The Decisions of Entrepreneurs and Their Agents: Revealed Levels of Risk Aversion and Betrayal Aversion

Anna Dreber[1], David Rand[2,3], Nils Wernerfelt[4], Peter Worrell[5] and Richard Zeckhauser[6]

[1]Department of Economics, Stockholm School of Economics, Stockholm Sweden

[2]Program for Evolutionary Dynamics, Harvard University, Cambridge MA USA

[3]Department of Psychology, Yale University, New Haven CT USA

[4]Department of Economics, Massachusetts Institute of Technology, Cambridge MA USA

[5]The Bigelow Company, Portsmouth NH USA

[6]Harvard Kennedy School, Harvard University, Cambridge MA

Abstract

Employing a unique sample of successful American entrepreneurs and their agents, we examine decision making in a real-world context. We explore economic risk taking as measured by a monetary gamble, social risk taking as measured by a trust game, and betrayal aversion as measured by the difference in risk taking between those two. Our decision makers act as either a principal or an agent acting on behalf of a principal. We test whether this sample is as betrayal-averse as typical student samples from a number of nations, and assess whether our agents are "faithful agents" or not. As in most other studies, our subjects are both betrayal-averse and economically risk-averse. Little difference emerges in behavior between the groups in either the two professional capacities or the two experimental roles. These results imply that, under our realistically framed business scenario with aligned incentives, agents could be relied upon to act according to the preferences of the principals. However, they fail to act as "correcting agents," advising against what many expert observers believe are principals' excess aversion to risks.

1. Introduction

People differ substantially in the decisions they make with respect to risk. Risk taking requires accepting outcomes that are more variable (as opposed to fixed payoffs) in return for payoffs that are potentially greater. Preferences for risk taking influence any investment decision. Entrepreneurs have been identified as particularly willing and effective risk takers, to the benefit of economic development and society (Schumpeter 1934; Stewart and Roth 2001; Hvide and Panos 2012). However, there is a conflicting literature (e.g. Brockhaus 1980; Wu and Knott 2006; Holm, Opper, and Nee 2012), some of which suggests that they are strongly risk averse. This analysis was undertaken in part to help resolve that conflict. The current study explores the risk preferences of actual seasoned successful entrepreneurs, i.e., owner-managers of private businesses with significant enterprise value, or professional expert advisors (lawyers, accountants, commercial bankers, wealth managers, and other consultants) to the owner-managers.

Most experiments on risk taking involve choices among desiccated lotteries, situations characterized solely by dollar payoffs and the probabilities with which they will be received. A chance device, such as the drawing of a ball from an urn, determines the outcome. This is straight ***economic risk*** taking.

Most risk-taking decisions by entrepreneurs differ from these "laboratory" decisions in two important dimensions: (1) they address a real-world situation in which the payoffs and probabilities are embedded in a context; and (2) they involve some reliance on other individuals. These two properties are present when a manager is hired, when a contract is undertaken with another corporation, when a company is bought or sold, or when a new product is developed. The manager, the executives of the other corporation, and the development team are all real and play major roles in determining the outcome.

Whenever an outcome is determined by another individual, we refer to it as a ***social risk***. The decision maker is seeking risky gains, which will be reaped if and only if another person behaves as hoped. Social risk taking has been shown to differ from economic risk taking (Bohnet and Zeckhauser 2004). Most importantly, across a variety of contexts, individuals have proved to be much more willing to accept a risk that depends on the

actions of "nature," that is, a chance device, than a risk involving identical probabilities and payoffs, but that depends on the actions of another individual.

Social risk taking is well illustrated in the famed trust game (TG) (Berg, Dickhaut, and McCabe 1995). In the TG, one person (Player 1) chooses how much money to send to another person (Player 2). Any money that is sent gets multiplied by a factor greater than 1 (capturing the potential gains from trust). Player 2 subsequently chooses an amount of money to return to Player 1. That amount, which is not multiplied, reflects Player 2's trustworthiness. Trusting someone in such a trust game is a risky investment. If the trustee proves trustworthy, then the trustor earns a profit; but the trustee can simply keep more money, producing a loss for the trustor.

Comparing Player 1's behavior in a TG where Player 2's decision is made either by Player 2 or by "nature," studies have found that people are substantially less risk-taking when another individual rather than nature determines the outcome. The additional factor is referred to as ***betrayal aversion***: the potential costs involved in social risk taking are deemed greater than the mere monetary losses to be incurred in the case of an untrustworthy Player 2 (Bohnet and Zeckhauser 2004; Bohnet et al. 2008; and Bohnet, Herrmann, and Zeckhauser 2010).

This study addresses three major questions. The first question is whether betrayal aversion plays a role among entrepreneurs and their agents, particularly when they are making a defined business decision of the type such individuals confront every day. Thus, within such a population, we explore both economic risk taking and social risk taking. Do these subjects, who have extensive professional experience with risk-taking, show the same tendencies observed among less experienced--and generally less successful--subjects? Given our focus on the real world, we start by noting that most important real-world business decisions involve two parties: principals, those responsible for the decision (and who will suffer/enjoy the consequences of its outcome), and individuals in the professional role of expert advisor, whom we refer to as agents. When entrepreneurs are making decisions, their agents include lawyers, accountants, commercial bankers, wealth managers, and other consultants. In theory, these agents are supposed to represent their entrepreneur/principals faithfully, at least as long as the incentives are aligned, but are

expected to be coldly objective (Stiglitz 1987). That is, the agents bring in their unique domain expertise, but recommend decisions to the entrepreneur clients, based on what is in their experience, their client's best interest.

Our second major question is whether subjects' roles affect the decisions they make. There are two elements to a subject's role: What is his profession in real life, and what is his assignment in the decision making task. Our real life PRINCIPALS only are assigned to the role of principals. However, our real life AGENTS are randomly assigned to be principal or agent. For expository clarity, when we capitalize either PRINCIPAL(S) or AGENT(S), we are referring to subjects in their real-world roles and not their experimental roles. Thus, we examine whether risk taking differs depending on one's real-life profession, and one's assigned role. Also important, we embed the main decision task in a business context that should be familiar to our subjects, as opposed to the typical lottery questions that inform so much economic and psychological research.

We start out comparing economic and social risk taking, and replicate the common finding that people are betrayal-averse. In our remaining experiments, we explore betrayal aversion and economic risk taking, where the decision maker is acting as either a principal or a principal's agent. We find little difference in behavior across conditions. This shows that the AGENTS in our experiment are "faithful agents"; they behave similarly when acting either for themselves or for someone else, and in both cases act similarly to PRINCIPALS.

The theoretical principal-agent literature suggests that efficiency losses can occur if the principals and their agents differ in their risk preferences (Grossman and Hart 1983). Previous studies have shown that, when people make choices in the domain of economic risk taking on behalf of others, they use a combination of their own risk preferences and their estimates of the risk preferences of those they represent. This often inclines them toward risk neutrality (Daruvala 2007). People making economic risk-taking decisions for an anonymous stranger are less risk-averse than when making decisions on behalf of themselves (Chakravarty et al. 2009). We wished to determine whether such behavior would persist in the unstudied domain of social risk taking. Under both settings in our sample, there proved to be reasonable concordance between the decision making of principals and agents. That is, we find that real-world AGENTS, acting on behalf of

principals in a simulated traditional business context, recommend decisions reflecting levels of risk aversion and betrayal aversion consistent with those of their principals. It appears that they understand their principals' preferences, and they are faithful. This might pose problems if for example, their principals are adversely affected by cognitive biases in decision making leading them to make less than optimal decisions (in this case to be overly risk or betrayal averse). Thus a less positive interpretation of agent fidelity is that they are not objective expert advisors, but simply reflecting or worse purposefully reproducing the biases of their PRINCIPALS.

This study is the first to test social risk taking and betrayal aversion in a realistic business scenario, one where participants are accustomed to making decisions. Some previous studies suggest that people behave differently when asked about a realistic scenario in their arena of expertise, as opposed to a hypothetical scenario far removed from it, or a barebones lottery. (See, for example, Schubert et al. 1999, who compare economic risk taking in an abstract gambling decision with economic risk taking embedded in an investment or insurance context.) We thus expected our subjects, who have extensive business experience, to be less risk-averse in this type of real-world scenario related to business than in a more abstract scenario. Our subjects, however, turn out to be very (and surprisingly) risk-averse in both the economic and the social domains.

Our paper proceeds as follows. In Section 2, we introduce the experimental design and describe the subjects. In Section 3, we present the results. In Section 4, we discuss the results.

2. Experimental Design

A total of 162 subjects participated in this study on social and economic risk taking. Through The Bigelow Company, a company that arranges mergers and acquisitions on behalf of the owners of entrepreneurial companies, we were able to recruit both professional PRINCIPALS and professional AGENTS for our study. (All subjects in our study were clients of The Bigelow Company, potential clients, or advisors to such.) Our subjects are either successful entrepreneur owner-managers or AGENTS who advise that same class of owner-managers. These entrepreneur owner-managers are thus aware that the decisions that they make as principals often have significant impact on enterprise value,

which frequently they have worked all their lives to build. Their agents are similarly aware.

We recruited subjects through email invitations describing our decision-making study. Potential subjects were identified from The Bigelow Company's proprietary internal database of professional contacts. A total of 194 PRINCIPALS, 726 AGENTS acting as principals, and 724 AGENTS acting as agents were contacted, with respective response rates of 40 PRINCIPALS, 63 AGENTS acting as principals, and 59 AGENTS acting as agents. The study was open online for several weeks, and occasional reminder emails were sent to subjects who had not yet replied. All participation was voluntary, and our study received approval from the Harvard Human Subjects Committee.

The trust game was framed in the following business context. One company (called ADC in the instructions) produces a critical component of a product for another company (called Daisy). If nothing changes, each company will make $10 million in profit from this project. Daisy (the equivalent of Player 2 in the TG) gives ADC (the equivalent of Player 1) a proposal that entails a risky outcome to be determined by Daisy's choice. Specifically, Daisy proposes that ADC accept an R&D commission to develop a new version of the product. Daisy creates the expectation, but makes no binding commitment, that it will engage ADC to produce the product. If Daisy follows through and engages ADC for production, the companies will earn $15 million each; but if Daisy instead goes to China, a cheaper source for production, ADC will earn only $8 million while Daisy earns $22 million. This can be illustrated in Figure 1 as follows:

Figure 1. Trust game in business context.

		Profits to ADC	Profits to Daisy
ADC rejects proposal		\$10 million	\$10 million
	Daisy production choice:		
ADC accepts proposal	**Stick with ADC**	\$15 million	\$15 million
	Go to China	\$8 million	\$22 million

Each subject made decisions in all three of the following different scenarios.

In Scenario 1, each subject took the role of ADC (Player ONE in a trust game), either as a principal (the CEO of ADC) or as an agent (advisor to the CEO of ADC). Subjects were told that they would be randomly paired with other persons who had been assigned to the role of Daisy (Player TWO). Rather than Player ONEs simply being asked whether they would accept or reject the proposal, subjects were asked to base their decisions to accept on the probability that Player TWOs would choose to remain with ADC (that is, be trustworthy/loyal). In particular, each Player ONE was asked for the minimum percentage of Player TWOs choosing to remain with ADC for which that Player ONE would choose to accept the proposal. Since a Player ONE would be paired at random with a computer-matched Player TWO, this established the "minimum acceptable probability" (MAP) for that Player ONE of Player TWOs who are loyal to ADC.

This system gives the ADC principals and their advisors an incentive to respond honestly, since if they really required percentage R, and the true percentage was $Q \geq R$, they would accept the proposal. They would then have at least an R chance that Daisy would remain loyal to them, and probably a greater chance, since Q was unlikely to be precisely equal to R.

Our experiment had principals decide for themselves. By contrast, agents recommended

actions to a hypothetical CEO of ADC (a principal), with the understanding that the principal would follow the agent's advice. Subjects, whether acting as principals or as agents, were informed that they would receive $1 for every $1 million earned by ADC.

In Scenario 2, the subjects were instead placed in the role of Daisy (Player TWOs) and paired with other random computer-matched subjects who would act in the role of ADC (Player ONEs). We asked the TWOs whether they would remain loyal to ADC or go to China if Player ONE chose to accept their proposal. Subjects in this TWO role received $1 for each $1 million earned by Daisy.

In Scenario 3, the subjects participated in an economic risk-taking task. They were shown two alternatives. Alternative A would pay $100 with certainty, whereas Alternative B would pay $150 with probability q and $80 with probability 1-q. We asked the subjects how large p would have to be for them to choose the lottery in Alternative B instead of the certainty in Alternative A. This is thus an abstract non-social version of Scenario 1, with "nature" rather than another person determining the outcome of Alternative B. Subjects were informed that, subsequently, 10 participants would be selected at random from all respondents to actually engage in this task for money, with their decisions as to whether or not to gamble based on what they had indicated in the study. They were told that a value of q would be chosen (but not how that value would be picked), and that whether or not they gambled would depend on that value of q. If they did gamble, a random number would be drawn to determine if they had won.

Finally, subjects answered a questionnaire on their professional experiences and demographic characteristics.

Subjects were paid by check, mailed to them following the conclusion of the study. Subjects also received an email describing their results in each scenario.

3. Results

3.1 Economic risk aversion – the gamble

Subjects, whether PRINCIPALS or AGENTS, were very risk-averse. In the risky gamble (Scenario 3), the break-even probability was 2/7 (about 0.29), whereas the mean response in our sample was 0.507, a dramatically higher and more risk-averse value (Wilcoxon

signed-rank test,[1] p<0.0001). (This extreme difference raises the question as to whether many subjects, despite dealing with uncertain situations every day, even bothered to compute the break-even probability.) Table 1 presents the results. It is interesting to note that Bohnet, Herrmann and Zeckhauser (2010) used the same measurement in their cross-nation study conducted among students, yet the mean among our sample of PRINCIPALS (0.515, N=35) and AGENTS (0.504, N=116) is higher than the mean that study reports for any country (the highest they report is 0.48 from the United Arab Emirates). Though our stakes were ten times higher for the gamble, this is unlikely to explain the difference, since our subjects--all successful as entrepreneurs or professionals advising them--had incomes many times greater than students. The explanation awaits further study. We suspect it relates to an aversion of entrepreneurs and their advisors to taking gambles over which they do not have any control.

Table 1. Economic risk aversion by condition and background. Mean (standard deviation).

PRINCIPALS acting as Principals	AGENTS acting as Principals	AGENTS acting as Agents	All AGENTS	All subjects
0.515***	0.523***	0.485***	0.504***	0.507***
(0.260)	(0.244)	(0.225)	(0.235)	(0.240)
N=35	N=60	N=56	N=116	N=151
p=.0001	p=.0001	p<.0001	p<.0001	p<.0001

*** denotes significantly different from 2/7 at p=0.001.

3.2 Betrayal aversion

Our PRINCIPALS and AGENTS both showed substantial betrayal aversion. To measure betrayal aversion, we look at subjects playing the role of ADC. We compare their minimum acceptable probabilities of trustworthy Player TWOs in Scenario 1, with their MAPs for the lottery in Scenario 3. This comparison procedure follows Bohnet and Zeckhauser (2004). If there were no betrayal aversion, individuals would not care whether "nature" or the decision by an individual led to a bad outcome. Thus, they would select the same MAP

[1] All further p-values are two-sided Wilcoxon signed-rank tests, unless stated otherwise.

in both contexts. However, if our subjects were betrayal-averse, their MAP under the ADC-Daisy scenario would be higher. (Below, we sometimes refer to this as the *betrayal scenario.*)

Table 2 presents the results. It shows that looking at all subjects together, MAPs in the ADC-Daisy scenario were significantly higher (p=0.001). Nearly twice as many subjects had a higher value for the Daisy scenario (N=81) rather than a higher value for the gamble (N=42). The remaining 27 subjects had equal values for both measures.

It is important to reiterate that the stakes in the gamble were far higher than those in the betrayal scenario. Thus, with stakes raised, risk aversion should have inflated the MAPs in the gamble relative to those in ADC-Daisy. This may well explain the behavior of some of the 42 subjects with higher values for the gamble than for the Daisy scenario. Therefore, given the substantial risk aversion our subjects exhibited, our findings probably underestimate the level of their betrayal aversion.

Table 2. Social risk aversion by condition and background. Mean (standard deviation).

PRINCIPALS acting as Principals	AGENTS acting as Principals	AGENTS acting as Agents	All AGENTS	All subjects
0.583* (0.263)	0.583* (0.257)	0.582*** (0.271)	0.583** (0.263)	0.583*** (0.262)
N=40	N=63	N=59	N=122	N=162
p=.0935	p=.0503	p=.0097	p=.0015	p=.0004

*,**,*** denotes significantly different from economic risk aversion at p=0.1, 0.05, 0.001.

3.3 Faithful agents?

Here we explore whether there are differences among PRINCIPALS as subjects acting on their own behalf, AGENTS acting on behalf of their principals, and AGENTS acting as principals. The pure monetary payoffs were such that preferences were perfectly aligned. However, these were three quite different conditions, and we might expect to find substantial differences among them. Such differences could arise because AGENTS simply had different preferences, because AGENTS tried to dampen their principals' extreme betrayal aversions, or because AGENTS acting as agents chose different actions

than AGENTS acting as principals.

In each of our three conditions – AGENTS acting as agents, AGENTS acting as principals, and PRINCIPALS acting as principals – the average response for the ADC-Daisy scenario was higher than the average response for the straight gamble (0.582 vs. 0.485; 0.582 vs. 0.523; and 0.583 vs. 0.515, respectively). (See Tables 1 and 2.) Not surprisingly, we find significant evidence of betrayal aversion for players in every condition (p=0.017, p=0.05, p=0.01, respectively). The same result holds if we consider AGENTS in both roles jointly (p=0.001; the mean responses for the ADC-Daisy scenario were 0.583 and 0.504).

Our main result is that our AGENTS behaved "faithfully" toward their principals. By this we mean that they acted in no way differently from PRINCIPALS, either when acting on their own behalf or when acting for their principals--giving advice that they expected would be followed as if it were for themselves. AGENTS acting as principals behaved effectively the same as PRINCIPALS acting as principals (Wilcoxon Rank-Sum: p=0.99 for MAP; p=0.81 for gamble; p=0.96 for betrayal aversion). Similarly, AGENTS acting as agents behaved virtually the same as PRINCIPALS acting as principals (Wilcoxon Rank-Sum: p=0.90 for MAP; p=0.37 for gamble; p=0.72 for betrayal aversion). And AGENTS behaved the same whether they acted as principals or as agents (Wilcoxon Rank-Sum: p=0.94 for MAP; p=0.56 for gamble; p=0.64 for betrayal aversion).

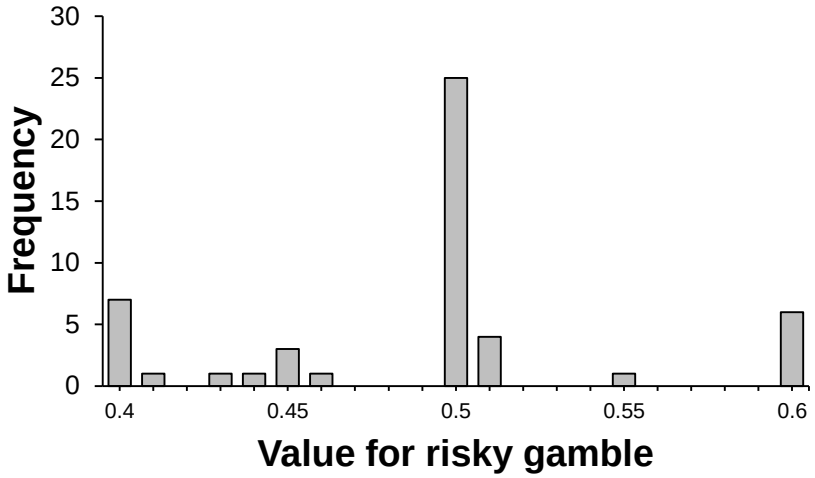
In short, in our data, the actions of principals and agents were strongly in accord. The implication is that, under our realistically framed business scenario with aligned incentives, principals could rely on agents to act as they themselves would act. There is a much less optimistic finding: Agents did not advise against their principals' extreme levels of betrayal and risk aversion despite their duty to serve their principals' interests. In a broad range of situations, such as arranging mergers or other major transactions (the subject of our scenario), AGENTS will usually have much more experience than PRINCIPALS. Moreover, they should have the capacity to approach decisions subject to less cognitive bias. Therefore, we might have expected our AGENTS to advise decisions reflecting less risk aversion, and certainly less betrayal aversion than our PRINCIPALS.

3.4 Final observations and future research

Our findings identify a number of issues for future study. In gambling Scenario 3, we see

clusters of subjects at the 50% cutoff or just above, whereas many fewer subjects replied with a number just below 50% (See Figure 2). This suggests a major psychological difference between accepting a payoff with just below a 50% chance, and one at least equal to that. This is an intuitively plausible behavioral bias that we believe has not yet been identified in the literature. Thus, we would expect people to pay more for going from a 49% to a 52% chance of winning a prize than they would to go from 46% to 49% or from 52% to 55%. If true, such a result would have applications in several domains, from pricing to marketing to medicine.

Figure 2. Frequency of answers to the risky gamble (only showing values between 0.4 and 0.6)



Forty out of 126 subjects who answered this question (or about 27%) chose to betray. This percentage is almost identical to the percentage betraying in Switzerland and the United States, the two developed Western countries in the study by Bohnet, Herrmann and Zeckhauser (2010). Coincidentally, it is also extremely close to the percentage that breaks even in expected payoff (29%).

The subjects who, acting for Daisy, chose to betray did not behave any differently than those who remained loyal to ADC. They had neither higher MAPs in the betrayal scenario ($p=0.30$) nor higher MAPs in the gamble ($p=0.73$), and they were not more betrayal-averse ($p=0.61$). This result was somewhat surprising, since we might have expected betrayers to

be less betrayal-averse because they have a higher expectation for the betrayal probability (a finding in Bohnet, Herrmann and Zeckhauser 2010), or because they find betrayal less unacceptable.

Multiple factors could push agents to be less or more betrayal-averse. Presumably, they would be less personally offended by betrayal, which could lead them to be less averse. Moreover, since they advise on large numbers of major business decisions, they might be able to see them more as mere lotteries. This, too, would reduce betrayal aversion. Finally, and amplifying rather than dampening betrayal aversion, agents had to worry about being blamed for a good decision that had a bad outcome. Blame aversion, a concept not in the literature, deserves future study.

Discussion

The two major questions addressed in this study are (1) whether we observe significant risk and betrayal aversion among actual seasoned successful entrepreneurs, i.e., owner-managers of private businesses with significant enterprise value, as compared to their expert advisors in a realistically framed business scenario and (2) whether risk taking differs according to real-life professional role and/or assigned experimental role (as a principal or as an agent). Understanding the answers to these questions helps shed light not only on the behavior of real-world PRINCIPALS and AGENTS, but also on the relationship between the behavior of individuals in the lab and in their daily lives. Our unique subject pool provided us a valuable opportunity to analyze these questions.

Both PRINCIPALS and AGENTS exhibited high levels of risk aversion and betrayal aversion. Thus, our subjects were not qualitatively different in this regard from subjects in past studies, despite their extra real-world experience in similar scenarios. This suggests that significant risk aversion, even over small monetary amounts, is found in individuals accustomed to making monetarily consequential decisions (including those significantly affecting the enterprise value of their companies), even when they are deciding in familiar circumstances. It is not a characteristic merely unique to undergraduates making lottery decisions, the traditional fare of experiments on monetary gambles. A conjecture deserving future research, deriving from the experience of Bigelow with large numbers of entrepreneurs, is that entrepreneurs are willing to take risks in their own domain, but shun

other risks, a finding that would be consistent with some of the literature cited above.

We further observed no differences in levels of these traits according to profession or to role as a principal or an agent. We thus find evidence in support of faithful agents: the agents in our sample could be trusted to represent their principals' interests well. This result implies that we do not need to worry that decision-making differences exist between individuals who self-select into AGENT versus PRINCIPAL roles, that spending a career as an AGENT might influence preferences, or that AGENTS have self-serving reasons (such as blame aversion) for recommending decisions that differ from those of their PRINCIPALS. However, it is interesting that our AGENTS do not appear to be "correcting" in the sense that they are not advising against excessive risk aversion on the side of the PRINCIPALS. Agents are surely technical experts, say in evaluating business strategy or analyzing financial statements, but they do not appear to be both able or willing to provide coldly objective advice on major business decisions that may be contrary to the inclinations of their principals (even when such advice would be in the clients' best interest). Such reluctance by agents may be more surprising given that they were much better educated than our principals (72% of AGENTS had graduate degrees, compared to 44% of PRINCIPALS), and presumably had broader experience with the Daisy-ADC-type business decision. If this inability or reluctance is confirmed in future studies, it should reduce our assessment of the value of hired expertise. Finally, note that our results contrast with the standard assumption in moral-hazard models, the assumption that the principal is risk-neutral and the agent is risk-averse.

A potential challenge to our results could be that, while PRINCIPALS and AGENTS might in fact differ in their decision-making patterns, our experiment only reported on situations in which they do not. In other words, our experiment may be a poor proxy for the businesses in which PRINCIPALS and AGENTS actually do make decisions. We think this is unlikely for two reasons. First, our sample consisted of real-world PRINCIPALS and AGENTS; and thus our subjects were the individuals we are actually interested in, and not, for example, undergraduates posing as business leaders. Second, our questions were monetarily incentivized and specifically designed to mimic actual business scenarios. (Our main scenario was crafted with the help of seasoned business professionals.) Those with concerns about whether this study's results generalize should welcome future experiments

with business professionals as subjects in real-world scenarios calling for decisions.

The most surprising finding in our study was the extraordinary concordance between the choices of PRINCIPALS and AGENTS in both the ADC-Daisy betrayal scenario and the gamble, indeed whether AGENTS were acting as principals or agents. That leads to the opening question for philosophical discussion: Should we take reassurance because AGENTS were faithful and consistent in their actions for others and themselves, or should we be discouraged because AGENTS did not counterbalance their PRINCIPALS' high levels of betrayal aversion and risk aversion?

References

Berg, J., J. Dickhaut, and K. McCabe (1995). Trust, Reciprocity, and Social History. Games and Economic Behavior. 10(1) pp. 122-142.

Bohnet, I., B. Herrmann, and R. J. Zeckhauser (2010). Trust and the Reference Points for Trustworthiness in Gulf and Western Countries. Quarterly Journal of Economics. 125(2) pp. 811-828.

Bohnet, I., F. Greig, B. Herrmann, and R. J. Zeckhauser (2008). Betrayal Aversion: Evidence from Brazil, China, Oman, Switzerland, Turkey, and the United States. American Economic Review. 98(1) pp. 294-310.

Bohnet, I., and R. J. Zeckhauser (2004). Trust, Risk, and Betrayal. Journal of Economic Behavior & Organization. 55(4) pp. 467-484.

Brockhaus, R. H., Sr. (1980). Risk Taking Propensity of Entrepreneurs. The Academy of Management Journal. 23(3) pp. 509-520.

Chakravarty, S., G. W. Harrison, E. E. Haruvy, and E. E. Rutström. (2009). Are You Risk Averse Over Other People's Money? Working Paper, University of Central Florida.

Daruvala, D. (2007). Gender, Risk, and Stereotypes. Journal of Risk and Uncertainty. 35(3) pp. 265-283.

Grossman, S. J., and O. D. Hart (1983). An Analysis of the Principal-Agent Problem. Econometrica. 51(1) pp. 7-45.

Holm, H. J., S. Opper, and V. Nee (2012). Entrepreneurs Under Uncertainty: An Economic Experiment. Lund University Department of Economics Working Paper 2012:4.

Hvide, H., and G. A. Panos (2012). Risk Tolerance and Entrepreneurship. SSRN Working Paper.

Schubert, R., M. Brown, M. Gysler, and H. W. Brachinger (1999). Financial Decision-Making: Are Women Really More Risk-Averse? American Economic Review. 89(2) pp. 381-385.

Schumpeter, J. A. (1934) The Theory of Economic Development. Cambridge, Mass.

Stewart, W. H. Jr., and P. L. Roth (2001). Risk Propensity Differences Between Entrepreneurs and Managers: A Meta-Analytic Review. Journal of Applied Psychology. 86(1) pp. 145-153.

Stiglitz, Joseph E. (1987). Principal and agent. The New Palgrave: A Dictionary of

Economics, v. 3, pp. 966-71.

Wu, B., and A. M. Knott (2006). Entrepreneurial Risk and Market Entry. Management Science. 52(9) pp. 1315-1330.