The role of personal interaction in the assessment of risk attitudes

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ABSTRACT

Many decisions under uncertainty are delegated to professionals, such as financial advisors or medical doctors, requiring them to assess the risk attitudes of their clients or patients. To gain a better understanding of the potential factors influencing risk attitude assessments, the current study investigates the role of personal interaction in these assessments. Controlling for information transmitted, we find that personal interaction leads to more risk-averse assessments, but does neither harm nor benefit assessments in terms of precision. We replicate previous findings of stereotypes in risk preference predictions, and discuss the influence of the assessor's own risk attitude on her assessments.

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1. Introduction

Advice is important in many domains of decision making under uncertainty. Prominent examples are medical decisions supported by the advice of a doctor (Gigerenzer et al. 2007), or investment decisions supported by the advice of a financial professional. An advice relationship typically requires the advisor to carefully assess the advisee's willingness to take risks. For example, the MiFID (2006) guidelines specify that financial professionals need to know their customers' preferences; medical doctors need to discuss risks with their patients and obtain informed consent.

We are interested in the aspects that influence such assessments of other person's risk attitudes. In particular, we investigate whether personal interaction conveys relevant information about an advisee's risk attitudes, over and beyond a set of demographical background variables. We use experimental risk preference measurement and belief elicitation methods to study this question. Importantly, in our study, the personal interaction does not allow the advisor to formally assess or elicit the risk attitudes of the advisee. Rather, we are interested in the implicit information that the advisor may obtain through an informal interaction with a client.

Our investigation starts from the assumption that having more information, albeit implicit one deriving from the unstructured interaction during a consultation, is beneficial to the goal of assessing the advisee's preferences. However, it is also conceivable that personal interaction only adds noise and possibly biases to the assessment by the advisor. Our design aims to detect both positive effects and negative effects of personal interaction. We also test (i) if stereotypical assessments exist and whether they are more or less prevalent in the personal interaction condition; and (ii) if the advisor's risk attitudes influence her assessment of the advisee's preferences.

In the next section we present the details of our experimental design. The following section discusses the results. It will be shown that participants predict systematically lower risk aversion when they make their assessments based on merely a set of demographics, compared to a situation where they additionally have the possibility to obtain information in a personal interaction. However, the precision of the risk attitude assessments does not differ systematically between conditions with and without personal interactions.[2] These findings replicate across two different methods of risk preference assessment. We also replicate previously shown stereotypes in risk attitudes assessment, and find that the assessors own risk attitudes influence her assessment. The final section discusses our results in the context of the existing literature.

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[2] Precision is measured as the absolute deviation of the prediction from the true attitude, or alternatively as the number of correct predictions.

Table 1
Demographic Information Provided in Stage 2.

Variable	Possible realizations and aggregation
Gender	male, female
Age	25 or younger; 26-40; 41-65; 65 or older
Height	cm
Income (net/p.m.)	€1000 or less; €1001 to €3000; €3001 to €6000; €6000 or more
Family Status	single; divorced; in a relationship; living separately; married; widowed
Children	children; no children

2. Experimental design

2.1. Methods

To assess whether personal interaction affects judgments of other people's risk attitude, we use a within-person design as follows. In Stage 1 of the experiment, participants make risky choices as described in more detail below. In Stage 2, participants judge the risk attitude of other people on the basis of a condensed demographic summary shown in Table 1. The variables were selected based on previous research showing a correlation of these attributes with risk attitudes (e.g., Dohmen et al. 2011; Noussair et al. 2014; Roth and Voskort, 2014). Subjects were presented with 20 different profiles, all coming from real experimental participants. 8 of these profiles came from other participants in the current experiment, 4 of whom the assessor would encounter in Stage 3 of the experiment. The other profiles came from a related study where risk attitudes were measured in a non-student sample with larger variation in demographics. Risk attitude judgments were incentivized as described below.

In Stage 3 of the experiment, participants had four one-to-one conversations with other participants. All conversations took place at separated tables and were audio-recorded. In each conversation of 2 minutes (in mode D) or 4 minutes (in mode F, defined below), initially one person interviewed the other person. After a signal by the experimenters, the groups switched roles and the other person took the role of the interviewer. That is, in each conversation, both participants assessed the other person (and thus were assessed by another person). The participants had to take notes during the interviews. After the last conversation, they returned to their computers and filled in the risk-preference assessment for each of the four people they talked to. Importantly, during the personal interview participants were not allowed to ask for the other person's behavior in the risk tasks (participants knew in advance that they would assess the other person on these dimensions). With three experimenters present, and audio-recordings available, we did not detect any violations of this restriction.

The four interviews in Stage 3 were split in 2 groups of 2 interviews that differed according to the questions the participants could ask during the interview. In mode D ("demographics only") interviews, subjects had to ask for exactly the information that was given in the short descriptions of people in Stage 2. In mode F ("free conversation") interviews, subjects had to collect the information given in the Stage 2 descriptions, and were also allowed to additionally collect any other information about the other person (with the exception described above). This setup ensured that in Stage 3 assessments, assessors had at least as much information about the other person as in Stage 2. Note that participants were not aware of the fact that they would encounter people in Stage 3 whose profiles they assessed in Stage 2 of the experiment.

Stage 1 risk preference elicitation. The Stage 1 risk elicitation employed two different preference elicitation tasks: a financial investment task modeled upon a survey question in Dohmen et al. (2005); and an abstract binary-choice based risk preference measure based on Holt and Laury (2002). In the following we refer

Table 2
Choice list risk measure.

Choice no.	Option A	Option B
1	10%: €2; 90%: €1.60	10%: €3.85; 90%: €0.10
2	20%: €2; 80%: €1.60	20%: €3.85; 80%: €0.10
3	30%: €2; 70%: €1.60	30%: €3.85; 70%: €0.10
4	40%: €2; 60%: €1.60	40%: €3.85; 60%: €0.10
5	50%: €2; 50%: €1.60	50%: €3.85; 50%: €0.10
6	60%: €2; 40%: €1.60	60%: €3.85; 40%: €0.10
7	70%: €2; 30%: €1.60	70%: €3.85; 30%: €0.10
8	80%: €2; 20%: €1.60	80%: €3.85; 20%: €0.10
9	90%: €2; 10%: €1.60	90%: €3.85; 10%: €0.10
10	100%: €2; 0%: €1.60	100%: €3.85; 0%: €0.10

to the first measure as *Investment*, and to the second measure as *Choice*. The measures are normalized in the analyses such that higher values always refer to more risk aversion.

The investment decision elicited the share of a windfall gain that a participant was willing to put at stake in a risky investment vs. the share she would prefer to keep uninvested. There were six possible amounts. The question was stated as follows (cf. Dohmen et al., 2005, p.8):

"Please consider what you would do in the following situation: Imagine that you had won €100,000 in a lottery. Almost immediately after you collect the winnings, you receive the following financial offer, the conditions of which are as follows: The amount invested either gets doubled, or you lose half of it, with equal probability. You have the opportunity to invest the full amount, a part of it, or nothing and thus reject the offer. What share of your lottery winnings would you be prepared to invest in this financially risky, yet lucrative investment?

Your Decision: €100,000 - €80,000 - €60,000 - €40,000 - €20,000 - Nothing, I would decline the offer."

The investment decision was incentivized such that each €400 in experimental payoff yields 1 cent in real payoffs. That is, the risk-free option of not investing at all yields a payoff of €2.50. In the analyses below we normalize the amount uninvested on a scale from 0 (no risk aversion; full investment) to 10 (kept the full amount uninvested).

The second measure of risk preference was elicited by an adapted choice list task using the payoffs and probabilities shown in Table 2. Because we needed unambiguous choices in this choice list tasks to incentivize risk preference predictions, we enforced a unique switching point by asking participants in which row they wanted to switch to the riskier option B. As shown in Table 2, initially option A is much more attractive than option B. When going down the list of choices, option B becomes relatively more attractive, and dominates option A in choice no. 10. The choice item in which the decision maker switches from the safer option A to the riskier option B indicates the decision maker's risk attitude, normalized as the degree of risk aversion on a scale from 0 (immediately) to 10 (never).