on the total number of participants, beliefs about the chances of being chosen for the payment might have differed. The negotiation task would still be incentive compatible in this case, but the perceived strength of the incentive could have differed.

any kind of comments, order of offers, counteroffers and rejections. This enabled us to gather rich behavioral data on entrepreneurs' bargaining strategies and outcomes.

To test for adaptability, we confronted participants with three different bargaining scenarios that varied in the roles assigned to the participants - buyers became sellers and sellers became buyers - and in the structure of information provided. Furthermore, participants were randomly re-matched with a new anonymous counterpart⁵ for each scenario. Participants' ability to use incomplete, asymmetric information to their advantage was tested in scenarios 1 and 2. In scenario 1, buyer and seller had private information about their own evaluation of the good under negotiation; e.g. the cost of producing the good was known to the seller alone, while the buyer's appreciation of the good was only known to the buyer. The seller had risky information about the reservation price of the buyer, e.g., knowing only the distribution of the buyers' possible reservation prices. Accordingly, the buyer had risky information about the reservation price of the seller, e.g., knowing only the distribution of the seller's possible reservation prices. In the second scenario, participants knew their own and their opponent's reservation price for the good, but both could sell or buy the good elsewhere at a price known solely to them. Their opponent knew only the distribution of possible outside option prices. In the third scenario, participants had complete information about their own and their opponent's reservation price and no outside option existed⁶.

All negotiations were executed under time pressure: for each scenario, participants had 15 minutes to settle on a price. Once agreeing on a price, they could confirm and make it a binding agreement. If no agreement was reached within 15 minutes, they lost out on the

⁵ The matching was based on a random algorithm run prior to the experiment to determine the participant numbers that would be matched in each scenario. When signing in on the platform participants were assigned a random participant number.

⁶ This scenario is similar to the Ultimatum Game (Güth et al.1982). The Ultimatum Game is an experimental paradigm that has been designed to test theories of alternating-offers-bargaining and received ample attention in behavioral economics. However, our study design differs from it in that participants are free to communicate and decide on the order of offers.

chance of making a profit from the exchange. The time remaining was displayed on the screen, and participants were made aware of the consequences of not closing a deal in time.

Control variables

After having completed all three negotiation tasks, participants were asked to indicate their age, gender, and professional and educational background, and to fill in a personality inventory.

The influence of personality has been shown to be a poor predictor of negotiation behavior and outcomes; despite ample research efforts, results remain contradictory and inconclusive (Lewicki et al. 1994, Thompson 1990). Negotiation researchers have thus tended, over time, to put less emphasis on the influence of personality. Nonetheless, we feel that a robustness test controlling for the effect of personality is informative, given that entrepreneurs have been shown to differ from non-entrepreneurs in terms of a number of characteristics (e.g. Rauch and Frese 2007; Zhao and Seibert 2006). We measured those traits that have been most widely studied and discussed to have an influence on negotiations: extraversion, agreeableness, conscientiousness, neuroticism, and openness (the “Big Five”, Costa and McCrae 1992). Additionally, we measured participants’ internal locus of control (Rotter 1966) as a frequently cited trait that has been shown to be related to entrepreneurial success and that could potentially affect entrepreneurs’ success in negotiations (Rauch and Frese 2007). Further narrow traits that would be interesting to control for in future research include self-efficacy, stress tolerance, and pro-activity. Due to time restrictions we did not include items to measure these traits in the present study. The Big Five were measured on 5-point scales in accordance with John et al. (1991): extraversion (8 items), agreeableness (9 items), conscientiousness (9 items), neuroticism (8 items), and openness (10 items). Locus of control was measured on a 6-item 5-point scale using a short version of the original Rotter scale (1966).

Independence of observations

Observations of participants who negotiate with each other are dependent. For example, whenever a seller is able to claim a profit share of 60%, the buyer will automatically receive the remaining 40%. Including both parties in the analyses would lead to overestimating effects. The assumption of independence therefore requires considering each negotiation only once. We therefore matched entrepreneurs and non-entrepreneurs with non-entrepreneur opponents and excluded the opponents' observations from the analysis. We included all entrepreneurs and those non-entrepreneurs who faced the same situation with respect to their own and their opponent's reservation price and the role they were assigned in the respective scenario.⁷ Appendix A contains the instructions.

4.3 Coding

To test hypotheses 3 and 4, we coded the messages exchanged in the bargaining processes using content analysis techniques. We coded participants' efforts to improve the price offered to them by arguing for better conditions (hypothesis 3). We also coded when a participant expressed emotions (hypothesis 4) and whether their emotional expressions were positive or negative. Furthermore, we recorded participants' initial asking levels; whether a participant opened the conversation, or made the opening offer; how often they made, rejected, and obtained offers; the concession they were willing to make; and when participants explicitly lied about their reservation price or outside option.

The coding was conducted separately by an external and an internal coder without knowledge of the group affiliation or other individual information. After a first assessment of the bargaining protocols, coding categories were discussed and agreed upon. As part of the

⁷ We first identified which role participants were assigned to and the values of their own and opponents' reservation prices participants were assigned to in each scenario. For each entrepreneur with a specific parameter constellation, we randomly selected one non-entrepreneur who was confronted with the same parameters in this round.

external coder's training, we coded three of the protocols together. Then we coded three further protocols separately and compared and discussed the results before individually continuing with the coding. Coding categories and examples are listed in table A.1 in Appendix A. When coding was completed, the results were compared: we obtained a reliability of 92 % agreement in the coding of categories. For the coding of positivity/negativity of expressed emotions the agreement rate was 62.71%, and the inter-rater reliability was fair to good (Cohen's Kappa = 0.531). We discussed the remaining cases of deviation and agreed on the categories. All together, about 37.5 hours of chat conversation were coded.

5. Results

5.1 Samples

128 participants registered for the study (34 entrepreneurs and 94 non-entrepreneurs). Two of the 34 entrepreneurs and 10 of the 94 non-entrepreneurs dropped out early and did not complete all tasks. This equals a dropout rate of 10.6 %, which can be considered low, particularly, when taking into account the length of the study of about one hour. We excluded the observations of these participants from further analyses, assuming that they had been interrupted or had not taken their participation seriously enough. To avoid effects of dropouts on their opponents, we also excluded the observations of the 16 participants who could not complete all parts of the study because their opponent had dropped out. Our analyses are based on 87 observations of 29 entrepreneurs who completed all parts and 87 observations of those 30 non-entrepreneurs who completed all parts of the study and faced the same bargaining setup as the entrepreneurs; i.e., the same reservation price, opponent's reservation price, and role in the respective scenario. In total, we included 176 negotiations. As explained in above, we considered one party of each negotiation only as outcomes are perfectly

interdependent. Characteristics of the opponent entered the analyses via controlling for the opponents' reservation price.

Entrepreneurs

The entrepreneurs were aged 27 to 59 years (Mean: 36.7, Median: 36.0). Twenty-one of the entrepreneurs were male, six were female, and two did not indicate their sex. Eighteen of them had one or more co-founders when starting their company and 23 of them stated that their company had been growing over the last 12 months. The industries they were active in ranged from financial services, consulting, education, technology and online media, energy, retailing and marketing, health care, beauty and fashion, and others. Thirteen of them had had experience with a previous venture. For the other 16 their current venture was their first experience as an entrepreneur. Twenty had one to four years of experience, four had four to eight years, three had more than eight years, and two did not indicate their years of experience. The number of employees their companies employed ranged from five to 220, with a mean of 19.9 employees and a median of five employees, indicating a higher percentage of small business owners than medium-sized business owners. Ten of the entrepreneurs had been trained in negotiation in either a specific course or another formal training program.

Non-entrepreneurs

The non-entrepreneurs were aged 18 to 64 (Mean: 30.0, Median: 28.0) years. Five of them did not indicate their age. Twelve of them were male, 13 were female, and five did not indicate their sex. The industries they were employed in varied from academia, administration, accounting and financial services, health care, IT and engineering, journalism, and others; five did not indicate their industry. Only one of them indicated having been trained in negotiation.

5.2 General results

In 140 out of 174 negotiations a deal was closed and the product was sold for the agreed price. This equals an agreement rate of 81%. In scenario 1, where private information about reservation prices was given, the agreement rate was 75.9%. In scenario 2, where private information about outside options was given, it was 74.1%, and in scenario 3, with complete information, 91.4% of the participants reached an agreement.

Overall, entrepreneurs closed significantly fewer deals than non-entrepreneurs: they reached an agreement in 63 out of 87 negotiations, whereas the non-entrepreneurs did so in 77 out of 87 negotiations (Pearson $\chi^2 = 7.17$, $p = 0.007$). The difference in agreement rates was most pronounced in scenario 1.

Agreement rates influenced the profits that were generated. Only when a deal was closed could participants make a profit from the negotiation. In scenario 2, participants had outside options to sell or buy the product to or from a third party; however, executing the outside option would generate a lower profit than could be reached by a negotiated agreement.

Overall, mean profits were 97.55 GBP. Mean profits increased from 70.86 GBP in scenario 1 to 108.95 GBP in scenario 2 and 112.85 GBP in scenario 3. Because of their lower agreement rate, entrepreneurs made lower mean profits than non-entrepreneurs in scenario 1. In scenario 2 and 3, entrepreneurs made slightly higher mean profits. None of these differences is statistically significant.

When examining profits from closed deals, however, we find that entrepreneurs made significantly higher profits: their mean profit from closed deals was 126.68 GBP. Non-entrepreneurs made on average 107.70 GBP when they closed a deal. This difference is statistically significant (Wilcoxon rank sum test: $z = -2.136$, $p = 0.033$). Table A.2 in Appendix A gives an overview of participants' profit rates by scenario, group, and in total.

5.3 Hypotheses testing

5.3.1 Negotiation performance

Uncertain and asymmetric information

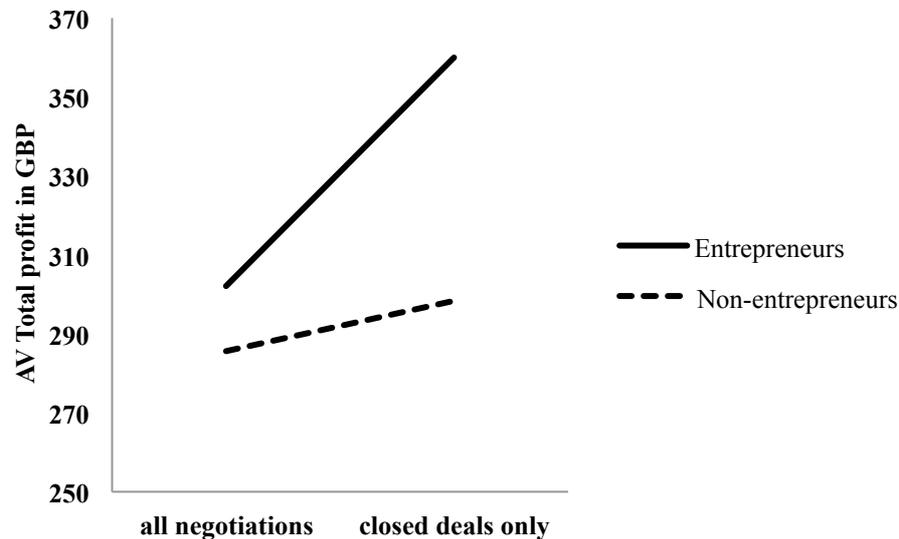
To test whether entrepreneurs are better than non-entrepreneurs in using information asymmetries to their advantage, we compared the profits of the two groups in scenarios 1 and scenario 2. In scenario 1, private information was supplied about reservation prices. In scenario 2, private information was supplied about outside options. Our results do not show significant profit differences between entrepreneurs and non-entrepreneurs in either of these scenarios (scenario 1: $z = 1.766$, $p = 0.077$; scenario 2: $z = -0.673$, $p = 0.501$). In scenario 1, entrepreneurs' profits were slightly lower than those of non-entrepreneurs, but slightly higher in scenario 2. Hypothesis 1, that entrepreneurs outperform non-entrepreneurs in negotiations involving uncertain and asymmetric information, is hence not supported by our data.

Adaptability

To test entrepreneurs' ability to adapt to changing negotiation scenarios and roles, we compared entrepreneurs' and non-entrepreneurs' outcomes across all three scenarios. If a participant is particularly good at adjusting to different scenarios this should show in her/his accumulated profits; the higher the adaptability of a participant the higher his/her accumulated profits should be. Average accumulated profits were 293.86 GBP (SE: 16.67 GBP). This includes all negotiations – whether a deal was closed and or not. With 302.10 GBP (SE: 25.84 GBP), entrepreneurs' average accumulated profits were higher than those of non-entrepreneurs' with 285.62 GBP (SE: 21.20 GBP); however, this difference is not statistically significant (Wilcoxon rank sum test: $z = -0.323$, $p = 0.747$). Notably, when considering profits from closed deals alone, we find that entrepreneurs made significantly higher accumulated profits (Wilcoxon rank sum test: $z = -2.047$, $p = 0.041$). Their average accumulated profits from closed deals were 360.05 GBP (SE: 22.11 GBP). Non-entrepreneurs average

accumulated profits in this case were only 298.36 GBP (SE: 21.17 GBP). Figure 1 below illustrates these results.

Figure 1: AV total profits in GBP



5.3.2 Negotiation behavior

Arguments

Our third hypothesis was that entrepreneurs use arguments as a technique of persuasion more frequently than non-entrepreneurs do. To test this, we coded how often participants made an argument to convince their counterpart to make concessions. Results show that entrepreneurs argued much more frequently than non-entrepreneurs: for every 10 arguments non-entrepreneurs made, entrepreneurs made on average 17 arguments. This difference is statistically significant (Wilcoxon rank sum test: $z = -3.912$, $p < 0.001$), providing strong support for hypothesis 3.

In scenario 1, most of the sellers' arguments dealt with covering costs of production, whereas buyers argued about the value the product would have for them. In scenario 2, where outside

options existed, arguments focused on the participants' BATNAs (best alternative to negotiated agreement) whereas in scenario 3, where complete information was available, arguments dealt primarily with fairness considerations. Thereby, entrepreneurs used fairness arguments slightly less often than non-entrepreneurs; however, this difference is not statistically significant (Pearson $\chi^2 = 1.947$, $p = 0.163$).

Expressing emotions

Furthermore, we expected entrepreneurs to express emotions more frequently than non-entrepreneurs would (hypothesis 4). Our data support this hypothesis. Entrepreneurs expressed emotions 1.38 times more often than non-entrepreneurs. This difference is statistically significant (Wilcoxon rank sum test: $z = -2.590$, $p = 0.0048$).

Although we find no differences in negativity /positivity of expressed emotions between entrepreneurs and non-entrepreneurs (Wilcoxon rank sum test: $z = 1.13$, $p = 0.257$), entrepreneurs' emotional expressions were significantly more variable than those of the non-entrepreneurs, changing their from positive to negative more extensively throughout a negotiation process (Wilcoxon rank sum test: $z = -3.797$, $p < 0.001$).

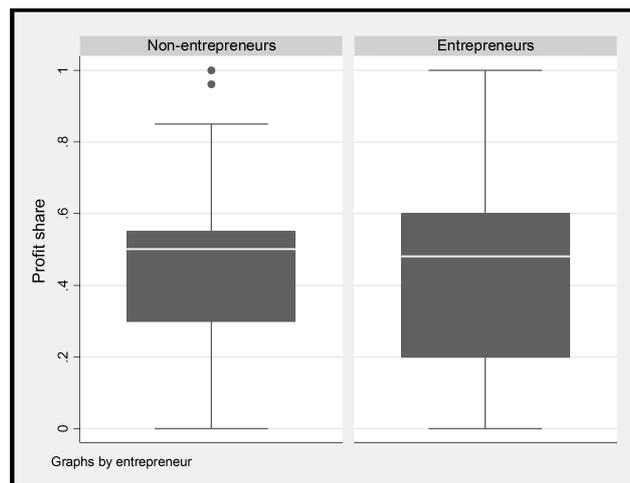
Strategic uncertainty

Testing differences in participants' willingness to accept strategic uncertainty, we compared the highest profit share rejected and the variation of profit shares they were able to claim. On average entrepreneurs rejected offers equal to or below 49.1% (SE: 2.6%) while non-entrepreneurs rejected offers equal or below 46.3% (SE: 2.3%). This difference is not statistically significant (Wilcoxon rank sum test: $z = -0.810$, $p = 0.418$).

Furthermore, we found significant differences in the distribution of profit shares claimed by entrepreneurs and non-entrepreneurs. We can reject the null hypothesis that they were drawn from the same distribution (two-sample Kolmogorov-Smirnov test for equality of distribution

functions $p= 0.548$). The variance in profit shares claimed by entrepreneurs is significantly higher, whereas no significant differences can be observed in the mean (see figure 2 below). Our data thus support hypothesis 5b.

Figure 2: Profit share by group



The higher variance in profit shares claimed by entrepreneurs reflects the lower number of deals closed by them and their higher profits in closed deals. As mentioned earlier, entrepreneurs closed fewer deals than non-entrepreneurs. Consequently, they received zero profit (or a very low profit from executing their outside option in the case of scenario 2) more often than the non-entrepreneurs did. When entrepreneurs did close a deal, however, their profits were higher than those of non-entrepreneurs. Hence, they also experienced high profit shares more often than the non-entrepreneurs. Together this leads to a greater variance in profit shares with entrepreneurs than with non-entrepreneurs.

5.3 Further results

We found no significant differences between entrepreneurs and non-entrepreneurs with respect to their propensity to open the conversation or make the opening offer. Entrepreneurs

did not choose to set the “anchor” for their negotiations more frequently than non-entrepreneurs did. Their initial asking levels were higher than those of non-entrepreneurs (mean initial asking level entrepreneurs = 99%; mean initial asking level non-entrepreneurs: 92%) but this difference did not reach statistical significance. In both groups the concession rates did not differ. Entrepreneurs made significantly fewer offers than non-entrepreneurs and also rejected offers more often, but the difference in the number of rejected offers was not statistically significant. Supporting the observation gained through the results reported above, these results suggest that entrepreneurs tend to negotiate harder than non-entrepreneurs.

Furthermore, we tested whether entrepreneurs lied more frequently about their reservation price than non-entrepreneurs. Few participants chose to lie about their true reservation price. Entrepreneurs lied in 15 out of 87 negotiations, and non-entrepreneurs in 8 out of 87 negotiations. This difference is not statistically significant. These results are summarized in table A.3 in the Appendix.

5.4 Robustness tests

To test the robustness of our main results, we estimated random effects linear models controlling for personality, age, gender, educational background, and negotiation training. Furthermore, we included controls for the participants’ own private value and their opponents’ private value to control for the negotiation scenario they were faced with.

Before running the regressions, we tested for differences in personality between the two groups. In line with previous research, we found that entrepreneurs have a more internal locus of control. We also found significant differences in neuroticism and openness. Table 1 below summarizes the results.

Table 1: Personality scores by group

	Entrepreneurs	Non-entrepreneurs	p-value
<i>Locus of control</i>	16.63 (SD 1.94)	15.10 (SD 2.98)	< 0.001
<i>Extraversion</i>	29.81 (SD 5.50)	28.08 (SD 7.57)	> 0.05
<i>Agreeableness</i>	34.67 (SD 5.08)	34.66 (SD 5.44)	> 0.05
<i>Conscientiousness</i>	35.78 (SD 6.28)	35.16 (SD 6.83)	> 0.05
<i>Neuroticism</i>	17.59 (SD 4.82)	20.18 (SD 6.11)	(1-p) < 0.01
<i>Openness</i>	40.70 (SD 4.10)	37.34 (SD 4.14)	< 0.0001

The regression results are reported in table 2; they show that the pronounced use of arguments and expressed emotions by entrepreneurs are robust when controlling for personality, age, gender, education, and negotiation training. When controlling for these individual differences, the result that entrepreneurs gain higher total profits when they close a deal is not robust. Although the regression coefficient is high and positive, the effect does not reach statistical significance. The limited statistical significance of this robustness test might be due to the large number of controls in a comparably small sample. Furthermore, the result that entrepreneurs closed fewer deals than non-entrepreneurs did is robust when controlling for personality, age, gender, education, and negotiation training (table A.4 in Appendix A).

Table 2: Robustness tests: Linear regressions with random effects for individuals

VARIABLES	(1) Arguments	(2) Emotions	(3) Total profit from closed deals
<i>Entrepreneur</i>	1.773** (0.845)	2.091* (1.074)	21.53 (53.57)
<i>Private value</i>	-0.489 (0.334)	-0.791* (0.433)	115.9*** (25.75)
<i>Private value opponent</i>	0.546* (0.332)	0.648 (0.430)	10.44 (25.23)
<i>Gender</i>	1.197 (0.751)	1.884** (0.954)	-80.78* (48.97)
<i>Age</i>	-0.0394 (0.0402)	-0.0379 (0.0509)	-1.823 (2.613)
<i>MBA</i>	-0.971 (0.835)	-1.518 (1.060)	21.14 (54.72)
<i>Bachelor</i>	-0.928 (1.050)	-0.572 (1.338)	-20.78 (68.03)
<i>Master</i>	-0.758 (1.104)	-1.826 (1.405)	40.60 (70.78)
<i>Education related to job</i>	0.469 (0.799)	0.480 (1.016)	13.84 (52.49)
<i>Training</i>	0.452 (0.823)	1.231 (1.047)	30.59 (55.92)
<i>Extraversion</i>	0.0793 (0.0573)	0.103 (0.0728)	-1.485 (3.790)
<i>Agreeableness</i>	0.0990 (0.0717)	0.0955 (0.0911)	-4.030 (4.643)
<i>Conscientiousness</i>	0.00336 (0.0671)	0.0534 (0.0854)	-3.240 (4.414)
<i>Neuroticism</i>	0.0755 (0.0780)	0.153 (0.0992)	-6.397 (4.991)
<i>Openness</i>	-0.0175 (0.0815)	0.0610 (0.104)	-1.185 (5.330)
<i>Locus of control</i>	-0.244 (0.175)	-0.435* (0.223)	-0.980 (11.70)
<i>Constant</i>	-0.318 (5.980)	-2.814 (7.606)	904.8** (385.9)
Observations	143	143	116
Number of subject_id	52	52	52
R2	0.25	0.28	0.28
sigma_u	1.428	1.767	83.48
sigma_e	2.310	3.006	148.6
rho	0.277	0.257	0.240

Notes: Linear regression with GLS random effects for individuals; SE in brackets.

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

6. Discussion

Current psychological and sociological approaches to entrepreneurship focus on either the individual or the team as the unit of analysis (Packalen 2007, Ruef 2003) neglecting a central dimension of entrepreneurial activity: the intersubjective interactions between entrepreneurs and their various stakeholders. This is surprising in the face of theories and empirical results from social psychology that point to numerous ways in which an interaction perspective can contribute to and challenge existing perspectives and theories in entrepreneurship research. Investigating interactions in negotiations is at the very heart of such research. To set up and develop their venture, entrepreneurs have to negotiate with various stakeholders. The dearth of research investigating the processes through which contracts between different stakeholders are structured and closed has already been criticized by Sarasvathy and Venkataraman (2011). They call for “making the inter-subjective a key factor of analysis” in entrepreneurship research.

In this paper, we respond to this call and contribute to behavioral, process-oriented approaches to entrepreneurship by investigating entrepreneurs’ interactions in negotiations and making the inter-subjective the key focus of our analysis. Understanding how entrepreneurs interact and communicate with others in negotiation processes is crucial for understanding how they succeed in persuading stakeholders to commit substantial resources to a venture of yet uncertain outcome. We test the hypotheses that entrepreneurs make pronounced use of arguments and emotions as means of persuasion in order to compensate for and use the uncertain and asymmetric information in their negotiations with stakeholders. Indeed, our results support that entrepreneurs use arguments and emotions significantly more often than non-entrepreneurs do to convince their opponents. Their pronounced use of arguments as a technique of persuasion demonstrates assertiveness.

A pronounced assertiveness can result from entrepreneurs’ extensive experience of negotiating on both sides of the table – now acting as a seller, then as a buyer. Epley, Caruso

and Bazerman (2006) find that perspective taking can lead to an increase in “taking”, e.g., in demanding high shares of the profit. They describe how this dark side of perspective taking can lead to increases in impasses and overall inferior negotiation outcomes. In their study, considering the opponent’s perspective activated egoistic theories of their likely behavior, which led people to counter by behaving more egoistically themselves.

Showing that entrepreneurs argue much more than non-entrepreneurs do and that they exhibit a pronounced assertiveness in negotiating, our results correspond with findings on entrepreneurs’ above-average perseverance (Gimeno et al. 1997, Lowe and Ziedonis 2006, Markman et al. 2005). Arguments are not only a means to persuade others but also work as a fence against being persuaded by others. The extensive use of arguments in negotiations might thus reflect one of the strategies that make entrepreneurs more persistent in following their goal.

Second, entrepreneurs’ negotiations have so far been widely treated like a black box (Rea 1989, Zhang 2011). We open this black box by investigating entrepreneurs’ behavior and strategies in the negotiation process. In particular, we study the use of expressed emotions, or “emotional labor” as Cardon et al. (2012) call the intentional use of expressed emotions in interactions. Our data suggests that entrepreneurs use emotions strategically to influence their opponents in the negotiation process. Such strategic use of emotions has already been documented in previous research on negotiation (Li and Roloff 2006). In the presence of uncertainty, entrepreneurs might have learned to use emotions to reduce their opponents’ perceived insecurity, to establish trust, or to signal that they possess relatively more bargaining power by acting “tough”. A strategy of using emotions in negotiations to sway stakeholders would be in line with the growing literature emphasizing the importance of emotions in the entrepreneurial process (Cardon et al. 2012, Brundin et al. 2008). By studying the use of expressed emotions we address their call for research that explores how “deliberate

emotional displays (...) shape interactions among members of the venture team, customers and other resource providers, and how such deliberate management of the entrepreneurs' emotions impacts the outcomes with and for these stakeholders" (Cardon et al. 2012, p. 4). Our results raise the questions of to which extent and with what effect entrepreneurs use emotions *intentionally* and *strategically* to influence stakeholders in different steps of the entrepreneurial process. Our results suggest that this is a fruitful avenue for future research.

The result that entrepreneurs express emotions more often in negotiations could also indicate greater emotional involvement and inability to control their emotions. This can compromise outcomes when emotions rise high. Being able to adequately express and control one's emotions has been shown to have a positive effect on entrepreneurs' profits (Baron and Markman 2003). To test for such a negative effect of emotions on profits, we ran additional analyses – the results show that an extensive expression of emotions did not have a significant negative effect on profits but that expressed positive emotions had a significant and positive effect on a negotiator's outcome. Hence, we have reason to believe that entrepreneurs did not express emotions more often because they were unable to control them.

Third, our results on performance differences between entrepreneurs and non-entrepreneurs are mixed. Although unable to confirm that entrepreneurs made higher overall profits under constraints that shape the entrepreneurial context, we found that they made higher profits when they did close a deal but also that they closed significantly fewer deals. Entrepreneurs tended to agree to a deal only when it was particularly profitable for them. They preferred to turn down a small profit and took the risk of making no profit at all for the chance of making a high profit. This behavior led to a greater variance of entrepreneurs' profits: more often than non-entrepreneurs, they left the bargaining table with nothing, but they also left with a very high share more often. This result is in line with recent results of Holm et al. (2013) who show that entrepreneurs are more willing than non-entrepreneurs to accept strategic

uncertainty in a competitive situation, and with the idea that entrepreneurs' have a pronounced willingness to accept uncertain payoffs (Knight 1921; Kihlstrom and Laffont 1979).

Implications

What do we learn from these results? First of all, our results show that expressing emotions and providing persuasive arguments are important tools in entrepreneurs' negotiations. We suggest that these tools can help entrepreneurs to compensate for and even exploit the uncertainty involved in their negotiations. Future research should build up on our results and study the strategic use of emotions and arguments in negotiations with different kinds of stakeholders.

Furthermore, given that entrepreneurs close fewer deals, do they negotiate too hard? Our results suggest that entrepreneurs indeed negotiate "harder" than non-entrepreneurs do, being more assertive and resistant to closing deals at mediocre prices. However, we find that their average profit shares do not differ from those of non-entrepreneurs. This suggests that entrepreneurs' strategy to achieve profits in negotiations differs from that of non-entrepreneurs, leading not to better or worse outcomes but to different outcome distributions.

Why would entrepreneurs possibly follow such a strategy? Does this strategy simply reflect their preference for strategic uncertainty? We suggest there might be a plausible alternative explanation: Assuming that entrepreneurs used the strategies they use in their "natural environment", their behavior reflects a strategy that is adapted to the entrepreneurial context outside our negotiation scenarios. Previous research in behavioral economics shows that professionals regularly use strategies that they use in their job rather than reacting to incentive structures provided by economic experiments (e.g., Dejong et al. 1988). In their profession, entrepreneurs often negotiate in the face of limited resources. There, unlike in our negotiation scenarios, they can only fulfill a limited number of contracts. These contracts in turn need to

be as profitable as possible to secure venture survival. A strategy that ensured closing only the most profitable deals would prove successful in such an environment. The pronounced willingness to accept profit variability in our negotiation scenario could thus reflect such a strategy that is well adapted to entrepreneurs' professional environment.

Limitations

Our results are based on a small sample of observations, which might have limited the statistical significance of some of our results. Furthermore, participants interacted via a chat device, which limited their means of expression as compared with face-to-face interaction. Although this procedure ensured participants' anonymity and allowed us to control for potential effects that are not in the focus of this study, i.e., potential differences in reactions towards a male or female / younger or older opponents, face-to-face negotiations would be an interesting subject to study. Given the lively negotiations we observed and the degree to which participants appeared to be involved, we believe that our results provide a good first impression of entrepreneurs' negotiation behavior.

Another potential limitation is that we cannot rule out the possibility that entrepreneurs might have implicitly assumed that they were interacting with other entrepreneurs, having been contacted via the entrepreneurship center. In this case entrepreneurs would have been even more inclined to behave as they do when negotiation in their "natural environment", where they are confronted with other entrepreneurs. We therefore do not expect such effects to reduce the validity of our results.

Future research

There are rich opportunities for future research on entrepreneurs' negotiation behavior. The first of these concerns perspective taking: the fact that entrepreneurs need to switch their role and perspective when negotiating on a frequent basis – now acting as a seller, and then acting

as a buyer – might increase their ability to correctly interpret opponents’ moves. Familiarity with the other side of the table may help entrepreneurs to take the perspective of their stakeholders. Perspective taking, i.e., the cognitive capacity to consider the world from other viewpoints and to anticipate others’ behavior and reactions (Davis, 1983), can be a very beneficial skill. Negotiators often need to understand the other parties’ interests in order to obtain the best outcome for themselves (Fisher et al. 1991, Thompson 1990, Thompson and Hastie 1990). For instance, imagine the case of two sisters who negotiate about splitting the last lemon they have at home. A fair split would seem to be half of the lemon each. However, as soon as they discover that one of them is interested in the juice while the other only wants the peel, both are able to achieve a far better outcome than by splitting the lemon in half.

Negotiating in different roles and with different opponents can to promote the development of perspective taking and the ability to assess opponents’ goals and strategies, leading to fewer impasses and inefficiencies in negotiations. In a recent study, Ramesh and Sarasvathy (unpublished manuscript) investigate how perspective taking influences founder equity splits. In an experiment with 239 entrepreneurship students they show that participants who take the perspective of their opponent were *more* likely to change their position and make a concession. Perspective taking might thus also help to reduce the high percentage of negotiation failures that can be observed in equity spitting. Future research on perspective taking in entrepreneurs’ negotiation promises important insights for theory development.

We studied entrepreneurs’ behavior in distributive negotiations. Future research should also examine entrepreneurs’ negotiation behavior in other set-ups, such as negotiations with VCs and banks, partners and employees where long-term relationships and repeated interaction play a major role. Moreover, the interaction between entrepreneurs and other entrepreneurs might be of interest. In our study, entrepreneurs were always matched with non-entrepreneurs to maximize the number of entrepreneurs’ observations. Indeed, it would very interesting to

study how entrepreneurs interact with other groups of opponents. In particular, we think that it would be important to study differences in behavior towards different kinds of stakeholders. Do entrepreneurs negotiate differently with investors than with partners or customers?

Future research might also consider differences between entrepreneurs and other groups of expert negotiators, such as sales people and managers who act as agents to the owners of their company, whereas entrepreneurs put their own money at risk.

Furthermore, the context of integrative negotiations is highly relevant to the entrepreneurial process and we expected that entrepreneurs might be particularly good at seeing opportunities for “making the pie larger”. Another question related to context is whether entrepreneurs are particularly skilled in persuading others when the negotiation is related to their actual ventures that they are passionate about. That situation might lead them to hold biased judgments about values but also to have stronger arguments and also to be more influential and emotionally convincing.

7. Summary and Implications

We provide first empirical results on entrepreneurs’ negotiation behavior. Our results confirm that entrepreneurs make extensive use of emotional labor and arguments as tools of persuasion. We suggest that these tools help entrepreneurs to compensate for and exploit the uncertainty involved in entrepreneurs’ negotiations with their various stakeholders. Our study contributes to behavioral, process-oriented research in entrepreneurship by focussing on using intersubjective interactions and establishing entrepreneurs’ negotiation behavior as an important research topic.

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Appendix A: Tables

Table A.1: Categories and examples

Argument	<i>"I came down 75 and you only went up 25" "let's do the middle then...for the sake of the deal"</i>
Emotions	<i>"Clock is ticking ☹️ I'm afraid we won't get a deal here", "Stop wasting my time...", "I like your style, you seem like an honest guy 😊"</i>
Obtaining an offer	<i>"...How much do you want for this then?" "What would be a good starting point for you?"</i>
Rejecting an offer	<i>"Won't buy at that price dear." "Sorry, too much."</i>

Table A.2: Overview mean profits in GBP

	Scenario 1	Scenario 2	Scenario 3	Total
<i>Entrepreneurs</i>	58.62 (12.33)	112.97 (10.81)	116.55 (10.59)	96.05 (7.04)
<i>Entrepreneurs closed deals</i>	100.00 (13.96)	138.14 (10.19)	135.20 (6.83)	126.68 (6.02)
<i>Non-entrepreneurs</i>	83.10 (9.68)	104.93 (10.08)	109.14 (9.68)	99.06 (5.73)
<i>Non-entrepreneurs closed deals</i>	89.26 (9.34)	123.55 (10.05)	113.04 (9.18)	107.70 (5.65)
<i>Total</i>	70.86 (7.93)	108.95 (7.35)	112.85 (7.13)	97.55 (4.53)
<i>Total closed deals</i>	93.41 (7.81)	130.67 (7.16)	123.49 (5.97)	116.24 (4.19)

Table A.3: Overview further results

	Entrepreneurs	Non-entrepreneurs	Wilcoxon rank sum test /p-value
<i>Initial asking level</i>	98.7 % (6.2%)	92.4% (6.4%)	0.201
<i>Concessions</i>	36.0% (4.7%)	43.1% (5.8%)	0.495
<i>Concession frequency</i>	1.83 (0.15)	2.18 (0.16)	0.138
<i>Offers</i>	2.93 (0.19)	3.44 (0.19)	0.022*
<i>Rejections</i>	1.15 (0.12)	0.89 (0.11)	0.127
<i>Obtaining offer</i>	0.45 (0.84)	0.48 (0.86)	0.510
	Entrepreneurs	Non-entrepreneurs	Chi-square test
<i>Lie</i>	15/87	8/87	0.117

Table A.4: Robustness tests: Logistic regression with random effects for individuals

	Odds ratio
<i>Entrepreneur</i>	0.26**
<i>Private value</i>	2.78***
<i>Private value opponent</i>	0.89
<i>Extraversion</i>	0.95
<i>Agreeableness</i>	1.02
<i>Conscientiousness</i>	1.09*
<i>Neuroticism</i>	1.04
<i>Openness</i>	1.05
<i>Locus of control</i>	0.76*
<i>Gender</i>	2.78
<i>Age</i>	0.89
<i>Constant</i>	1.02
Log likelihood	-58.15
LR chi2	22.27
Pseudo R2	0.161

Notes: N = 143, dependent variable: deal =0/1

* p < 0.10; ** p < 0.05; *** p < 0.01

Appendix B: Instructions

Figure A.1: Instructions

Welcome to our online experiment.

In this experiment you will face different bargaining situations.

In each situation, you will be matched with another participant to bargain about the price at which a fictitious product is exchanged between the two of you.

Bargaining takes place via an online chat. You can make offers at any point in time. If you reach an agreement, you confirm your agreement and the product will be exchanged at the agreed price.

Payments:

Two participants will be randomly chosen to receive a real payment from this bargain. This payment equals the profit that the respective participants achieved by exchanging the product at the agreed price. If you are chosen, you can decide whether you want to receive the payment as a check to your address or whether you prefer an Amazon voucher of the same amount.

Results:

The experiment will take about 60 minutes. At the end you will receive feedback on how well you bargained as compared to the other participants. A table will show your rank and the profits achieved by the participants in the different situations.

Anonymity:

All results will be strictly anonymised.

Please do not close this browser window until you have completed the whole experiment. You will be notified when the experiment is over.

Please [click here](#) when you are ready to begin

Figure A.2: Instructions

Bargaining situation 1

Imagine you are a buyer for Product A.

You will now bargain about the price at which you purchase Product A from a seller.

- Product A has a value of £350 to you.
- The seller produces Product A at a cost of either £75, £100, or £125.
- There are equal numbers of sellers with each of these costs but you do not know the actual cost to the seller you are matched with.
- The seller also does not know your actual valuation. He only knows that your valuation is either £225, £300, or £350 and that there are equal numbers of buyers with each of these valuation levels.

When you indicate you are ready to begin, you will be randomly matched with another participant who is assigned the role of a seller.

Both of you will automatically enter a chat room. In the chat room you will bargain.

Both of you are free to make offers and counter-offers in any order you wish. When you settled a price please confirm your agreement on this price in the respective box on the right hand side of the next screen. If you do not agree on a price, the product will not be exchanged.

People usually take about five to ten minutes for each of the situations. **However, you will have fifteen minutes to finish before you will be matched with the next participant for a new bargaining situation.** The matching for the next situation happens automatically.

Between the different situations you might have to wait for a moment until the next participant is ready to be matched with you. Please remain at your computer to be ready for the next bargaining situation.

Please [click here](#) when you are ready to begin

Figure A.3: Instructions

Bargaining situation 1

Imagine you are a buyer for Product B.

You will now bargain about the price at which you purchase Product B from a seller.

- Product B has a value of £350 to you.
- The seller produces Product B at a cost of either £75, £100, or £125.
- There are equal numbers of sellers with each of these costs but you do not know the actual cost to the seller you are matched with.
- The seller also does not know your actual valuation. He only knows that your valuation is either £225, £300, or £350 and that there are equal numbers of buyers with each of these valuation levels.

10 minutes remaining

System Notice: Seller has joined the session
System Notice: Buyer has joined the session

Once you have agreed a price, please enter it in the box below. Once you have both entered the same number, the negotiation will end.

Confirm

Send