Inequality and Social Influence: Monetary Hierarchies Shape Persuasive Power

Andrea F.M. Martinangeli* Biljana Meiske†

March 9, 2025

Abstract

We examine how purely monetary differences between individuals affect social influence in a controlled experiment using a representative German sample of over 1,500 participants. By isolating the social hierarchy outlined by income differences, free from cultural or individual confounds, we assess how advice from differently ranked advisors sways recipients' choices. We find an influence premium of high rank accounting for 0.17 standard deviations of choices, indicating an inherent psychological predisposition toward affluent sources of information. This effect, observed in absence of merit signals, suggests that visible wealth status independently amplifies interpersonal influence, offering insight into the value of monetary rank in social hierarchies.

JEL Codes: C91, D02, D31
Keywords: Inequality, rank, social influence

Acknowledgments: We are grateful to Jana Cahlíková, Simona Cicognani, Florian Englmaier, Evan Friedman, Nicolas Jacquemet, Kai A. Konrad, Eleonora Montagner, Panu Poutvaara, Marina Povitkina, Raisa Sherif, Sven Arne Simon, Kenny Skagerlund, Eli Spiegelman, Morten Støstad, Angela Sutan, Jean-Robert Tyran, Lisa Windsteiger, and to our colleagues at the MPI for Tax Law and Public Finance for helpful comments and feedback. We further extend our gratitude to the participants in seminars at the Max Planck Institute for Tax Law and Public Finance and Utrecht School of Economics, ESSEC Business School, and in the ASFEE, LAGV and CIMEO conferences, for constructive discussions. Paul Binder, Stefan Bruckmeyer and Magnus Haselier offered invaluable research assistance. We are grateful for financial support from the Max Planck Society.

Pre-Registration: AEARCTR-0007269
Ethics Clearance: Ethics Council of the Max Planck Society 2020-15/2
Data availability: The original raw data collected for this investigation is stored on read-only servers of the Max Planck Society
Conflicting Interests: None

This draft: March 9, 2025.

*LEMMA, Université Paris 2 Panthéon-Assas, Paris, France; andyfm.martinangeli@gmail.com
†European University Institute, Florence, Italy; a

1 Introduction

Differences in relative affluence between two individuals shape their interaction via multiple channels: The rich are expected to contribute more to collective (financial) efforts, perhaps due to their greater contribution capacity (see Reuben and Riedl (2013); Martinangeli (2021); Rockenbach et al. (2021)), they face lower marginal risk and cost for their actions (Martinangeli, 2021), and their effort and skill are overweighted as determinants of their relative placement (Alesina and Angeletos, 2005). All these regularities favour the actions of the affluent as stronger determinants of other individuals' choices (Martinangeli, 2021; Rockenbach et al., 2021; Martinangeli and Windsteiger, 2024). Crucially, however, beyond their greater contribution capacity, their mechanically smaller marginal costs, and inferences about their qualities others root in shared cultural beliefs, highest income individuals are made salient by the natural hierarchy generated by the income distribution (Gächter, 2015).

This article examines how inequality, defined narrowly as purely monetary differences, shapes behavior by ranking individuals along a salient social gradient (Gächter, 2015). This narrow and controlled definition of inequality allows us to eliminate the confounding effects of expectations, of cultural factors, and of differences in relative costs.[1] We specifically investigate the patterns of influence unfolding across a monetary distribution, motivated by the ubiquity of environments in which individuals are exposed to information originating from others (e.g., example, advice), and by the imperfection of an individual's relative standing as a signal about the quality of that information.[2]

Human behaviour is susceptible to the influence of others' behaviours and beliefs (Bardsley and Sausgruber, 2005; Bicchieri and Xiao, 2009; Krupka and Weber, 2009; Herbst and Mas, 2015; Fershtman and Segal, 2018; Bursztyn et al., 2020). Studies on social learning and conformity show that a considerable portion of individuals rely on others' previous choices, even when not informative or costly, and at the expense of more informative private signals (Anderson and Holt, 1997; Çelen and Hyndman, 2012; Goeree and Yariv, 2015; Duffy et al., 2021). Crucially, in searching for guidance for their actions, individuals seek successful models and use imperfect cues to help them in model selection (Henrich and Gil-White, 2001). Extensive research in social and evolutionary psychology, as well as in biology, documents the importance of hierarchical social environments in this context. Interacting with, or merely observing, an individual displaying even minimal cues of higher rank activates systematic behavioural, psychological and neurological responses. These include increased attention and eye-contact, liking and imitation, and adaptation of one's behaviours to that of superiors (e.g., Cheng et al., 2013; Koski et al., 2015; Mattan et al., 2017). In other words, people tend to mimic those in higher

[1] When referring to "rank" or "hierarchy" we henceforth address this purely scalar (monetary) operationalisation of inequality, unless differently specified. We will interchangeably use the terms *income* or *wealth*, a distinction that is for us irrelevant, in reference to the individuals' material resources.

[2] While education and skill are natural correlates of affluence, a large component of individuals' economic circumstances lies beyond their control and is independent of skill (e.g. inter-generational wealth transmission determines a large proportion of individuals' economic conditions; for instance: Oulton (1976); Piketty (2011); Elinder et al. (2018); Ohlsson et al. (2020)).

positions and be more receptive to their influence even if the specific ranking trait isn't relevant to the situation at hand (Camerer et al., 2005). Consistently, mere exposure to images depicting individuals described as occupying a high rank activates neural regions associated with attention, self-referential comparison, inhibition, and adherence to social norms (Zink et al., 2008; Cloutier et al., 2012). These mechanisms occur automatically and below-awareness (Camerer et al., 2005; Fehr and Rangel, 2011; Alos-Ferrer, 2018) and have been suggested as having facilitated the transmission of valuable adaptive behaviours from the apex of the social hierarchy – the fittest – to the rest of the group and across generations (Henrich and Gil-White, 2001).

Because inequality ranks individuals along a saliently visible social gradient (Gächter, 2015; Mattan et al., 2017), we hypothesise that greater monetary rank will serve *by itself* as a cue for grater social rank and thus grant a greater influence over others, all else equal.[3,4] Testing this hypothesis entails removing a host of confounding factors. For instance, an individuals' skill and effort undoubtedly play an important role in determining both their material affluence (income, wealth) and their influence over others. In turn, said affluence generates beliefs about its origin in the individuals' skill or education. To remove all confounds and isolate the impact of relative monetary rank, we rely on the hierarchical nature of the purely monetary dimension of inequality and on a tightly controlled experimental design. In doing so, we thus depart from previous literature where inequality, rank, and other status dimensions are investigated jointly and inextricably (Koski et al., 2015; Mattan et al., 2017).

Concretely, we design our experiment to observe how more than 1000 individuals from a representative sample of the German population react to investment advice from relatively affluent or non affluent advisors. To construct tightly controlled and non-deceptive experimental conditions, we first collect data from 100 "advisors" who leave investment advice to an anonymous future participant. The advisors are randomly allocated either a *High* or *Low* endowment, and themselves participate in the same task they will leave advice about: Investment in a lottery either tripling or destroying the invested value (Gneezy and Potters, 1997). Their advice recommends a *proportion* of endowment to be invested. The advisors' data only serves the purpose of generating our experimental conditions without deception (the advice received by a participant indeed

[3]This would not be the sole example where an individual's rank along some seemingly irrelevant dimension impacts behaviors and/or beliefs of decision-makers interacting with them. For example, physically attractive individuals are offered higher salaries (Biddle, 1994; Scholz and Sicinski, 2015), win more votes in political races (Little et al., 2007; Lenz and Lawson, 2011; Berggren et al., 2010), and are (wrongly) expected to be more capable (Mobius and Rosenblat, 2006), trustworthy (Wilson and Eckel, 2006) and cooperative (Andreoni and Petrie, 2008). Studies on traffic behavior reveal that drivers account for the status of vehicles they interact with, highlighting the influence of status even in environments where both formal rules and shared norms prescribe uniform rule application. Doob and Gross (1968) showed that an experimenter's car, instructed to act as a frustrator - i.e., to idle at the traffic light after the signal turned green - was significantly more likely to be honked at if an older and cheaper vehicle than if newer and more expensive. This result was replicated in Deaux (1971) and in Guéguen et al. (2014). These effects hold when varying the status of the blocked car (Diekmann et al., 1996), or the status of the vehicle of a provocative driver (McGarva and Steiner, 2000).

[4]Our hypothesis is pre-registered (AEARCTR-0007269).

was left by an advisor with the described characteristics), and is not studied otherwise.

More than 1000 "advisees", our target sample, participate in the lottery task: An individual choice without externalities. Unsolicited advice originating from the advisors is provided prior to the investment decision and suggests a proportion of the endowment to be invested. Each participant is randomly shown one piece of advice originating from *either* a high *or* a low endowment advisor. Importantly, the endowment of the advisors is commonly known to be randomly allocated and thus cannot be interpreted as a signal for underlying characteristics. The advisees are also aware of being randomly allocated a High or Low endowment (orthogonal to the advisors'), unknown until later, from the same distribution as the advisors'. This allocation nests the participant within the same hierarchy the advisors are part of, giving meaning to their relative ranks.

By randomly varying whether the advice originates from a high or low endowment advisor, we can evaluate the impact of the advisors' endowment on the effectiveness of their advice in steering the advisees' choices. Consistent with our preregistered hypothesis, greater monetary resources serve as an independent source of influence: Advice from *high* ranked advisors is followed significantly more, shifting individual choices closer to the received advice by 16.9% of a standard deviation.

Our design excludes confounding effects due to envy, (beliefs about) recommendation quality, or endowment homophily, besides that of the advisor's ability which we eliminate via endowment randomisation. First, even if allocated randomly, wealth might affect the advice that one provides to others. To remove this concern, we inform the advisors of their endowment after they made their choice and left the advice. We further select the advice to be passed on from a restricted set of the advice collected from the advisors. We distribute advice recommending (with equal probability) either a high (70%) or a low (30%) lottery investment, orthogonal to advisees' wealth.[5] Second, this strategy ensures that the advice distributed can be palatable to more or less risk averse advisees. Third, to remove the concern that homophily could lead the advisees to follow the advice of a same-endowed advisor more, they learn the value of their endowment only after making the lottery investment decision (expressed as a proportion of the endowment). A further advantage of this choice is that the advisees know that they are within the same hierarchy as the advisors and their endowment is allocated the same way. We thus remove any effects due to envy or feeling of entitlement on behalf of the advisees.

In an extension of this main setup, we gain insight into how the advice shifts the participants' decision from the investment they would have "naturally" chosen in the absence of advice. We collect data from 500 more individuals who make an investment choice before receiving advice. These participants are then offered to revise their choice after having received the advice. This investigation confirms our finding: Choice updates towards the advice are larger when this comes from high endowment advisors.

To see the implications of this phenomenon, consider for instance the realm of leadership. Most organizations (e.g. companies, informal associations, political groups) are characterized by some form of hierarchy with a leader playing a critical role in deter-

[5]The advisors were told that their advice "may or may not be passed on to other participants", thus ensuring no deception.

mining outcomes and collective and individual actions (Alston et al., 2021). Successful leadership hinges not only on the ability to select appropriate actions but also on the leader's ability to garner support among followers (e.g., Antonakis et al., 2022; Ajzenman et al., 2023; Hoffman and Tadelis, 2021). If a leader's greater income credibly signals their superiority (e.g. in skill), a greater influence of affluent leaders would be rational. Affluence *on its own* granting an "influence premium" would instead amount to a behavioural regularity not easy to rationalise. Given the imperfect correlation between income or wealth and competence (e.g., Caselli and Morelli (2004) in the context of political leadership), these effects could exacerbate the adverse consequences of low leadership quality (Schyns and Schilling, 2013; Hancock et al., 2023; Modliba and Treffers, 2024).

Should the preferences of affluent leaders be misaligned with social objectives, outcomes might well be socially sub-optimal. For instance, literature on political leadership finds that law-makers from different income groups bring different perspectives to the political process (Thomas, 1991; Berkman and O'connor, 1993; Bratton and Ray, 2002; Pande, 2003; Chattopadhyay and Duflo, 2004; Franck and Rainer, 2012). Affluent leaders proving to be more persuasive would amount to an electoral advantage for one set of policies over another. In public finance, these considerations could imply greater political weight to the tax schedules preferred by top incomes, and offer a potential further motive for the lower than expected demand for redistributive taxation among lowest incomes (Kuziemko et al., 2014; Martinangeli and Windsteiger, 2020).

All of these considerations could outline a cyclical pattern in which affluent individuals more likely emerge as successful leaders and further enhance their affluence by occupying leadership roles, with ensuing distributional consequences.

Finally, our investigation offers insight on a potential motivation underlying display of rank via conspicuous consumption. Greater consumption utility does not explain the costly strife for making one's rank visible (Amaldoss and Jain, 2005; Veblen, 2017; Cosaert, 2018). Is the comfortable feeling of being ahead and gaining others' "good opinion" all there is, or does costly consumption purchase the individual other benefits such as increased influence?[6] Cole et al. (1992) and Eaton and Eswaran (2003) are to the best of our knowledge the only economic investigations endogenising concerns over relative ranks: Positionality offers evolutionary advantage by granting the fittest preferential access to resources and partners, becoming hard-wired in individual and collective psychology and social organization.[7,8] Our finding offers evidence for an additional motive in the greater social influence even minimal high-rank cues grant their bearer.

This article is organised as follows: Section 2 describes the experimental design, Section 3 illustrates our empirical strategy and our results, Section 4 concludes.

[6] "*It is not wealth that men desire, but the consideration and good opinion that wait upon riches*" – Adam Smith, *The theory of moral sentiments.*

[7] Positionality is often assumed in the utility function to investigate its effect on other micro and macro phenomena (e.g. Bernheim, 1994; Hopkins and Kornienko, 2004; Immorlica et al., 2017).

[8] For evidence from other primates, see for instance Raleigh et al. (1984).

2 Experimental design

We sample 1018 individuals representative of the German population along the age, gender, income and geographic dimensions.[9] We programmed the experiment in Qualtrics and delegated its distribution to the panel company Respondi.[10]

Our respondents face a purely individual investment choice without any externality. The participants can invest any proportion of their endowment in a lottery tripling or destroying their investment (Gneezy and Potters, 1997). Before they make their choice, we pass them unsolicited advice originating from a participant known to having participated earlier, whose endowment is known to be assigned randomly, High or Low. We orthogonally vary whether the respondents receive advice from a high or low endowment advisor to observe whether differently ranked advisors influence their decisions differently, independent of natural confounds. We further investigate a variant of this design in which 483 respondents first make their initial investment choice and are asked to update it after receiving the advice. This alternative design confirms our results and is discussed in Appendix 3.2.

The effectiveness of advice from even minimally experienced peers in steering individuals' decisions is well documented, from purchases of goods and services to selection of strategies in social dilemmas (Schotter, 2003; Schotter and Sopher, 2006; Chaudhuri et al., 2006; Chevalier and Mayzlin, 2006; Schotter and Sopher, 2007; Keller and Fay, 2012; Loeper et al., 2014; Sadler, 2020; Fainmesser and Galeotti, 2021; Sadler, 2023). Should advisors (e.g. consultants, lawyers, brookers, or senior co-workers) be substantially more experienced than than the decision makers (advisees, henceforth), and should their expertise be purposefully purchased, their experience will plausibly dominate over, and hinder the investigation of, other factors potentially determining the influence of their advice.

Advice is moreover particularly important when the decision-maker faces a problem without a clearly correct answer (Brockner et al. (1984)). In these situations, third parties without vested interests play an important role in steering the individuals' choice, and hence in determining the final outcome and the decision maker's ultimate welfare. Where a clear, visible and commonly understood optimal choice exists, the power of advice in shifting choices will certainly be confounded or weakened by the optimum's attractiveness. Conversely, where the optimum is determined by the decision maker's preferences, and these are unknown to the advisor, advice and optima will on average be orthogonal: No "good" advice can be delivered.[11] The relative power of advice of different origin in steering choices can now be measured. How much to invest in risky assets (financial, or immaterial goods with uncertain returns like education or interpersonal relationships), how much to contribute to collective efforts, or how much to trust others or institutions, are all situations in which no unequivocally correct action exists: The ultimate benchmark are purely individual preferences over risk.

[9] We detect a minimum effect of the advisors' status on standardised outcomes of MDE=0.18 18% of a standard deviation) at power $\pi = 0.8$ and $\alpha = 0.05$.

[10] https://www.respondi.com/EN/

[11] We hence depart from Ronayne and Sgroi (2018), where advice is explicitly good or bad.

Stylising these examples as the individual choice of purchasing a lottery allows us to remove the social dimension from the situation. Social dilemmas (e.g. Martinangeli, 2021), charitable donations (Nelissen and Meijers, 2011) or trusting decisions (e.g. Xiao and Bicchieri, 2010; Bicchieri et al., 2011), all allow for an important and potentially confounding role of other regarding concerns, beliefs and social norms. By minimising the interference of commonly understood norms of behaviour, of identifiable optima or welfare externalities, we are able to capture how well advice of different origin is capable of influencing decision maker's perfectly individual choices.[12]

The experimental design adopted for the advisees and described here can be visualised on the right hand side of Figure B1 in Appendix B. We provide a description of the experimental design used to collect the advice in Appendix A. An English transcription of the German survey is available in Appendix E.

Phase 1: Demographics We start by collecting the respondents' gender, age, German state of residence and family income, used to ensure representativeness, as well as further background demographics.

Phase 2: Experimental conditions, receiving advice and lottery choice Our aim is to identify how the advisor's monetary rank determines the influence of their advice on the (very personal) choice of an advisee. Our design relies on each participant deciding what proportion of their endowment (if any) to invest in a lottery yielding triple the amount invested or zero with equal probabilities. The participants keep the endowment that was not invested.

The lottery is first fully described. Next, the respondents receive a randomly selected piece of advice consisting of what fraction of their endowment they should invest according to an advisor. We experimentally vary which types of advisor the advice originates from: One who has a high or a low endowment, randomly assigned. The respondents do not yet know what endowment they will be assigned when choosing their investment, but are made aware of which type of advisor left the advice and that the advisor participated in the same task as themselves. A transcription of the information the advisee received is reported here:

"Additional to the participation fee of 90 mingle points, you will be assigned an **additional budget** in this survey, which you can use later on.
This additional budget will consist of either 50 or 100 mingle-points. Whether you will be assigned 50 or 100 mingle points will be decided randomly by the software.

You can use the additional budget that you have been assigned to participate in a lottery. You can decide what proportion of the additional budget you want to invest in the lottery.
The lottery will either **triple or cancel** the amount of points you invested. The **probability of both outcomes is equal**.

[12]Our conceptualisation of influence differs from that of Cialdini (2001). Influence there leverages on social mechanisms and situational cues: reciprocity, commitment and consistency, social proof, authority, scarcity, liking and social identity, none of which play a role in our framework. We investigate the influence over others' actions by the mere resources in one's possession.

Therefore, you have a 50-50 chance of tripling your investment or losing it.
You will keep for sure the points that you decide not to invest in the lottery.
The outcome will be decided randomly by the software via a wheel of fortune.
Attention: at this point the value of your additional budget is still unknown, and can be either 50 or 100 Points.

Before you decide your lottery investment, we would like to show you an **advice** that has been forwarded by a person who has made their lottery investment in the same lottery at an earlier point of time.
This person advises you to invest {$\hat{s}_i$}% of your budget.
This person was assigned a budget of **50 [100] mingle-points**.
This person had participated in the same task as you and the size of their budget was allocated in the same way as yours."[13][14]

Our experimental variation of interest is whether the advisor has a low or high endowment, randomly selected and hence orthogonal to potential unobservables.

To obtain sharp predictions and tests, we only pass advice taking two values $\hat{s}_i \in \{30\%, 70\%\}$, selected randomly and orthogonal to the type of advisor it originated from.[15] This strategy offers three advantages. First, the advice offered is relatively far from the focal investment of 50% of one's endowment. Second, we offer advice which can be palatable both to relatively more or less risk averse individuals. Third, we ensure that the advice used to deliver our experimental conditions is orthogonal to the advisors' (observable or unobservable) characteristics.

Next, respondent i, having received advice $\hat{s}_i$ and knowing what type of advisor it comes from, makes their investment choice $s_i \in \{0\%, 1\%, ..., 100\%\}$. The lottery is *not yet realised*. We measure the impact of advice as the absolute distance $|s_i - \hat{s}_i|$ between participant i's investment choice and the advice received.

To avoid design effects, as the advisors are known to have been randomly assigned a high or low endowment, we communicate to the advisees that they too will be randomly assigned a low or a high endowment with the same possible sizes as for the advisors. We thus ensure the advisees don't feel unfairly treated relative to the advisors: They too have the same chance at a high or low endowment. The advisees' endowment is assigned and communicated only at the end of the survey (Phase 4) to preserve the exogeneity of the investment choice with respect to their own endowment. We can thus cleanly attribute treatment effects to our experimental variation: The size of the advisor's endowment.

Phase 3: Cognitive Reflection Test After the respondents chose their investment but before the lottery is realised, we administer the Cognitive Reflection Test (CRT) (Frederick, 2005). The test consists of five simple mathematical questions trading off

[13]The last sentence was included in a second wave of data collection with the purpose of increasing the salience of the randomness of the advisor's endowment.

[14]Each mingle point corresponds to a payment of 0.01€ as per survey company policy.

[15]The advice *always* originated from a real advisor: At least one advisor generated one of the four high/low endowment × high/low investment advice cells. The advisors participated in a small preliminary data collection the purpose of which is solely that of collecting the advice, it is useless for our purpose and will hence not be part of any of our analyses. Advisors sent advice from the space $\hat{s} \in \{0\%, \ldots, 100\%\}$ in 10% steps. We told them their advice "*may or may not* be passed on" to future participants (see Appendix A).

the ability to provide a reasoned *correct* answer over an intuitive *incorrect* one. The respondents were remunerated for each correct answer provided within 5 minutes.

Phase 4: Lottery realisation, further demographics and debriefing After the respondents participated in the CRT, the lottery is visualised on their screen as a "wheel of fortune" which they spin with a click. This implementation helps the respondents graphically visualise the lottery. The size of the advisees' endowment is determined at this stage. At the end of the survey we collect information about the respondents' education level and their employment status. Finally, we debriefed the respondents on their assigned endowment, on the outcome of their choices and on their earnings.

3 Empirical strategy and results

We investigate the impact of the advice received as the average proximity of the chosen investment strategy to the one advised. Denote with s_i the proportion of endowment invested in the lottery by respondent i, and the proportion received as advice by respondent i with $\hat{s}_i$. Our variable of interest can be written as:

$$y_i = |s_i - \hat{s}_i|.$$

Our analysis will rely on the double-bounded Tobit estimation of

$$y_i = \beta_0 + \beta_1 HighE + \beta_2 \hat{s}_i + \beta X + \varepsilon, \tag{1}$$

where *HighE*, our experimental condition indicator, takes value 1 when the advisor's endowment is high. The coefficient β_1 informs us of whether average choices are closer to the advice received from a given advisor type compared to the other. X is a vector including the respondent's age, German state of residence (NUTS 1), equivalent household income, gender, CRT score and an indicator for higher education. $0 \leq y_i \leq 70$ is bounded below and above by the minimum (exact matching) and maximum (full or no investment) distance from the advice received. Robust standard errors are clustered at region (NUTS 3) level.[16] Estimating equation (1) allows us to test our hypothesis, which would be supported by $\beta_1 < 0$.

3.1 The impact of monetary rank

Figure 1 displays the average distance between individuals' investment choice and the advice they received.[17] We disaggregate over the advisors' endowment size. The respondents are on average 3.298 percentage points closer to the advice received when the latter originates from an high endowment advisor (two-sided Fisher-Pitman test p-value=0.006). Because of the bounded nature of the variable and its construction this

[16] Clustering is inconsequential for our results.

[17] Figure B2 in Appendix B displays the distributions of investments and of distance from the advice received from low and high endowment advisors. Visual inspection already reveals investments are closer to the advice received from high rather thank low endowment advisors.

difference is a strong indication of clear behavioural impacts of the advisors' rank on individuals' choices in the expected direction.

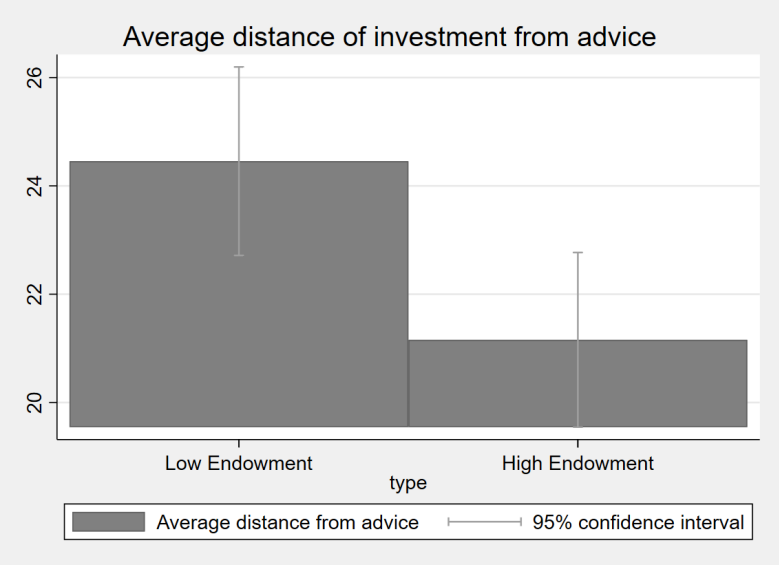


Figure 1: Average distance of investment choice from investment advice by type of advisor who were randomly allocated their (high or low) endowment.

We investigate this observation more formally in Table 1, reporting the results of double-bounded Tobit estimations of model (1). These analyses account for the impact of advice on both the probability of individual i being "bounded" (i.e. perfectly matching the advice or choosing an investment level at the maximum distance from the advice) and on the proximity to the advice received given that the choice is not bounded.[18]

Table 1 shows that the distance between advised and invested endowment is systematically smaller by around 3 percentage points (corresponding to approximately 16.5% of a standard deviation of the baseline group) if the advisor was endowed with a randomly assigned high endowment.[19] These findings are robust to the inclusion of controls for the type of advice received (a relatively low or high proportion of one's endowment) and for the respondents' socio-demographic background. These findings support our hypothesis that advice from a high ranked individual has greater influence on the advisees' choices.

Result: *Advice from individuals who were randomly assigned a high endowment is followed more closely than that from others who were randomly assigned a low one.*

An intuitive way of getting a clear picture of how advice from different types of advisors impacts the probability of being bounded at zero is that of investigating the probability of exactly matching the advice received. To do so we build an indicator

[18]OLS estimations of model (1) confirming these results are reported in Appendix C.1. This result is robust to multiple hypotheses correction: High end. advisor, List correction p-value=0.025 (List et al., 2019; Barsbai et al., 2020); Bonferroni and Holm corrections p-values=0.028 in both cases.

[19]Regressions on standardised outcomes are reported in Appendix C.1.

Table 1: Effect of advisor's endowment size on advice influence

	(1)	(2)	(3)
Distance of individual choice from advice: $y_i = \lvert s_i - \hat{s}_i \rvert$			
Baseline: Low end. advisor			
High end. advisor	-3.965	-3.821	-3.887
	(1.368)	(1.348)	(1.370)
High investment advice		6.445	6.225
		(1.569)	(1.567)
Marginal effects: $E(y \mid \mathbf{x})$:			
High end. advisor	-3.235	-3.119	-3.172
	(1.112)	(1.097)	(1.115)
Constant	Yes	Yes	Yes
Demographics	No	No	Yes
No. of Obs.	1,018	1,018	1,018

Notes: Robust standard errors in parentheses.
Tobit regression of absolute difference between advised and invested share of endowment on advisor's endowment size and the type of advice received. Controls: gender, age, higher education, equivalent household income, CRT score and German state of residence. Marginal effects are computed unconditional on y_i and can be directly interpreted as percentage points difference between investment and advice.

$M_i = \mathbf{1}(y_i = 0)$ for subject i exactly matching the advice received. Table 2 shows the results of its probit regression on our condition indicators and our set of control variables.

We observe from Table 2 that advice originating from an advisor whose endowment is high is significantly more likely to be matched exactly than advice from a low-endowment advisor. Controlling for the type of advice received (relatively high or low investments) does not significantly alter our estimates of interest, and shows again that high-investment advice is strongly and significantly less likely to be matched than low-investment advice. These findings are robust to the inclusion of socio-demographic background controls.

3.2 Individual choice update and placebo test

The design presented in Section 3.1 allows us to investigate the average distance between the individuals' decision and the advice they received, but does not allow us to observe what individuals' choice would have been in the absence of advice. In order to gain an insight into how advice pushes individuals' to act in relation to what they would "naturally" choose, we gathered data from an alternative design henceforth referred to as the "two-stage" design. Instead of immediately receiving advice and subsequently making their one and only choice, the participants here make a first choice, receive the advice, and can then choose to revise it in a second and final decision which they know will determine final outcomes. The "baseline" distribution of natural investments can

Table 2: Effect of advisor's endowment on probability of exactly matching the advice when endowments are assigned randomly

	(1)	(2)	(3)
	Matched: $\Pr(M_i = 1)$		
Baseline: Low end. advisor			
High end. advisor	0.188	0.187	0.210
	(0.097)	(0.097)	(0.101)
High investment advice		-0.273	-0.301
		(0.118)	(0.119)
Constant	-1.339	-1.213	-1.317
	(0.075)	(0.087)	(0.249)
Marginal effects: $E(y \mid \mathbf{x})$:			
High end. advisor	0.035	0.034	0.036
	(0.018)	(0.018)	(0.017)
Demographics	No	No	Yes
Observations	1,018	1,018	996

Notes: Robust standard errors in parentheses.
Probit regression of fully matching the advice received on advisor type indicators and the type of advice received. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

be used as a benchmark against which to evaluate the individuals' final choice after the investments, enabling the direct investigation of advice taking behaviour (Sniezek and Buckley (1995); for a survey of the so called Judge-Advisor paradigm see e.g. Bonaccio and Dalal (2006)). We gathered 483 observations from the same sample (without repeats) in collaboration with the survey company Respondi.

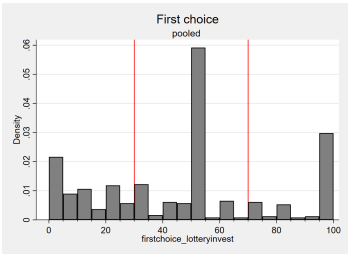
The two-stage design is a particularly hard test-bed for our effect of interest, as the first choice is expected to generate strong anchoring for the respondent. It is well documented that individuals want to appear consistent both to themselves and to observers (the experimenters). Having made a first choice, the likelihood and the extent with which they are likely to update it following the advice they received is reduced by the anchor represented by their initial decision (for instance, Tversky and Kahneman, 1974; Epley and Gilovich, 2006; Koehler and Harvey, 2008; Mochon and Frederick, 2013), a phenomenon discussed in the Judge-Advisor literature as well (Harvey and Fischer, 1997; Lim and O'Connor, 1995).

In line with our reasoning in Section 1 and with the evidence presented in Section 3.1, we expect the advice originating from advisors known to have a high endowment to attract second choices more than advice originating from advisors with a low endowment. We construct a measure of the influence of the advice using all the information at our disposal from first and second stage choices as:

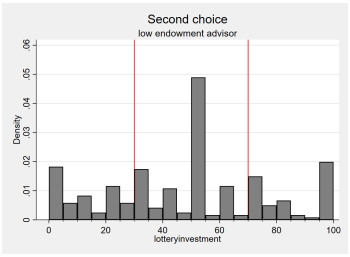
$$y = \frac{s_2 - \hat{s}}{s_1 - \hat{s}} \quad , \tag{2}$$

where s_1 and s_2 denote respectively the respondents' first and second stage investment choices and $\hat{s}$ represents the advice received from the advisor. Notice the following properties of (2): first of all, y is always positive whenever the respondent updates their choice in the direction suggested by the advice (i.e. upwards if $s_1 < \hat{s}$ and downwards if $s_1 > \hat{s}$); $y = 1$ if whenever the respondent updates fully (i.e. $s_2 = \hat{s}$); $y = 0$ whenever the respondent does not update (i.e. $s_2 = s_1$).[20]

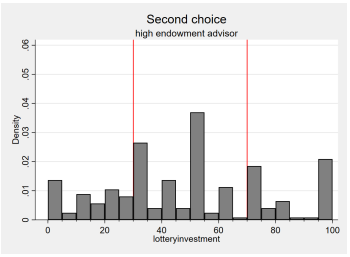
Figure 2 displays the distribution of first (panel a) and second investment choices, the latter disaggregated over participants receiving advice from low endowment (panel b) and high endowment advisors.



(a) Distribution of first stage investments in percentage points from 1 to 100, pooled over (future) advisor type.



(b) Distribution of second stage investments in percentage points from 1 to 100 after advice from low endowment advisors.



(c) Distribution of second stage investments in percentage points from 1 to 100 after advice from high endowment advisors.

Figure 2: Distribution of first and second investment choices. The red vertical lines correspond to the advised investments.

Consistent with the results presented in Section 3.1, we recognise the focal investment of 50% of the endowment being chosen disproportionately more frequently. We also observe its frequency decreasing in second stage choices, more so when the advisor has a high endowment. At the same time we observe the frequency of the advised investment proportions increasing in second stage choices, more so when the advice originates from high endowment advisors (panel c).

Tables 3 to 5 investigate these observations formally.

[20] Only 15 respondents had first stage choices coinciding with the advice they would subsequently receive. For these subjects, y is not defined. We assign $y = 0$ to 8 of these respondents whose second choice coincides with the advice and with the first choice, and drop the 7 who deviate from the advice and from the first choice from the analysis. The results are robust to dropping all 15 respondents from the analysis.

Table 3: Regression of choice update.

	(1)	(2)	(3)
	Investment update: $y = \frac{s_2 - \hat{s}}{s_1 - \hat{s}}$		
Baseline: Low end. advisor			
High end. advisor	0.095	0.095	0.065
	(0.054)	(0.053)	(0.057)
High investment advice		-0.041	-0.035
		(0.053)	(0.055)
Constant	Yes	Yes	Yes
Demographics	No	No	Yes
Observations	483	483	483
R-squared	0.006	0.007	0.065

Notes: Robust standard errors in parentheses.
OLS regression of the choice update measure y on the advisor type indicator and the type of advice received. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

Table 3 confirms our results: we observe a significant positive effect of receiving advice from a high endowment advisor. The coefficients can be interpreted as the respondents receiving advice from high endowment advisors updating their choice to a larger extent on average, corresponding to 17% of the baseline group's standard deviation, than those receiving advice from low endowment advisors. corresponding to. Consistent with the suspect that this paradigm would yield weaker results this effect fails to achieve 5% significance and do not survive the inclusion of background demographics.

Table 4: Probability of fully matching the advice received

	(1)	(2)	(3)
	Matched: $\Pr(M_{i2} = 1)$		
Baseline: Low end. advisor			
High end. advisor	0.324	0.326	0.399
	(0.146)	(0.146)	(0.158)
High investment advice		-0.188	-0.263
		(0.153)	(0.156)
Constant	Yes	Yes	Yes
Demographics	No	No	Yes
Observations	490	490	452

Notes: Robust standard errors in parentheses.
Probit regression of fully matching the advice received with the second choice ($M_{i2} = 1$) on advisor type indicators and the type of advice received.Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

We reinforce our findings with an analysis of the probability with which the respondent matches the advice they received with their second stage choice. This investigation is reported in Table 4. There we see that our respondents are significantly more likely to exactly match the advised proportion of endowment if the advise originates from a high endowment advisor, an effect robust to the inclusion of demographic background variables.

This new evidence offers further support for the effects described and discussed in Section 3.1 but using a more demanding test-bed as discussed above.

The two-stage design allows us moreover to run a placebo test to our effects using the respondents' first stage, natural choice: As the first stage choice is selected *prior* to receiving advice, it cannot be influenced by the advice itself. We can thus reassure the reader that the effects of advice observed are indeed originating from the advice itself and not a product of statistical chance organising our respondents into experimental conditions such that their underlying subjective preferences are aligned by chance with the advice they receive. To do so, we use a measure analogous to that in Equation (1) in Section 3.1, measuring this time the absolute distance of individual i's first stage investment choices s_{1i} from the advice they received: $y_{1i} = |s_{1i} - \hat{s}_i|$. We regress y_{1i} on the advisor and advice type indicators using simple OLS. Table 5 confirms our expectations: The distance between first stage investments and the advice is independent of the advice received and of the advisor type, reinforcing the validity of the findings so far discussed.

Table 5: Placebo OLS regression of first choice investment (pre-advice) on advisor and advice type.

	(1)	(2)	(3)
	$y_i = \lvert s_{1i} - \hat{s}_i \rvert$		
Baseline: Low end. advisor			
High end. advisor	-1.35	-1.35	-1.23
	(1.900)	(1.900)	(1.950)
High investment advice		-5.19	5.09
		(1.771)	(1.838)
Constant	Yes	Yes	Yes
Demographics	No	No	Yes
Observations	490	490	490
R-squared	0.001	0.017	0.043

Notes: Robust standard errors in parentheses.
Placebo OLS regression of the absolute distance between the respondents' first stage choice s_1 and the advised investment $\hat{s}$ on the advisor type indicator and the type of advice received. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

4 Discussion and concluding remarks

Hierarchical social organizations are ubiquitous in human societies (for instance, Cheng and Tracy, 2013; Koski et al., 2015; Mattan et al., 2017). Findings in psychology and cognitive science highlight how one's placement at higher ranks in the hierarchy is capable of activating behavioural responses in others resulting in both conscious and unconscious behavioural regularities: These include, for instance, eye contact, inhibition and imitation (Koski et al., 2015; Mattan et al., 2017). These regularities have been largely overlooked by economic research despite their potential far reaching consequences and despite their potential to explain extensively researched phenomena: social influence, conspicuous consumption, and positionality (e.g., Cole et al., 1992; Fershtman and Segal, 2018; Bursztyn et al., 2020; Sadler, 2023; Amaldoss and Jain, 2005).

We extend these results by investigating whether individuals are capable of exerting greater influence on others' choices when their monetary endowment places them higher up in the monetary ranking. We remove the potential confounds generated by beliefs about the origin of the ranking itself by ensuring ranks are commonly known to be randomly assigned. We built our experiment in such a way as to render the recommendations received by our respondents void of meaning: No universally valid advice can, in our setup, be meaningfully given without knowledge of the receiver's risk preferences. The decision-maker's choices are moreover purely individual and have no externalities. We can thus highlight the purely *monetary* rank-based origin of influence differentials.

Our findings support the hypothesis that high monetary rank, even if random, accords an influence premium over others' choices: Individuals follow the recommendations of strangers randomly endowed with a high monetary endowment more than advice from others whose endowment was randomly assigned to be low.

These results shine a new light on the nature of social hierarchies. In accordance with theories in biology and evolutionary psychology (Henrich and Gil-White, 2001; Eaton and Eswaran, 2003; Witkower et al., 2020), they suggest that rank-cue recognition and the tendency to accord it privileges might indeed be hard-wired in human psychology: Influence, as perhaps other advantages, might be automatically accorded to individuals based purely on their perceptible rank cues. Beyond being a novel finding, that individuals' rank determines their ability to exert influence on others suggests a potential mechanism for individuals' willingness to incur into high costs to signal a high rank placement via conspicuous consumption (e.g. Veblen, 2017).

This consideration begs the question of individuals' awareness (beyond the feelings generated by being ahead/behind of others) of the effect purely monetary rank has on individuals' ability to influence other's choices, and of how such knowledge could and would be used strategically. For instance beyond truthfully signaling one's rank, conspicuous consumption could serve to misrepresent own rank to gain access to privileges vsi-a-vis others. It will be thus interesting to investigate to what extent individuals are willing to incur into (monetary or intrinsic) costs to misrepresent or reveal their rank, with or without the prospect of obtaining an advantage from doing so. This investigation is left for future research.

A further natural next step forward is understanding the scope of the behaviours over which rank grants influence. Would, for instance, the finding reported here extend towards behaviours ridden with ethical concerns, vested interests, and antisociality. Future investigations should moreover illuminate on which channels express the findings here outlined: For instance, candidates are an increased focality of the message originating from high ranked individuals, an increase in the perceived authoritativeness of its content, or complexity-reduction heuristics.

We hope our findings will encourage researchers to broaden the scope of this research to further our understanding of hierarchical social organisations, of their behavioural and psychological consequences, and of their consequences on social and economic relationships (e.g. workplace relations, policy demand and political preferences).

References

Ajzenman, N., Cavalcanti, T., and Da Mata, D. (2023). More than words: Leadersâ speech and risky behavior during a pandemic. *American Economic Journal: Economic Policy*, 15(3):351–371.

Alesina, A. and Angeletos, G.-M. (2005). Fairness and Redistribution. *American Economic Review*, 95(4):960–980.

Alos-Ferrer, C. (2018). A review essay on *Social Neuroscience*: Can research on the social brain and economics inform each other? *Journal of Economic Literature*, 56(1):234–264.

Alston, E., Alston, L. J., and Mueller, B. (2021). Leadership and organizations. Technical report, National Bureau of Economic Research.

Amaldoss, W. and Jain, S. (2005). Conspicuous consumption and sophisticated thinking. *Management science*, 51(10):1449–1466.

Anderson, L. R. and Holt, C. A. (1997). Information cascades in the laboratory. *The American economic review*, pages 847–862.

Andreoni, J. and Petrie, R. (2008). Beauty, gender and stereotypes: Evidence from laboratory experiments. *Journal of Economic Psychology*, 29(1):73–93.

Antonakis, J., d'Adda, G., Weber, R. A., and Zehnder, C. (2022). "Just Words? Just Speeches?" On the Economic Value of Charismatic Leadership. *Management Science*, 68(9):6355–6381. Publisher: INFORMS.

Bardsley, N. and Sausgruber, R. (2005). Conformity and reciprocity in public good provision. *Journal of Economic Psychology*, 26(5):664–681.

Barsbai, T., Licuanan, V., Steinmayr, A., Tiongson, E., and Yang, D. (2020). Information and the formation of social networks. *NBER Working paper 27346*.

Berggren, N., Jordahl, H., and Poutvaara, P. (2010). The looks of a winner: Beauty and electoral success. *Journal of public economics*, 94(1-2):8–15.

Berkman, M. B. and O'connor, R. E. (1993). Do women legislators matter? female legislators and state abortion policy. *American Politics Quarterly*, 21(1):102–124.

Bernheim, B. D. (1994). A Theory of Conformity. *Journal of Political Economy*, 102(5):841–877.

Bicchieri, C. and Xiao, E. (2009). Do the right thing: but only if others do so. *Journal of Behavioral Decision Making*, 22(2):191–208.

Bicchieri, C., Xiao, E., and Muldoon, R. (2011). Trustworthiness is a social norm, but trusting is not. *Politics, Philosophy & Economics*, 10(2):170–187.

Biddle, J. (1994). Beauty and the labour market. *American Economic Review*, 84(5).

Bonaccio, S. and Dalal, R. S. (2006). Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational behavior and human decision processes*, 101(2):127–151.

Bratton, K. A. and Ray, L. P. (2002). Descriptive representation, policy outcomes, and municipal day-care coverage in norway. *American Journal of Political Science*, pages 428–437.

Brockner, J., Nathanson, S., Friend, A., Harbeck, J., Samuelson, C., Houser, R., Bazerman, M. H., and Rubin, J. Z. (1984). The role of modeling processes in the "knee deep in the big muddy" phenomenon. *Organizational Behavior and Human Performance*, 33(1):77–99.

Bursztyn, L., Egorov, G., and Fiorin, S. (2020). From Extreme to Mainstream: The Erosion of Social Norms. *American Economic Review*, 110(11):3522–3548.

Camerer, C., Loewenstein, G., and Prelec, D. (2005). Neuroeconomics: How Neuroscience Can Inform Economics. *Journal of Economic Literature*, 43(1):9–64. Publisher: American Economic Association.

Caselli, F. and Morelli, M. (2004). Bad politicians. *Journal of Public Economics*, 88(3):759–782.

Çelen, B. and Hyndman, K. (2012). Social learning through endogenous information acquisition: an experiment. *Management Science*, 58(8):1525–1548.

Chattopadhyay, R. and Duflo, E. (2004). Women as policy makers: Evidence from a randomized policy experiment in india. *Econometrica*, 72(5):1409–1443.

Chaudhuri, A., Graziano, S., and Maitra, P. (2006). Social Learning and Norms in a Public Goods Experiment with Inter-Generational Advice. *The Review of Economic Studies*, 73(2):357–380.

Cheng, J. T. and Tracy, J. L. (2013). The Impact of Wealth on Prestige and Dominance Rank Relationships. *Psychological Inquiry*, 24(2):102–108. Publisher: Routledge _eprint: https://doi.org/10.1080/1047840X.2013.792576.

Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., and Henrich, J. (2013). Two ways to the top: evidence that dominance and prestige are distinct yet viable avenues to social rank and influence. *Journal of personality and social psychology*, 104(1):103.

Chevalier, J. A. and Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of marketing research*, 43(3):345–354.

Cialdini, R. B. (2001). *Influence: Science and Practice*. Allyn and Bacon.

Cloutier, J., Ambady, N., Meagher, T., and Gabrieli, J. (2012). The neural substrates of person perception: Spontaneous use of financial and moral status knowledge. *Neuropsychologia*, 50(9):2371–2376.

Cole, H. L., Mailath, G. J., and Postlewaite, A. (1992). Social Norms, Savings Behavior, and Growth. *Journal of Political Economy*, 100(6):1092–1125. Publisher: The University of Chicago Press.

Cosaert, S. (2018). Revealed Preferences for Diamond Goods. *American Economic Journal: Microeconomics*, 10(2):83–117.

Deaux, K. K. (1971). Honking at the intersection: A replication and extension.

Diekmann, A., Jungbauer-Gans, M., Krassnig, H., and Lorenz, S. (1996). Social status and aggression: A field study analyzed by survival analysis. *The Journal of social psychology*, 136(6):761–768.

Doob, A. N. and Gross, A. E. (1968). Status of frustrator as an inhibitor of horn-honking responses. *The Journal of Social Psychology*, 76(2):213–218.

Duffy, J., Hopkins, E., and Kornienko, T. (2021). Lone wolf or herd animal? information choice and learning from others. *European Economic Review*, 134:103690.

Eaton, B. C. and Eswaran, M. (2003). The evolution of preferences and competition: a rationalization of Veblen's theory of invidious comparisons. *Canadian Journal of Economics/Revue canadienne d'Ã©conomique*, 36(4):832–859. _eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/1540-5982.t01-3-00003.

Elinder, M., Erixson, O., and Waldenström, D. (2018). Inheritance and wealth inequality: Evidence from population registers. *Journal of Public Economics*, 165:17–30.

Epley, N. and Gilovich, T. (2006). The Anchoring-and-Adjustment Heuristic: Why the Adjustments Are Insufficient. *Psychological Science*, 17(4):311–318. Publisher: SAGE Publications Inc.

Fainmesser, I. P. and Galeotti, A. (2021). The Market for Online Influence. *American Economic Journal: Microeconomics*, 13(4):332–372.

Fehr, E. and Rangel, A. (2011). Neuroeconomic foundations of economic choice-recent advances. *Journal of Economic Perspectives*, 25(4):3–30.

Fershtman, C. and Segal, U. (2018). Preferences and Social Influence. *American Economic Journal: Microeconomics*, 10(3):124–142.

Franck, R. and Rainer, I. (2012). Does the leader's ethnicity matter? ethnic favoritism, education, and health in sub-saharan africa. *American Political Science Review*, 106(2):294–325.

Frederick, S. (2005). Cognitive Reflection and Decision Making. *Journal of Economic Perspectives*, 19(4):25–42.

Gächter, S. (2015). Behavioural economics: Visible inequality breeds more inequality. *Nature*, 526(7573):333.

Gneezy, U. and Potters, J. (1997). An experiment on risk taking and evaluation periods. *The Quarterly Journal of Economics*, 112(2):631–645.

Goeree, J. K. and Yariv, L. (2015). Conformity in the lab. *Journal of the Economic Science Association*, 1(1):15–28.

Guéguen, N., Meineri, S., Martin, A., and Charron, C. (2014). Car status as an inhibitor of passing responses to a low-speed frustrator. *Transportation research part F: traffic psychology and behaviour*, 22:245–248.

Hancock, A. J., Gellatly, I. R., Walsh, M. M., Arnold, K. A., and Connelly, C. E. (2023). Good, Bad, and Ugly Leadership Patterns: Implications for Followersâ Work-Related and Context-Free Outcomes. *Journal of Management*, 49(2):640–676. Publisher: SAGE Publications Inc.

Harvey, N. and Fischer, I. (1997). Taking advice: Accepting help, improving judgment, and sharing responsibility. *Organizational behavior and human decision processes*, 70(2):117–133.

Henrich, J. and Gil-White, F. J. (2001). The evolution of prestige: freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, 22(3):165–196.

Herbst, D. and Mas, A. (2015). Peer effects on worker output in the laboratory generalize to the field. *Science*, 350(6260):545–549.

Hoffman, M. and Tadelis, S. (2021). People management skills, employee attrition, and manager rewards: An empirical analysis. *Journal of political economy*, 129(1):243–285.

Hopkins, E. and Kornienko, T. (2004). Running to Keep in the Same Place: Consumer Choice as a Game of Status. *American Economic Review*, 94(4):1085–1107.

Immorlica, N., Kranton, R., Manea, M., and Stoddard, G. (2017). Social Status in Networks. *American Economic Journal: Microeconomics*, 9(1):1–30.

Keller, E. and Fay, B. (2012). Word-of-mouth advocacy. *Journal of Advertising Research*, 52(4):459–464.

Koehler, D. J. and Harvey, N. (2008). *Blackwell Handbook of Judgment and Decision Making*. John Wiley & Sons.

Koski, J. E., Xie, H., and Olson, I. R. (2015). Understanding social hierarchies: The neural and psychological foundations of status perception. *Social Neuroscience*, 10(5):527–550.

Krupka, E. and Weber, R. A. (2009). The focusing and informational effects of norms on pro-social behavior. *Journal of Economic psychology*, 30(3):307–320.

Kuziemko, I., Buell, R. W., Reich, T., and Norton, M. I. (2014). âLast-Place Aversionâ: Evidence and Redistributive Implications. *The Quarterly Journal of Economics*, 129(1):105–149.

Lenz, G. S. and Lawson, C. (2011). Looking the part: Television leads less informed citizens to vote based on candidatesâ appearance. *American Journal of Political Science*, 55(3):574–589.

Lim, J. S. and O'Connor, M. (1995). Judgemental adjustment of initial forecasts: Its effectiveness and biases. *Journal of Behavioral Decision Making*, 8(3):149–168.

List, J. A., Shaikh, A. M., and Xu, Y. (2019). Multiple hypothesis testing in experimental economics. *Experimental Economics*, 22(4):773–793.

Little, A. C., Burriss, R. P., Jones, B. C., and Roberts, S. C. (2007). Facial appearance affects voting decisions. *Evolution and Human Behavior*, 28(1):18–27.

Loeper, A., Steiner, J., and Stewart, C. (2014). Influential Opinion Leaders. *The Economic Journal*, 124(581):1147–1167.

Martinangeli, A. F. M. (2021). Do What (You Think) the Rich Will Do: Inequality and Belief Heterogeneity in Public Good Provision. *Journal of Economic Psychology*, 83:102364.

Martinangeli, A. F. M. and Windsteiger, L. (2020). Last word not yet spoken: a reinvestigation of last place aversion with aversion to rank reversals. *Experimental Economics*.

Martinangeli, A. F. M. and Windsteiger, L. (2024). Inequality shapes the propagation of unethical behaviours: Cheating responses to tax evasion along the income distribution. *Journal of Economic Behavior & Organization*, 220:135–181.

Mattan, B. D., Kubota, J. T., and Cloutier, J. (2017). How Social Status Shapes Person Perception and Evaluation: A Social Neuroscience Perspective. *Perspectives on Psychological Science*, 12(3):468–507. Publisher: SAGE Publications Inc.

McGarva, A. R. and Steiner, M. (2000). Provoked driver aggression and status: A field study. *Transportation research part F: traffic psychology and behaviour*, 3(3):167–179.

Mobius, M. M. and Rosenblat, T. S. (2006). Why beauty matters. *American Economic Review*, 96(1):222–235.

Mochon, D. and Frederick, S. (2013). Anchoring in sequential judgments. *Organizational Behavior and Human Decision Processes*, 122(1):69–79.

Modliba, R. and Treffers, T. (2024). The good, the bad and the evil: A unified conceptualization of negative leadership behaviour. *International Journal of Management Reviews*, n/a(n/a). _eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/ijmr.12384.

Nelissen, R. M. A. and Meijers, M. H. C. (2011). Social benefits of luxury brands as costly signals of wealth and status. *Evolution and Human Behavior*, 32(5):343–355.

Ohlsson, H., Roine, J., and Waldenström, D. (2020). Inherited Wealth over the Path of Development: Sweden, 1810â2016. *Journal of the European Economic Association*, 18(3):1123–1157.

Oulton, N. (1976). Inheritance and the Distribution of Wealth. *Oxford Economic Papers*, 28(1):86–101. Publisher: Oxford University Press.

Pande, R. (2003). Can mandated political representation increase policy influence for disadvantaged minorities? theory and evidence from india. *American economic review*, 93(4):1132–1151.

Piketty, T. (2011). On the Long-Run Evolution of Inheritance: France 1820-2050 *. *The Quarterly Journal of Economics*, 126(3):1071–1131.

Raleigh, M. J., McGuire, M. T., Brammer, G. L., and Yuwiler, A. (1984). Social and Environmental Influences on Blood Serotonin Concentrations in Monkeys. *Archives of General Psychiatry*, 41(4):405–410.

Reuben, E. and Riedl, A. (2013). Enforcement of contribution norms in public good games with heterogeneous populations. *Games and Economic Behavior*, 77(1):122–137.

Rockenbach, B., Tonke, S., and Weiss, A. R. (2021). Self-serving behavior of the rich causes contagion effects among the poor. *Journal of Economic Behavior & Organization*, 183:289–300.

Ronayne, D. and Sgroi, D. (2018). Ignoring good advice. *Warwick Economic Research Papers*, 1150.

Sadler, E. (2020). Diffusion Games. *American Economic Review*, 110(1):225–270.

Sadler, E. (2023). Influence Campaigns. *American Economic Journal: Microeconomics*.

Scholz, J. K. and Sicinski, K. (2015). Facial attractiveness and lifetime earnings: Evidence from a cohort study. *Review of Economics and Statistics*, 97(1):14–28.

Schotter, A. (2003). Decision making with naive advice. *American Economic Review*, 93(2):196–201.

Schotter, A. and Sopher, B. (2006). Trust and trustworthiness in games: An experimental study of intergenerational advice. *Experimental Economics*, 9(2):123–145.

Schotter, A. and Sopher, B. (2007). Advice and behavior in intergenerational ultimatum games: An experimental approach. *Games and Economic Behavior*, 58(2):365–393.

Schyns, B. and Schilling, J. (2013). How bad are the effects of bad leaders? A meta-analysis of destructive leadership and its outcomes. *The Leadership Quarterly*, 24(1):138–158.

Sniezek, J. A. and Buckley, T. (1995). Cueing and cognitive conflict in judge-advisor decision making. *Organizational behavior and human decision processes*, 62(2):159–174.

Thomas, S. (1991). The impact of women on state legislative policies. *The Journal of Politics*, 53(4):958–976.

Tversky, A. and Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science*, 185(4157):1124–1131. Publisher: American Association for the Advancement of Science.

Veblen, T. ([1899] 2017). *The theory of the leisure class*. Routledge.

Wilson, R. K. and Eckel, C. C. (2006). Judging a book by its cover: Beauty and expectations in the trust game. *Political Research Quarterly*, 59(2):189–202.

Witkower, Z., Tracy, J. L., Cheng, J. T., and Henrich, J. (2020). Two Signals of Social Rank: Prestige and Dominance Are Associated With Distinct Nonverbal Displays. *Journal of Personality and Social Psychology*, 118(1):32.

Xiao, E. and Bicchieri, C. (2010). When equality trumps reciprocity. *Journal of Economic Psychology*, 31(3):456–470.

Zink, C. F., Tong, Y., Chen, Q., Bassett, D. S., Stein, J. L., and Meyer-Lindenberg, A. (2008). Know your place: neural processing of social hierarchy in humans. *Neuron*, 58(2):273–283.

Appendix

A Collecting the advice

We collected advice from a small number of respondents ($N_{adv} = 99$) on the 10^{th} of March, 2021, before collecting data from our target group, the advisees. In order to be able to collect advice from the advisors in accordance with our experimental design, the sequence of tasks differs slightly from that given to the advisees (see the left hand side of Figure B1 in Appendix B).

After having been assigned their endowment but without knowing yet its value, the advisors are given a complete and detailed description of the lottery task (including the outcomes and the odds) and of their choice set. They are then asked to leave advice, in the form of what fraction of the endowment to invest, which might or might not be passed on to a respondent who will face the same investment choice at a later point in time. Leaving the advisor ignorant of the size of their endowment minimises the risk that advice might be sensitive to the advisor's endowment size. We allow the advisors to pick their advice from the set {0% (no investment), 30%, 50%, 70%, 100% (full investment)}, to obtain a manageable advice space. We moreover inform the advisor that the person who might receive their advice might have either a low or a high endowment.

Only after having left their advice, the advisors can choose which fraction of their endowment to invest in the lottery. Notice however that the advisors only serve the purpose of allowing us to construct the experimental manipulations to which the advisees, our population of interest, will be exposed without deception. The advisors' data will hence not be part of any of our analyses.

B Graphs and figures

B.1 Flowchart of the experiment

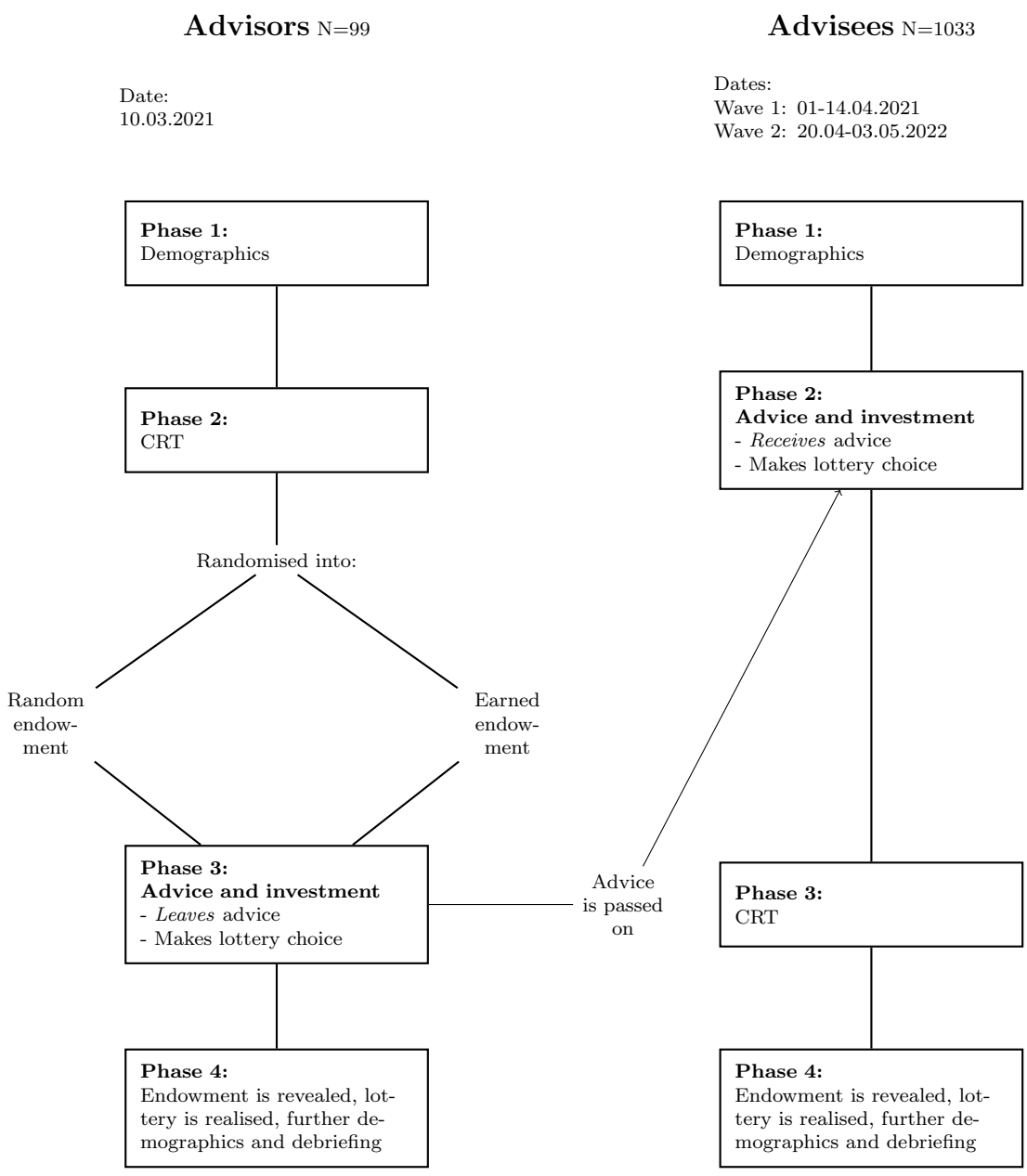


Figure B1: Flowchart of the subjects' progress through the experiment

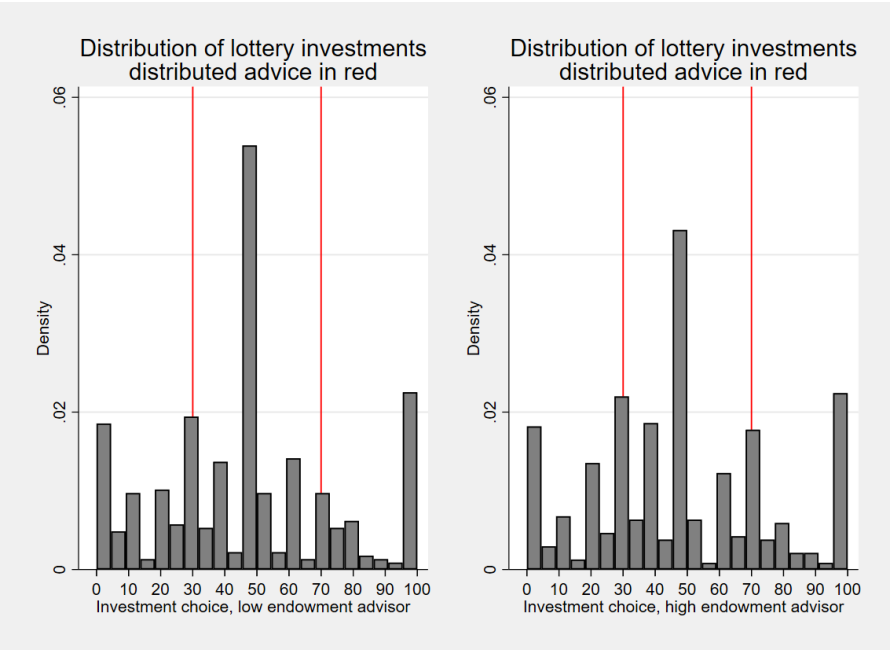
B.2 Distribution of investments

Figure B2a depicts the distribution of investment choices (top panel) and absolute distances from the advice received (lower panel) when advice was received from a low endowment (left side) and high endowment advisor (right side).

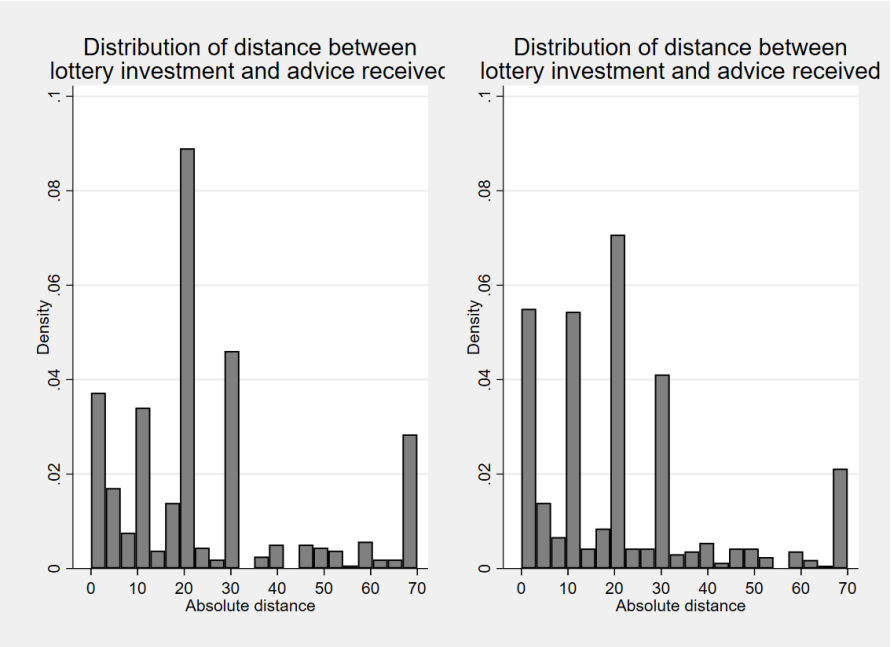
Comparing the left and right panels of the top panel we observe an increase in the frequency of investments of 30 and 70% of endowments and a sizeable reduction in the frequency of the focal choice of 50% when advice originates from a high endowment advisor rather than a low endowment advisor.

This observation is visible in a comparison of the left and right bottom panels: Lower absolute distances from the advice are visibly more frequent when advice originates from a high endowment advisor rather than from a low endowment advisor. Notice that a 0 distance in this case means the advice is matched exactly, while a distance of 70 is the maximum possible distance (e.g. an investment of 100% (0%) when the advice received was 30% (70%).

We additionally observe evidence of bunching at salient round values and at the focal investment of 50% of the endowment (generating the spikes at 20 percentage points difference in the lower panels of the figure).



(a) Distribution of investments in percentage points. Distributed advised values in Red. Left panel: Low endowment advisor. Right panel: high endowment advisor.



(b) Distribution of the absolute distance between the investment choice and the advice received. Left panel: Low endowment advisor. Right panel: high endowment advisor.

Figure B2: Distribution of investment choices and absolute distance from advice disaggregated by advisor type.

C Further analyses

C.1 OLS regressions

Table C1 reports the results of OLS regressions analogous to the Tobit estimates reported in Table 1 in Section 3. The patterns discussed there are confirmed. Table C2 runs an analogous regression but standardises the outcome variable against the distribution in the baseline group, allowing to evaluate the effects in terms of the baseline's group standard deviation. Table C3 reports the output of an OLS regression where the measure of choice update $y = \frac{s_2 - \hat{s}}{s_1 - \hat{s}}$ used in Table 3 in Section 3.2 is standardised with respect to the baseline's distribution.

Table C1: Effect of advisor's type on advice influence when endowments are assigned randomly

	(1)	(2)	(3)
Distance of individual choice from advice: $y_i = \lvert s_i - \hat{s}_i \rvert$			
Baseline: Low end. advisor			
High end; advisor	-3.298	-3.186	-3.268
	(1.142)	(1.124)	(1.154)
High investment advice		5.753	5.568
		(1.325)	(1.342)
Constant	24.456	21.533	24.191
	(0.893)	(0.988)	(2.769)
Demographics	No	No	Yes
Observations	1,018	1,018	1,018
R-squared	0.007	0.030	0.056

Notes: Robust standard errors in parentheses.
OLS regression of absolute difference between advised and actually invested share of endowment on advisor type indicators and the type of advice received. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

Table C2: Effect of advisor's type on advice influence when endowments are assigned randomly

	(1)	(2)	(3)
Standardised distance of individual choice from advice: $y_i = \lvert s_i - \hat{s}_i \rvert$			
Baseline: Low end. advisor			
High end. advisor	-0.167	-0.161	-0.165
	(0.058)	(0.057)	(0.058)
High investment advice		0.291	0.282
		(0.067)	(0.068)
Constant	<0.001	-0.148	-0.013
	(0.045)	(0.050)	(0.140)
Demographics	No	No	Yes
Observations	1,018	1,018	1,018
R-squared	0.007	0.030	0.056

Notes: Robust standard errors in parentheses.
OLS regression of absolute difference between advised and actually invested share of endowment on advisor type indicators and the type of advice received. The outcome variable is standardised with respect to the distribution observed in the baseline group. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

Table C3: Regression of standardised choice update.

	(1)	(2)	(3)
Standardised investment update: $y_i = \frac{s_{2i} - \hat{s}}{s_{1i} - \hat{s}}$			
Baseline: Low end. advisor			
High end. advisor	0.173	0.173	0.118
	(0.097)	(0.097)	(0.103)
High investment advice		-0.074	-0.064
		(0.097)	(0.100)
Constant	Yes	Yes	Yes
Demographics	No	No	Yes
Observations	483	483	483
R-squared	0.006	0.007	0.065

Notes: Robust standard errors in parentheses.
OLS regression of the choice update measure y, standardised against the baseline group's distribution, on the advisor type indicator and the type of advice received. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence.

D Earned monetary rank

To place our results in relation to other prominent aspects of this problem, namely the advisor's cognitive ability, we complement this design with one in which, instead of being randomly assigned, endowments are earned by the advisors in a cognitive ability test. This branch of the experiment allows us to capture how advisors' rank shapes their power to influence others when granted based on an individual characteristics presumably allowing them to offer "better" (or at least more informed) advice.[21]

The added complexity introduced by the cognitive ability component in the rank-influence link warrants a few considerations and a reappraisal of the design in their light. Cognitive ability is a radically different trait from pure monetary endowments, inducing deep emotional, psychological and attitudinal responses (e.g. rank rejection, advice rejection, spite, self-confidence to name only a few).

Because this study was not intended to investigate the link between rank as a signal of ability, which is instead merely an "add on" intended to broaden its original scope, it is not well suited for this investigation. Recall that all our advisees were commonly known to be randomly allocated their endowment to ensure they wouldn't feel unfairly treated relative to the advisor. Upon receiving advice on behalf of an advisor who *earned* theirs (crucially, regardless of its size) in a cognitive ability test, an advisee might feel unfairly treated by the experimenters: They never were given the opportunity to prove themselves and earn a high endowment, and are instead forced to accept a high or a low one with equal probabilities. Crucially, these heuristics might be correlated with personal traits including not only observables such as age, gender, cognitive ability or income, but also unobservables such as personality and attitudes.

Because of these considerations we believe this branch of the design not to be suitable for the achievement of its objectives, we refrain from drawing conclusions based on its results, we refrain from performing comparisons of its results with those presented in Section 3, and leave a more accurate investigation of the channels here addressed to future research.

[21] Though "good" advice remains here, for all purposes, an entirely subjective matter.

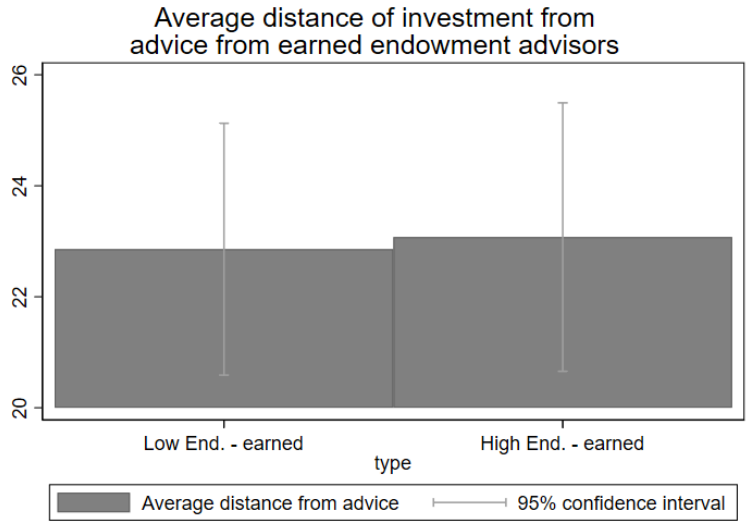


Figure D3: Average distance of investment choice from investment advice by advisor's endowment size (high or low endowment), where high (low) endowment corresponds to the high (low) score in the CRT.

Figure D3 plots the average distance between individuals' investment choices and the advice received when the advisors earned their endowments. We again disaggregate over the size of the advisor's endowment. Clearly, advice from high or low endowment advisors do not in this case impact investment choices differently (difference=0.218, two-sided Fisher-Pitman p-value=0.895).

Table D4 repeats the analysis from Table 1, that is the tobit regression of absolute difference between the investment and the received advice on advisor's endowment size and the set of controls, but now with the data set restricted to cases where the advisors earned their endowment.[22] The estimates show that in this case the impact of advice does not differ according to whether it originated from a high-endowed or low-endowed advisor. Controlling for the type of advice received and for the respondents' socio-demographic background is inconsequential.

Thus in contrast to when randomly assigned, monetary status as a signal of the advisors' cognitive ability does not appear to modify the impact of advice.

Result: *We find no evidence for an influence premium enjoyed by high over low status advisors when status is a signal of their underlying cognitive ability.*

[22]Corresponding OLS regressions, which can be found in Table **??** in Appendix C.1, confirm the findings here presented.

Table D4: Effect of advisor's endowment size on advice influence when endowments are assigned based on the CRT score

	(1)	(2)	(3)
Distance of individual choice from advice: $y_i = \lvert s_i - \hat{s}_i \rvert$			
Baseline: Low end. advisor			
High end. advisor	0.255	0.113	-0.274
	(1.980)	(1.946)	(1.951)
High investment advice		7.620	6.981
		(1.946)	(1.957)
Marginal effects: $E(y \mid \mathbf{x})$:			
Advisor highly endowed	0.211	0.094	-0.226
	(1.633)	(1.607)	(1.608)
Constant	Yes	Yes	Yes
Demographics	No	No	Yes
No. of Obs.	517	517	517

Notes: Robust standard errors in parentheses.
Tobit regression of absolute difference between advised and actually invested share of endowment on advisor type indicators and the type of advice received. Omitted controls include an indicator for gender, age, higher education, equivalent household income, CRT score and German state of residence. Reported marginal effects are computed unconditional on y_i and can be directly interpreted in terms of percentage points difference between investment and advice.

E Survey

Survey transcription

The following pages report an English transcription of the survey. Alternatives randomized between respondents are presented in brackets or parentheses, with eventual commentaries to the randomization in grey.

We are a group of independent researchers at one of the institutes of the Max Planck Society.

This survey should (on average) last for 15-20 minutes.

Please note: Your participation in this study is completely voluntary. We will receive only the anonymized form of your answers. This anonymized data will be saved and used only for scientific purposes.

- ○ Yes, I want to participate in this survey
- ○ No, I don't want to participate in this survey

Are you male or female?

- ○ Female
- ○ Male

How old are you?

- ○ 18-29 Years old
- ○ 30-39 Years old
- ○ 40-49 Years old
- ○ 50-59 Years old
- ○ 60 Years old or older

Please select the federal state and your municipality / your city / your region of residence:

What is your family status?
Welchen Familienstand haben Sie?

- ○ Single (Have never married before / widow(er) / separated / divorced)
- ○ Married / registered partnership / living together with a partner

How many persons live in your household (including yourself):

- ○ Adults _____
- ○ Children (below 18 years old) _____

What was the monthly net income in your household in the last year? By this we mean the total income resulting from the sum of wage, income from self-employment, pension, income from public support, income from renting or leasing, housing subsidies, childcare subsidies, and other sources of income, **after deduction of taxes and social security contributions**.

- ○ < 1000€
- ○ 1000€-1999€
- ○ 2000€-2999€
- ○ 3000€-3999€
- ○ 4000€-4999€
- ○ 5000€-5999€
- ○ 6000€-6999€
- ○ 7000€ or more

Additional to the participation fee of 90 mingle points, you will be assigned an **additional budget of mingle-points** that you can use later on.

This additional budget will consist of **either 50 or 100 mingle-points**. Whether you will be assigned 50 or 100 mingle points will be decided **randomly** by the software.

You can use the additional budget that you have been assigned to participate in a lottery. You can yourself decide what proportion of the additional budget you want to invest in the lottery.

The lottery will either **triple or cancel** the amount of points you invested. The **probability of both outcomes is equal.**
Therefore, you have a 50-50 chance of tripling your investment or losing it.
You will keep for sure the points that you decide not to invest in the lottery.

The outcome will be decided randomly by the software via a wheel of fortune.

Note: at this point the value of the additional budget is still unknown, and can thus be either 50 or 100 mingle-points.
You will be told the value of the budget assigned to you, after you have made the lottery investment decision.

The advised investment proportion was randomized to be high or low and originating from a high or low endowment advisor

Before you decide your own lottery investment, we would like to show you an **advice** that has been forwarded by a person who has made their lottery investment in the same lottery at an earlier point of time.
This person advised you to invest 30% [70%] of your budget.

---------- only displayed to participants in the random endowment advisor condition
This person was assigned a budget of **50 |100| mingle-points**.

Participated on: 10.03.2021

---------- only displayed to participants in the earned endowment advisor condition
This person was assigned a budget of **50 |100| mingle-points** based on their score in a **cognitive ability test**.

Participated on: 10.03.2021

The participant who left the advice for you advises you to invest 30% [70%] of your budget.

---------- only displayed to participants in the random endowment advisor condition
This person was assigned a budget of **50 |100| mingle-points** based on their score in a **cognitive ability test**.
Participated on: 10.03.2021

---------- only displayed to participants in the random endowment advisor condition
This person was assigned a budget of **50 |100| mingle-points** {based on their score in a **cognitive ability test**.
Participated on: 10.03.2021

Please select now the amount that <u>you</u> would like to invest in the lottery.

What proportion of your additional budget would you like to invest in the lottery?

	0 10 20 30 40 50 60 70 80 90 100
Please select what part of your budget you would like to invest; from 0% (nothing at all) up to 100% (everything)	

Before you proceed, we would like to ask you to provide answers to the 5 questions on the next screen.
Please answer all the questions. You will have **5 minutes** to provide the answers.
Any question left without an answer will automatically be considered incorrect.
You will receive two additional points for each correct answer.

A bat and a ball cost $1.10 in total. The bat costs a dollar more than the ball.
How much does the ball cost?
Please enter your answer in cents.

If it takes 2 nurses 2 minutes to measure the blood pressure of 2 patients, how many minutes would 200 nurses need in order to measure the blood pressure of 200 patients?

In a lake, there is a patch of lily pads. Every day, the patch doubles in size.
If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

Max received both the 15th highest and the 15th lowest mark in the class.
How many students are in the class?
Max hat gleichzeitig die 15. beste und 15. schlechteste Note bekommen.

Simon decided to invest $8,000 in the stock market one day early in 2008. Six months after he invested, on July 17, the stocks he had purchased were down 50%. Fortunately for Simon, from July 17 to October 17, the stocks he had purchased went up 75%.
At this point:

- ○ the value of purchased shares is equal to their value at the time of the purchase.
- ○ the value of purchased shares is higher than their value at the time of the purchase.
- ○ the value of purchased shares is lower than their value at the time of the purchase.

Display earnings – Advisee

In addition to your participation fee of 90 mingle points, you have been randomly assigned a budget of _____ mingle-points.
You invested _____% of this (additional) budget in the lottery, which is _____ mingle-points.

Since you lost (won) in the lottery your earnings from the lottery equal _____ mingle-points.

Therefore, you have earned:

- Participation fee: 90 mingle-points
- The part of the extra budget that you have not invested in the lottery: ____ mingle-points
- Earnings from the quiz: ____ mingle-points
- Earnings from the lottery: ____ mingle-points

In total your earnings equal: ____mingle-points
(your earnings are rounded up to the first integer number of mingle-points)

What is your current employment status?

- ○ Full time employed
- ○ Part time emplyoed
- ○ Self employed or enterpreneur
- ○ I am unemployed and am looking for an employment
- ○ I am a student / in vocational training
- ○ I am retired
- ○ I am currently unemployed and am not looking for an employment

What is your most advanced school degree (in general education or vocational training)?