Do as I Do: Paternalism and Preference Differences in Decision-Making for Others

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Abstract

We study whether money managers impose their risk preferences onto investments for clients paternalistically and whether they impose them more, the more their client's risk preference differs from their own. We conduct an online experiment, where participants make an investment decision for themselves and on behalf of another participant (as money managers). When investing for another (the client), we use the strategy method to elicit decisions for every possible investment the other participant could have made for their own payoff, such that money managers have complete information of their client's risk preference. With this, we systematically manipulate the difference in risk preference between the manager and client within subjects. Overall, we find that money managers do project their risk preferences onto clients' investments due to paternalism. The manager's risk preference significantly influenced their investment for others, despite knowing their client's risk preference, and them having no stake in the decision. Investments were also significantly predicted by the client's known risk preference, but this was a substantially worse predictor than the managers' preference. We also find, as predicted, that managers do deviate further from their client's risk preference, the more that preference differs from their own.

Keywords: decision making for others, paternalism, risk preferences, experiment

JEL: C91, D81, G11, G40

1   Introduction

All money managers assume some level of fiduciary duty which obligates them to put the interests of their clients above their own (Bogle, 2009). As part of this 'duty of loyalty and duty of care' (Bhattacharya et al., 2019), regulators have called for managers to be held to 'conduct metrics' that assess their conduct rather than performance and require them to tailor investments to their client's preferences (Angeli & Gitay, 2015; Laby, 2018). Despite this, managers are found to deviate significantly from client preferences, with investments more closely resembling their own risk tolerance than their clients' (Foerster et al., 2017). This bias not only neglects the individual needs and expressed wishes of investors, but such funds are even found to underperform passive benchmarks (Foerster et al., 2017; Linnainmaa et al., 2021). Although this is often attributed to agency conflicts (Allen & Gorton, 1993; Bergstresser et al., 2009; Mullainathan et al., 2012), Linnainmaa et al. (2021) showed that this may be due to money managers believing that their risk preferences would yield higher returns than their clients'; even when their own portfolios were underperforming. This suggests that managers deviate from client preferences and impose their own paternalistically (Ambuehl et al., 2021).

We examine one specific factor that may influence how much money managers project their preferences onto investments for their clients' – how much the client's risk preference differs from the managers'. Encountering beliefs that differ from one's own is found to be aversive for the observer if they think the other person holds false beliefs; referred to as belief dissonance (Golman et al., 2016; Molnar & Loewenstein, 2020). This suggests that the more a client's risk attitude differs from a money manager's, the more it would be seen as negatively affecting the client, so the more the money manager would find it aversive and the more they would be driven to correct the client's risk attitude due to social preferences. Therefore, we test whether money managers discount client preferences more, the more their client's risk preference differs from their own.

We implement a novel experimental design to analyse how preference differences affect the strength of paternalism exerted by a money manager. By using the strategy method, we elicit every possible combination of manager-client risk preferences, enabling us to not only identify whether greater preference differences evoke stronger paternalism, but also whether this relationship is non-linear or asymmetrical by risk preference. Identifying when managers are more paternalistic also has significant practical implications. Despite the traditional view that financially literate managers *should* be paternalistic and direct their less financially literate clients (Gennaioli et al., 2015), Linnainmaa et al., (2021) found that managers who imposed their risk preferences onto clients made average net returns as low as −3% each year. Coupled

with Rose's (2023) finding that clients prefer advisors to have similar risk preferences to themselves, this suggests that preventing managers from acting as projective paternalists will increase client satisfaction significantly.

We design an investment game where decision makers, or 'money managers', invest on behalf of another participant, or 'client'[1], with complete information of the other participant's preferred investment, but no obligation or financial incentive to follow it. We choose to examine risk preferences for three reasons. First, our findings can be applied directly to the context of money managers who invest on financial markets. Second, while there is a theoretical optimum under the assumption of risk neutrality, varying levels of risk aversion allow for individual evaluations of the situation such that there is no absolute "right" or "wrong" choice. Finally, we can introduce a finely grained, quantifiable variation in the difference between the money manager and client's subjective preference, to manipulate the degree of belief dissonance experienced. By having money managers receive no financial incentive in our setting, we also ensure that only social preferences can influence their investments for others, hence we can directly attribute behaviour to paternalism.

Our paper is most closely related to Ambuehl et al. (2021), who were the first to show that money managers mainly restrict another's choices by trying to align them with their own. We, however, build on this work by considering paternalistic behaviour on a finely grained continuum, rather than across three choice options, and by examining how differences in risk preference affects the *degree* of paternalistic projection. We also contribute to a small, but growing, experimental literature on paternalism more generally. People are found to prefer donating necessities (Gangadharan et al., 2018) or healthcare materials (Jacobsson et al., 2007) rather than the equivalent money, and are willing to force their peers to have a healthier lunch, rather than choose their own (Krawczyk & Wozny, 2016), though won't force others to be prosocial directly (Ackfeld & Ockenfels, 2021). This sparse literature shows that paternalistic behaviour is common, but has almost exclusively been examined in charitable giving or health care scenarios. Therefore, our paper is also among the first to examine whether money managers act paternalistic in financial scenarios, where decisions are less influenced by norms of appropriate behaviour and where managers are explicitly required to consider their client's preferences.

Overall, we find that money managers project their risk preferences onto others paternalistically. Investments were substantially influenced by the manager's own risk preferences despite them having no stake in the decision. Managers also did consider their

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[1] It should be noted, that whilst we refer to decision makers and decision recipients as 'money managers' and 'clients' throughout this paper for context, we adopted the more frame-neutral term of 'recipient' in the experiment instructions. This was to avoid behavioural effects from priming a financial context, and hence allowed us to identify a more context independent universal response to the other's preference.

client's risk preferences, but to a significantly lower degree than they projected their own. We are able to rule out the possibility that these findings are driven by managers minimising cognitive effort and identify whether the motivation for their actions are indeed paternalistic. In line with belief dissonance (Golman et al., 2016; Molnar & Loewenstein, 2020), we also found that money managers deviate further from their client's risk preference the more that preference differed from their own. These findings support the notion that money managers impose an egocentric paternalistic bias onto clients' investments, which becomes more pronounced, the more manager's risk preferences differ from their clients'.

2   Experimental Design

We conduct a one-shot Gneezy and Potters (1997) investment game[2]. Participants are endowed with £2.25 and must choose what amount, in £0.25 increments $X \in \{0, 0.25, ..., 2.25\}$ to invest in a risky asset . The amount invested has a 2/3 chance of being lost ($\pi^I = 2.25 - x$) and a 1/3 chance of being retained, with an additional 250% return on the investment ($\pi^I = 2.25 + 2.5x$). Investment amounts provide a reliable measure of risk preferences for each participant, making this game an effective tool to detect treatment effects (Charness et al., 2013). In a within-subjects design, we vary the recipient of this investment decision across two parts. In the first part, OWN, participants invest for their own payoff (X_{OWN}). In the second part, OTH, participants take the same investment decision, but they invest on behalf of another participant (X_{OTH}) receiving no payoff themselves for the decision. By not giving money managers a stake in the decision in OTH, we aim to not confound potentially paternalistic intent with conflict of interest. For a decision to be considered paternalistic, the sole aim must be the recipient's benefit, so if they had any stake in the decision we would not be able to identify whether money managers were driven by social preferences or their own self-interest. To minimise the influence of fairness preferences across parts one and two, only one of the two parts is paid at random (Charness et al., 2016) so that decisions in part two are not driven by participants attempting to make their client's payoff equal to their own from part one. Participants are told the payoff relevant part after making both decisions.

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[2] Using this game meant we could not differentiate between risk-neutral and risk-seeking preferences because of the positive expected return of investments. However, this characteristic allowed us to identify when behaviour was explained by money managers deciding more rationally (maximizing expected payoffs) for others, as found in previous literature (e.g. Andersson et al., 2016; Batteux et al., 2017) rather than following their client's expressed preference. If the payoff maximising choice was to invest , for example, half of the endowment, allowing us to identify risk seeking behaviour, then for every observation where this choice lay between the client and money manager's preferences (i.e. every time the client preferred less than half invested and the money manager preferred more than half or vice versa) we could not identify whether money managers chose this because they were influenced by their client's preferences, or whether they were investing more rationally. We avoid this in the Gneezy and Potters (1997) game as the risk-neutral choice of investing everything would rarely fall between a money manager and principal's preferences.

In OTH[3], we use the strategy method to elicit investment decisions from managers in response to every possible investment their client could have made for themselves in OWN (if their client invested £0.00, £0.25 etc.)[4]. With this, participants invest conditional on how much their client actually chose to invest for themselves in OWN (X_P^{OTH}), because only the investment that matched the client's decision from part one is paid, but all decisions had the potential to be payoff relevant so each remained incentivised. This manipulation allows us to systematically vary the difference in risk preferences between the money manager and their client within-subjects by taking each hypothetical decision as a series of treatments where only one is realised (Charness et al., 2016). For the analysis, each choice is categorised according to the difference between the money manager's choice in OWN and the client's preference ($X_P^{OTH} - X_{OWN}$) to capture differences in risk preferences as an independent variable; a statistic which we label P_{OWN}[5]. After making their decisions, participants are randomly assigned a money manager who will invest for them and a client for whom they will invest, such that no pair of subjects is both money manager and client for one another. This aimed to avoid any first or second-order reciprocity concerns that might have arisen if subjects were paired and could react to beliefs about their money manager's decision or expectations.

3   Implementation

We conducted the experiment on the website Prolific.co, using the online survey software Qualtrics. We recruited a sample of 200 participants, consisting of 101 Males and 99 Females (aged 18-77 years old). Participants could only participate in the experiment once and had to be United Kingdom residents[6]. We also pre-screened participants to ensure that they spoke fluent English and were using a desktop computer, to increase the likelihood that they were fully concentrating on the experiment. In line with Prolific rules, participants received a fixed £1.70 payment for the estimated 20-minute experiment and received their experimental payoff as a bonus payment (max bonus £8.18, min £0).

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[3] We choose to have recipients invest in OWN, rather than relay their preferred investment to money managers, to avoid them forming second-order beliefs about their money manager's reaction, which could make them alter their request in anticipation. Instead, by seeing the recipient's true incentivised risk preference from OWN, money managers receive a clear signal, such that any other choice would be an active departure from the recipient's wishes.

[4] The wording used to explain this choice was "Because you do not know what they (your recipient) invested for themselves in the first part – i.e. they could have invested either £0.00, £0.25, £0.50, £0.75, £1.00, £1.25, £1.50, £1.75, £2.00 or £2.25 for themselves - you will make one investment decision for each possible choice they could have made for themselves."

[5] By using the strategy method, we create far more observations which generate a large P_{OWN} statistic, relative to the direct response method. Although in this game, investing the full endowment maximises expected value, historically, only a small fraction of subjects make this choice (Charness et al., 2013), so using the strategy method ensures we are not reliant on those with the more extreme risk preferences to generate pairings with larger preference discrepancies.

[6] This was primarily because cultural differences in behaviour were not relevant to our research question, but also because investments were in discrete 25p intervals, so if these were converted into another currency to allow for those from other countries to participate, they would either represent a different size of incentive if they were not adjusted by exchange rate or purchasing power parity, or they would not be in intuitive monetary intervals if they were adjusted.

On the first page, participants received introductory instructions (see Appendix A) which outlined how payoffs would be determined and informed them that although the experiment was in two parts, only one of these parts would be paid. Participants were also told that there would be comprehension questions throughout, which they had to answer correctly to receive their payment. They received instructions for part one on screen, after which they answered comprehension questions to ensure understanding (see Appendix A for questions). Participants received instructions for part two only after completing part one. Since we needed information from OWN (part one) to implement OTH (part two), we did not reverse the order of OWN and OTH to test for order effects[7]. After reading the instructions for part two, participants again had to answer comprehension questions correctly before they could make their decision. The 10 conditional investment decisions in part two were all displayed on the same screen. However, each decision was elicited in a random order to negate consistency concerns or order effects.

Participants answered a follow-up questionnaire after completing part two. Since one of the main theories we consider is ideals projective paternalism, we include a question to test paternalistic intent similar to Ambuehl et al. (2021). For a money manager to be considered as having paternalistic intent, they must believe that their intervention is in the client's best interest (Dworkin, 1972). Therefore, after making their decisions, we ask money managers whether they thought their client would earn more from their own investment in part one, from the investment they had made on their behalf in part two, or the same amount in both parts[8]. This question also allows us to identify whether money managers project their preferences simply to minimise cognitive effort. If money managers did not consider their client's outcome in their decision-making, managers would likely hold the belief that their client made a better decision for themselves when they were directly responding to incentives, than they made for their client with minimal cognitive effort[9]. To make this question incentive-compatible, money managers received an extra £0.30 if they guessed correctly. Aside from this, we included an open-ended question where participants could explain how they invested in part two, the 6 primary items of the SVO slider measure (Crosetto et al., 2019; Murphy et al., 2011) to test

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[7] As noted by Brosig et al., (2003), participants undertake greater self-reflection from the beginning if they are aware that they will subsequently resume their counterpart's role, so it would also have presented a confound in our design if those who were to complete OTH first could base their subsequent decision in OWN on beliefs about their money manager's reaction, rather than their own risk preferences.

[8] It could be argued that because we ask money managers which decision would maximise earnings, this points to the expected return of the investment rather than the expected utility, such that the only correct answer is to select the decision which invests the most. However, we concluded that if we attempted to elicit beliefs about what would maximise the client's expected utility instead, then by definition this would be based on the client's risk-aversion so the only 'correct' answer would be to follow the client's risk preference. This, to some degree, fails to capture paternalism since managers must believe that, although the client's decision may maximise the client's expected utility (or they would not have chosen it in OWN), another decision would be objectively more beneficial to the client. It is this belief that we aimed to elicit. Using the client's earnings as the unit of measurement also has the advantage that it allows us to make this belief elicitation incentivised.

[9] As an additional robustness check to ensure that we can detect true projective paternalism, rather than projection to minimise cognitive effort, we also elicit SVO scores which allows us to test whether any effect remains even when those with low other-regarding preferences are removed from any analysis.

Social Value Orientation, and the 40 primary items of the empathy quotient test (EQ) to measure trait empathy scores[10] (Baron-Cohen & Wheelwright, 2004). The Social Value Orientation (SVO) slider allows us to categorise participants into 'altruists' who aim to maximise another's payoff, 'prosocial' participants who are inequality averse and aim to maximise joint payoffs, 'individualists' who aim to maximise their own income and 'competitors' who aim to maximise how much more they earn than their counterpart.

On the final page, participants were told which part they were being paid for and whether the project was a success or a failure. These were both determined at random. Investment outcomes were only revealed at the end of the experiment to avoid anchoring effects, such as gamblers fallacy, hot hand fallacy (Gilovich, Vallone, & Tversky, 1985; Tversky & Kahneman, 1971), and affective responses to earlier outcomes influencing subsequent decisions (Damasio, 1996; Ludvig & Spetch, 2011).

On average, participants took 19 minutes to complete the study and earned £4.20, including the bonus payment (max bonus £8.18, min £0). This is a high rate of payment for Prolific users (Prolific's minimum hourly payment at the time was £6 an hour and our participants earned £13.26 on average).

4   Hypotheses

In our setting, the economic standard model - assuming perfectly egoistic money managers - predicts that managers will follow their own risk preference in OWN. Given the absence of monetary incentives for the manager, this model offers no prediction of behaviour in OTH (see, e.g. Eriksen & Kvaløy, 2010; Fehr & Schmidt, 1999). However, recent evidence by Ambuehl et al (2021) suggests that some impose their own ideals onto decisions for others if they believe it is in the other's best interest.

Hypothesis 1a: *Investments in OTH will be significantly influenced by the money manager's own risk preference.*

The most extreme form of projective paternalism would mean that the money managers do not take the other's preferences into account at all and only act according to their own preferences – investing in OTH exactly as they invested in OWN. However, Ambuehl et al (2021) only find this to be the case for 11.6% of all decisions, so we similarly expect this to only be the case for outliers.

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[10] Throughout the EQ scale, we included 4 attention checks. Participants were excluded from our analysis and received no payment if they failed more than one attention check (one participant was excluded for this reason).

Hypothesis 1b: *Money managers will invest for their client as the money manager invested for themselves.*

From the mere observation of decisions, however, we cannot identify whether money managers act with *paternalistic intent,* that is, with their clients' best interest in mind (as discussed in section 3). To be considered ideals projective paternalists, money managers must both project their own preferences in OTH and state in the incentivised survey questions that they believe their choice will lead to higher earnings for the client than the client's own choice.

In contrast to paternalistic motives, Füllbrunn and Luhan (2020) and Batteux et al. (2017), among others, proposed that when people make decisions for others they attempt to predict, or 'simulate' what their recipient would have chosen for themselves. Previous research testing this proposition experimentally is limited to the papers by Bolton et al. (2015), Füllbrunn and Luhan (2023) and Kling et al. (2019), which yielded mixed results. Whilst, Füllbrunn and Luhan (2023) found no difference in investments when decision makers did and did not know their recipient's preference, Bolton et al. (2015) found that decision makers only adjusted to their recipient if they were more risk-averse than themselves and Kling et al. (2019) found that 49.3% of decision makers followed their recipient's preference exactly, with a further 38.4% attempting to follow but misinterpreting the preference communicated to them[11]. Nevertheless, it is possible that money managers in our setting will simulate their client's preference, though research suggests they will only simulate to some extent (Foerster et al., 2017; Kling et al., 2019).

Hypothesis 2a: *Investments in OTH will be significantly influenced by the client's known risk preference.*

We again include the prediction for the most extreme form of simulated perspective taking, although it is unlikely that we will observe this to a large extent.

Hypothesis 2b: *Money managers will invest for their client as their client invested for themselves.*

As with the extreme form of projective paternalism, an observation of investments in OTH that simply mirror the client's preferences could also be driven by an attempt to minimize

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[11] When considering these findings, it should be noted that differences in experimental design plausibly explain differences in results. In Füllbrunn and Luhan (2023), decision makers made one investment decision for six recipients who each had different preferences, making it impossible for them to simulate one individual's preferences. In Bolton et al. (2015), decision makers and recipient payoffs were aligned, giving them a financial incentive to not simulate. In Kling et al. (2019), recipients communicated a subjective profile to represent risk preference, such that there was substantial miscommunication between how decision makers and recipients perceived preferences. To create the strongest counterfactual for projective paternalism – that is, to ensure that we don't only detect paternalistic behaviour because we cannot adequately detect simulating – we rectify these factors. We limit money managers to one recipient, give them no financial stake in the decision, and give them the precise investment their client would have made for themselves.

cognitive effort rather than due to social preferences. However, we are able to identify this by measuring SVO score, and then remove this possibility by limiting our sample to only those categorised as 'altruist' or 'prosocial' when testing for simulating.

If we consider absolute paternalism (H1b) and absolute simulation (H2b) as the extremes on the vector of possible decision patterns, we need a model for the weighting of preferences in between these extremes to complete the picture. We consider the theory of belief dissonance which states that people find it aversive to encounter beliefs that differ from their own, because they believe that the other holds false beliefs (Golman et al., 2016; Molnar & Loewenstein, 2020). Indeed, people are known to overestimate how objectively they respond to the properties of a scenario, believing that their assessment is the correct one (Loewenstein, 2005; Van Boven & Loewenstein, 2005) and believing that another is acting on false beliefs has, in turn, been shown to cause onlookers to act paternalistically (Schroeder et al., 2017). In the domain of financial decision-making, this suggests that the more a client's risk preference differs from their money manager's, the more a manager would consider it to be financially detrimental to the client, so the more they would be driven to intervene due to social preferences. Therefore, if money managers in our setting experience belief dissonance with regard to differences in risk preference[12], we expect them to weigh their own preferences more heavily, overruling those of their client, the more their client has different preferences from their own.

Hypothesis 3: *The investment decision will shift away from the client's preference and closer to the money manager's preference with an increasing difference between the preferences.*

As we expect belief dissonance to increase the degree of projective paternalism, we also assume that participants will not (all) act as absolute projective paternalists (H1b) but will project to varying degrees (H1a). In the unlikely case of only perfect projective paternalism, we would not be able to observe belief dissonance.

The SVO measure provides an additional connection between paternalism and belief dissonance. Ambuehl et al (2021) found that ideals-projective paternalists had stronger beliefs about the benefits of their decision for recipients. We would therefore expect money managers with more concern for their clients to make choices closer to their own preferences, projecting paternalistically, and put a lesser weight on the clients' preferences.

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[12] Although Molnar and Loewenstein (2020) discussed belief dissonance in relation to verifiable beliefs, Golman et al. (2016) argued that dissonance is most acute if people come to different beliefs from the same information, resembling the process of forming different risk preferences from the same risky prospect.

Hypothesis 4: *The higher SVO money managers have, the more they will deviate from their client's preference.*

Finally, O'Connell et al (2013) report that those with higher trait empathy more readily simulated another's perspective, so we also expect them to simulate more in our setting.

Hypothesis 5: *The higher EQ money managers have, the less they will deviate from their client's preference.*

5   Results

We collected 2,200 observations from our 200 participants, 200 in OWN and 200 for each of the client's 10 possible preferences in OTH. The results for all investment decisions, SVO scores and EQ scores can be found in Table 1. In line with the previous literature, the mean investment for oneself (OWN) was very close to 50% (£1.12) (see, e.g. Eriksen & Kvaløy, 2010; Füllbrunn & Luhan, 2020), with a minimum investment of £0.00 and a maximum of £2.25. The mean observed investment for others (OTH), averaged over all client preference types, was £1.07, with a minimum of £0.00 and a maximum of £2.25. In line with previous experimental findings (e.g. Charness & Jackson, 2009), we observe an overall shift towards lower risk levels when investing for others as compared to investments for themselves across all possible client preferences (Wilcoxon signed rank, $p < .01$). However, unlike previous findings, this should not be interpreted as an overall cautious shift as a result of feelings of responsibility for the client. When splitting our observations into investments for clients with higher and lower risk aversion than the money manager, we find lower investments for the former and higher for the latter (both tests Wilcoxon signed rank, $p < .001$), which indicates an acknowledgement of clients' preferences (Bolton et al., 2015; Füllbrunn & Luhan, 2020).

TABLE 1. Average Investments by Treatment

			Other's Preference									
OWN	SVO	EQ	£0.00	£0.25	£0.50	£0.75	£1.00	£1.25	£1.50	£1.75	£2.00	£2.25
£1.12	28.07	40.56	£0.89	£0.87	£0.94	£0.98	£1.07	£1.09	£1.15	£1.18	£1.25	£1.26

Notes. The table displays the average investment in OWN, each level of OTH, average SVO score and average EQ score.

FIGURE 1. Average amount invested for all client's possible preferences
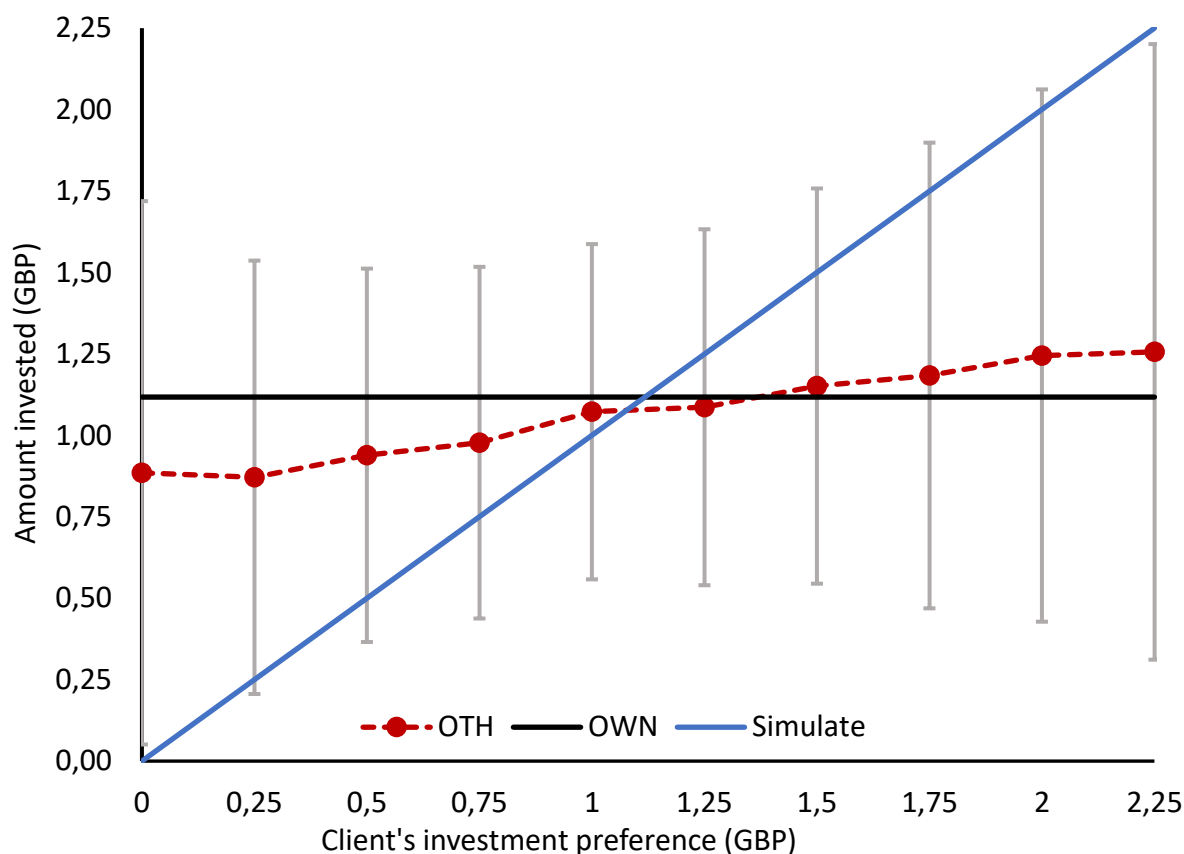
Notes. The dashed line shows the average investment for the client, for each of the client's possible investment preferences. The solid blue line denotes how much would have been invested if money managers followed their client's preference exactly, and the black line shows the average investment money managers made for themselves. Error bars indicate standard deviations.

Figure 1 depicts the average investments in treatment OWN, the case of perfect simulation and the actual average investment decision for all possible preferences of the client. We can clearly see the strong influence of the money managers' own preferences by the closeness of the red dashed line, depicting the average choices, to the black solid line of the money manager's mean preferences, in line with Hypothesis 1a. It is clear, however, that we do not see complete projection of the money manager's own preferences, and that the shape and slope of the decision line also follows the clients' preferences, depicted by the blue solid line, in line with Hypothesis 2a. This means that we don't find support for the extreme behavioural patterns of Hypotheses 1b and 2b. We can classify only ten (5%) of our subjects as pure 'projective paternalists' who invested for their client as they invested for themselves across all client preferences, and who also answered that their investment for the client would earn the client more money than the client's investment for themselves. Similarly, 22 subjects (11%) were categorised as perfect 'simulators' as they followed the client's preference exactly.

We conduct a series of regressions to test our first set of hypotheses and to analyse how much weight money managers put on their own and their client's preferences when making

investment decisions. In Table 2 we report the results of mixed-effects tobit models with censoring at the minimum (£0) and maximum (£2.25) possible investment amounts. Across all models, we regress investment amount in OTH on the client's investment preference and the money manager's investment in OWN, with gender and age as control variables.

TABLE 2. Influence of Money manager and Client's Risk Preference on Investments for Others

Dep(X_{OTH})	(1) All Participants	(2) Without Extreme Types	(3) Answered Part Two	(4) Prosocial or Altruist
Client. Pref. (X_P^{OTH})	0.22***	0.19***	0.24***	0.25***
	(0.02)	(0.03)	(0.03)	(0.02)
Money Manager. Pref. (X_{OWN})	0.60***	0.50***	0.81***	0.55***
	(0.07)	(0.08)	(0.10)	(0.08)
Gender	-0.20**	-0.14**	-0.39***	-0.14
	(0.08)	(0.07)	(0.13)	(0.09)
Age	0.004	0.002	0.007	0.005
	(0.003)	(0.003)	(0.005)	(0.003)
Constant	0.09	0.36***	-0.11	0.05
	(0.14)	(0.14)	(0.20)	(0.15)
Observations	2000	990	950	1490

Notes. Across all models, we take the amount invested in OTH as the dependent variable and the client's risk preference and the money manager's investment in OWN as the independent variables, with age and gender dummies as controls. The variable Gender was coded as 1 for males and 0 for females. We consider mixed-effects tobit models with all participants (model 1), with extreme behavioural types omitted (model 2), with only those who believed their investment would be more beneficial than the client's (model 3) and with only those who had an SVO category of prosocial or altruistic (model 4). Standard errors in parentheses. $* \, p < 0.10$, $** \, p < 0.05$, $*** \, p < 0.01$.

Considering all participants (model 1) both the money manager and client's risk preferences have a highly significant impact on the amount invested. These effects remain significant at the 1% level in linear mixed-effects and mixed effects Poisson models with robust standard errors clustered on the individual level (See Appendix B). We confirm these effects using non-parametric tests[13] and find these to be robust to different analysis methods. However,

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[13]To test how heavily own and recipient's preferences were weighted for each observation, we calculated an 'own' and 'other' preference weight for each participant. We took the difference between the money managers' investment in OWN and their investment in OTH as a measure of how much they shifted toward their recipient's preference, and then standardised this shift as a proportion, by dividing it by the difference between the money manager's preference and the recipient's preference, creating a proportional 'other' weight. Consequently, if money managers did not alter their investment between OWN and OTH, they would generate a weight of 0, and if they entirely simulated their recipient's preference they would generate a weight of 1. To calculate the 'own' weight, we simply subtracted the 'other' weight from 1, such that a 0 would be complete weighting of the other's preference and a 1, complete weighting of their own. By dividing each shift by the preference difference, we had to exclude all observations where the preference difference was 0, and all observations where the

we have already established that there is considerable variation in money managers' investment choices; some people entirely simulate their client's preference, while others entirely project. In the next model, we therefore exclude all participants who were classified as extreme types (see Appendix C for the classification criteria) and re-conduct all regressions using this subsample to test whether the extreme types are driving the effects. Even with extreme types excluded, our results remain qualitatively identical (Table 2, model 2) and, as before, hold across linear mixed effects and mixed effects Poisson models (see Appendix B).

To establish if it is actually projective paternalism that leads money managers to rely more (or solely) on their own risk preferences, we re-run model 1 from Table 2 using only the sub-sample of money managers who answered that their investment would earn their client more money than the client's investment for themselves (as discussed in section 3). We, again, find qualitatively identical results for the own and others' preference variables (Table 2, model 3) which holds across linear mixed effects and mixed effects Poisson models (see Appendix B). In fact, for this group of participants – displaying paternalistic motives – their own preference seems to have an even larger influence, with the coefficient often being larger than that in model 1, ranging from 0.49 to 0.81 depending on the model used. As expected, money managers with a paternalistic mindset appear to put stronger emphasis on their own preference or opinion, as they believe their choice is in the client's best interests. As a further robustness check we also re-run model 1 on the subsample of participants whose SVO scores classified them as either prosocial or altruistic (*N*=1490), excluding those who classified as individualistic or competitive (*N*=510). This was to ensure that this finding was not driven by those with low other-regarding preferences investing for their client as they had invested for themselves to minimise cognitive effort. With only 7% of money managers in our sample following their own preferences exactly, it was unlikely that our results were driven by money managers seeking to minimize cognitive effort and, indeed, we do find identical results (model 4) regardless of the model used (see Appendix B). Even on those with relatively high other-regarding preferences, the money managers' preference coefficient stayed significant at the 1% level. Furthermore, this consistent robust effect may even be a lower bound for the true effect size, given that our use of the strategy method potentially encouraged managers to consider their client's preferences more than they otherwise would. Therefore, we find strong evidence that money managers did paternalistically project their risk preferences onto others, supporting hypothesis 1B.

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investment lay outside of the money manager or client's risk preferences, leaving us with 1180 of each preference weight. The remaining other and own weights both differed significantly from 0 (*p*<.001) according to two, one-sample Wilcoxon signed-rank tests.

Observation 1: *Investments in OTH are significantly influenced by money managers paternalistically projecting their own risk preferences.*

Aside from the effect of the money manager's own risk preferences on investments holding through our robustness checks, the effect of the client's risk preference also remained significant at the 1% level throughout. This suggests that money managers do incorporate their client's risk preferences into their investment decisions, even with no economic incentive to do so. Given that the effect held on the subsample of participants who were not extreme types and those who were classified as prosocial or altruistic, we also conclude that the effect was not driven by extreme simulators or participants mimicking the preference presented to them to minimise cognitive effort, but by a genuine concern for the clients' preferences. Therefore, we support hypothesis 2a and state observation 2.

Observation 2: *Investments in OTH are significantly influenced by money managers simulating their client's known risk preference.*

We implement a series of Wald tests to determine whether paternalistic projection or simulating behaviour is more prevalent in our setting. Comparing the coefficients for the money manager and client's preferences in every model discussed, we unanimously find that money managers weight their own preferences more heavily than their client's ($p < .05$ for all Wald tests), suggesting money managers imposed their own preferences more than they considered their client's. In addition to our main results we also find a significant gender effect. Whilst males invested significantly higher amounts for themselves ($M = 1.16$) than females ($M = 1.07$) according to a two-sample Wilcoxon Rank-Sum test ($p < .001$), males took lower risks for their clients ($M = 1.03$) than females ($M = 1.10$), which was also confirmed by a two-sample Wilcoxon Rank-Sum test ($p < .05$).

Our next analysis considers whether money managers discount their client's preference more, the more that preference differs from their own (hypothesis 3). The results of six mixed-effects tobit models, where each observation is censored based on how far it was possible for money managers to deviate from their client's preference[14], can be found in Table 3. Across models 1 to 4, we take how much money managers deviated from their client's risk preferences as our dependent variable ($X_{OTH} - X_P^{OTH} = S_P^{OTH}$) and the difference between the money manager and client's risk preferences ($X_P^{OTH} - X_{OWN} = P_{OWN}$), EQ scores and SVO scores as

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[14] For example, when investing for a client who invested £0.50 for themselves, a money manager's deviation from that preference could only resume values between -0.5 and 1.75, i.e. money manager could only invest up to £0.50 less than the client wanted, or up to £1.75 more. Given this element of our experiment which causes definitive boundaries in the amount money managers could deviate, a tobit model was considered the best fit for the data.

independent variables. We also include gender, a gender and preference difference interaction term, and age as control variables. In models 5 and 6 we take the absolute deviation and absolute preference difference as our dependent and main independent variables, to examine the effect of preference difference magnitude, independent of directionality.

TABLE 3. Influence of Preference Difference between Money Manager and Client – Mixed Effects Tobit

Dep(S_P^{OTH})	(1) All Participants	(2) Without Extreme Types	(3) Answered Part Two	(4) Prosocial or Altruist	(5) Absolute Values	(6) Absolute Values
Pref Diff. (P_{OWN})	-0.74***	-0.82***	-0.88***	-0.73***	0.69***	0.61***
	(0.03)	(0.04)	(0.04)	(0.03)	(0.06)	(0.06)
SVO	-0.002	-0.005	-0.001	-0.01	-0.002	-0.002
	(0.003)	(0.003)	(0.006)	(0.009)	(0.005)	(0.005)
EQ	0.002	-0.001	0.003	0.0004	0.007	0.006
	(0.003)	(0.003)	(0.005)	(0.004)	(0.005)	(0.005)
Gender	-0.20**	-0.17**	-0.36***	-0.17*	0.16	0.18
	(0.09)	(0.07)	(0.14)	(0.09)	(0.13)	(0.14)
Gender x Pref Diff. (P_{OWN})	-0.04	0.09	0.20***	-0.004	-0.09	-0.11
	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)	(0.07)
Age	0.005	0.002	0.008	0.005	0.004	0.004
	(0.003)	(0.003)	(0.005)	(0.003)	(0.004)	(0.004)
Pref Above or Below Mean					0.16**	
					(0.07)	
Pref Diff. (P_{OWN}) X Pref Above or Below Mean					-0.03	
					(0.08)	
Pref Above or Below Money Managers'						0.004
						(0.06)
Pref Diff. (P_{OWN}) X Pref Above or Below Money Managers'						0.15**
						(0.07)
Constant	-0.15	0.24	-0.19	0.17	-0.55*	-0.47
	(0.21)	(0.18)	(0.35)	(0.37)	(0.29)	(0.29)
Observations	2000	990	950	1490	2000	1800

Notes. Across models 1-4, we take the money manager's shift from the client's preference as the dependent variable and the difference between the money manager's risk preference and the client's risk preference as the independent variable with SVO score, EQ score, age, gender dummies and an interaction term between gender and preference difference as controls. In models 5 and 6 we take the absolute value of the dependent variable and the main independent variable (preference difference), with the same set of control variables as models 1-4. In addition, we add dummy variables for whether the client's preference was above or below the mean (model 5), or whether the client's preference was above or below the money manager's (model 6), with terms interacting each with the absolute preference difference. We consider mixed-effects tobit models with all participants (models 1 and 5), with extreme behavioural types omitted (model 2), with only those who believed their investment would be more beneficial than the client's (model 3) and with only those who had an SVO category of prosocial or altruistic (model 4). The variable Gender was coded as 1 for males and 0 for females. Standard errors are included in parentheses $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

Across models 1-4 we find a highly significant negative relationship between how far money managers deviate from their client's wishes and the difference in risk preference between the money manager and client. That is, the more risk-taking the client is than the money manager, the more the money manager shifts away from their preference toward their own risk-averse preferences and vice versa. This effect remains significant at the 1% level in a linear mixed-effects model with robust standard errors clustered on the individual level (see Appendix B). To rule out the possibility that extreme types are driving this effect, we again implement the same model specification (model 1), excluding all of the extreme types from our data (see Appendix C for criteria) and find, as before, that the effect remains identical (model 2) and significant at the 1% level in a linear mixed-effects model (see Appendix B). Thus, we conclude that our results are not driven by the extreme types in our sample.

As before, to establish projective paternalistic intent behind this effect, we implement model 1 using only the sample of money managers who answered that their investment in part two would earn their client more money than the client's investment for themselves in part one. We find qualitatively identical results, with the preference difference variable remaining significant at the 1% level (model 3) which also holds in a linear mixed-effects model (see Appendix B). This shows that, as we proposed, money managers are paternalistically projecting their preferences more, the more their client's preference differs from their own[15]. However, given that a positive (negative) preference difference yields such a pronounced negative (positive) shift, it is plausible that this directionality is driving the effect in Table 3 rather than the magnitude of the preference difference and investment shift themselves. We therefore also conduct two different regressions with the *absolute* distance from the client's preference as the dependent variable, and the absolute difference in preferences as the primary independent variable. As in models 1-4, the preference difference coefficients remain significant at the 1% level (model 5 and model 6) which again, holds when linear mixed effects models were used (see Appendix B). Thus, we support hypothesis 3 and state observation 3.

Observation 3: *Money managers deviate further from their client's known risk preference and make investments closer to their own, the more their own risk preference differs from their client's.*

As an observed risk preference "outside the norm" might influence the decision, we analyse whether money managers deviate further from their client's preferences when the

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[15] As before, we also test whether money managers do purposely deviate from their client's preference, rather than attempt to minimise cognitive effort, by re-running model 1 from Table 3, on the subsample of participants whose SVO scores classified them as either prosocial or altruistic. Again, results remained qualitatively identical in both mixed effects tobit (model 4) and linear mixed effects (see Appendix B) models.

hypothetical client has a risk preference above or below the mean investment in our sample (M = £1.12). In model 5 of Table 3, we include a dummy variable for above and below mean risk preference and an interaction term for above and below mean preferences by absolute preference difference. We found that money managers were less willing to accommodate a preference above the mean investment than one below the mean ($p < .05$). However, this did not interact with the magnitude of difference in preference ($p = 0.70$) so rather than affecting each other, these appear to be two separate considerations for the clients. Thus, we state observation 4.

Observation 4: *Money managers deviate further from their client's preference when the client has an above-average risk preference than when their preference is below average.*

An alternative reference point to the "general norm" might be the client's own risk preference, so our next analysis tested whether money managers deviate further from their client's preferences when the client has a risk preference above (positive preference difference) or below (negative preference difference) their own. Here, we include a dummy variable for positive and negative preference difference and an interaction term for positive and negative preference difference by absolute preference difference in model 6 of Table 3. To create the positive or negative preference difference dummy variable, we had to exclude all observations where there was no preference difference between money manager and client ($N = 200$). We find that although there was no significant difference in deviation when clients were more or less risky than the money manager ($p = 0.95$), the deviation across preference differences did differ, depending on whether the difference between money manager and client's preference was positive or negative ($p < .05$). This interaction is displayed in Figure 2.
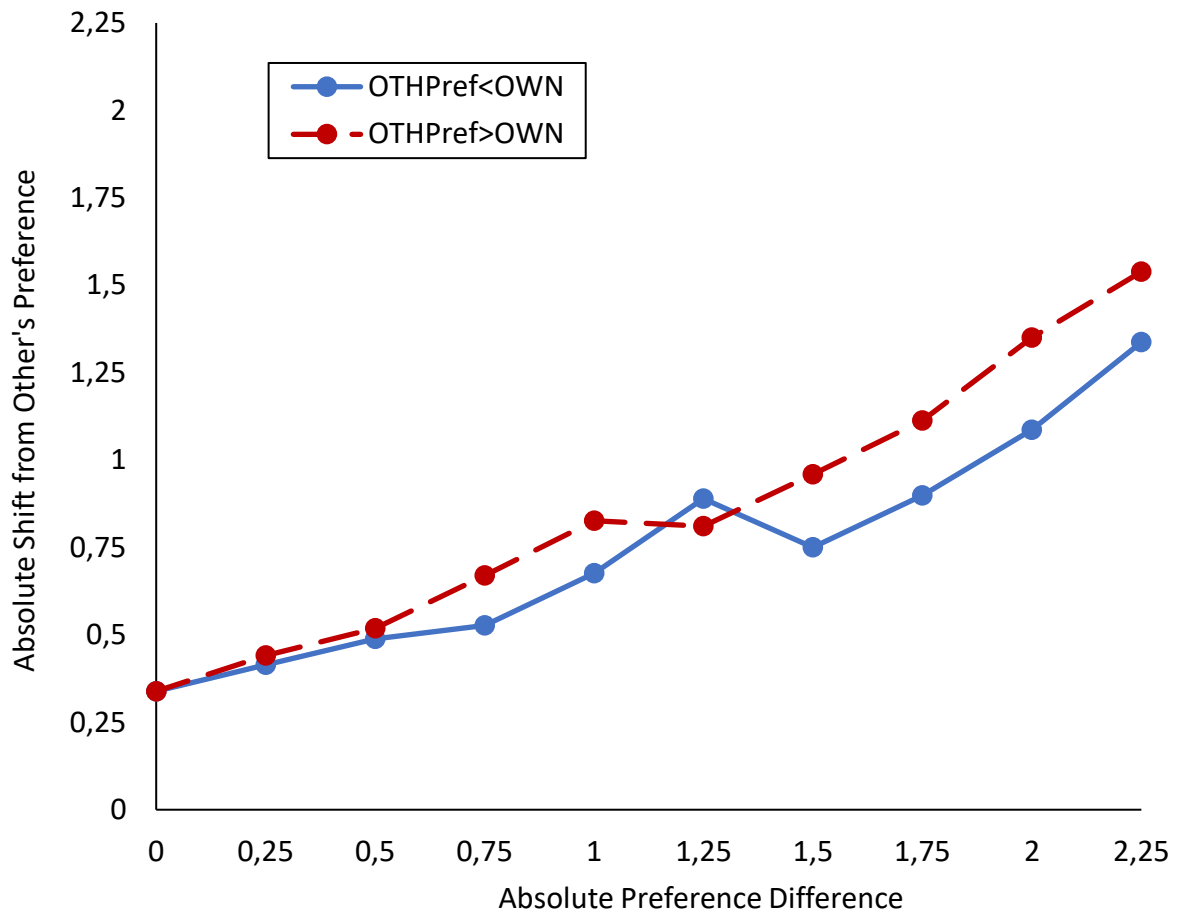
FIGURE 2. Average absolute deviation from client's preference for all absolute preference differences.

Notes. Both lines show the average deviation from the other participant's preference, for each possible difference between the money manager and client's preferences – displayed as the absolute deviation and absolute preference difference. The dashed red line shows the absolute average deviation when the client is more risk-taking than the money manager, and the solid blue line shows the absolute average deviation when the client is less risk-taking than the money manager.

Whilst money managers deviate by approximately the same amount across positive and negative preference differences when differences are small (up to £0.5), the gap between positive (red dashed) and negative preference differences (blue solid) widens as the preference difference gets larger. This increasing divide between decisions is in line with the social norm of being more cautious for others in a position of responsibility (see, e.g., Charness & Jackson, 2009; Stone et al., 2013). However, we do not explicitly elicit the mechanisms behind this, so we simply state observation 5.

Observation 5: *Money managers deviate further from their client's preference when the client is riskier than them, than when the client is less risky – but only when there is a significant difference in preferences.*

Our last two hypotheses 4 and 5 stated that higher SVO scores and lower EQ scores respectively would increase the deviation of the money manager's decision from the client's

preference. We do not find any relationship between either SVO score or EQ score and how close money managers invest to their client's preference in any of our estimation specifications (see Table 3 and Appendix B). We find no evidence to support hypotheses 4 and 5 and state observation 6

Observation 6: *We find no relationship between SVO score or EQ score and how far money managers deviate from their client's preference.*

Finally, across models 1-4 in Table 3 we again find a significant gender effect. Males are found to deviate further from their client's preference (Males $M = -0.10$ vs Females $M = -0.02$)[16], investing more cautiously for the client than the client wanted. One possible explanation for this is that in line with previous findings (Baron-Cohen & Wheelwright, 2004) females were also found to have higher trait empathy ($M = 44.5$) than males ($M = 36.7$) according to a two-sample Wilcoxon Rank-Sum test ($p < .001$), which may explain why they were less willing to deviate from their client's preferred investment.

6   Discussion and Conclusions

We used an online Gneezy and Potters (1997) investment game to test whether money managers follow their clients' risk preferences or paternalistically project their own risk preferences in investments for others and whether they project them more, the more their client's risk preferences differ from their own. We implemented the strategy method to systematically vary the difference between the money manager and client's preferences, which let us observe the entire spectrum of participant reactions to every possible risk preference, as well as all possible preference differences. Our design thus allowed us to test a range of behavioural motivations and to attribute specific behavioural patterns to specific mechanisms.

We find that when investing for others across all preferences, money managers do project their risk preferences onto clients paternalistically. Supporting ideals projective paternalism (Ambuehl et al., 2021), investments were significantly influenced by the money manager's own risk preferences, even when they had no stake in the decision and when we ruled out the possibility that managers projected to minimise cognitive effort. Managers also considered their client's risk preferences to some degree, albeit significantly less than they projected their own. In line with the theory of belief dissonance (Golman et al., 2016), we also find that money managers consider their client's preferences less, the more that preference differs from their own, suggesting that managers were more driven to act as ideals projective

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[16] We also confirmed this finding with a two-sample Wilcoxon Rank-Sum test which was significant at the 5% level.

paternalists, the more they believed their client had 'false beliefs' (Molnar & Loewenstein, 2020). Reflecting Füllbrunn and Luhan (2015) and Batteux et al., (2019), we also find that money managers deviate more from the preferences of those with above-average risk preferences than those with below-average preferences and that they are more willing to accommodate preferences that are less risky than their own than those that are more risky.

In relation to financial markets, our findings reflect those of Foerster et al (2017) and Linnainmaa et al., (2021) in suggesting that money managers actively impose an egocentric bias on their client's investments. However, we build on their findings by showing experimentally that this is driven, at least in part, by paternalism rather than agency conflicts. Even in our random online sample, where money managers had no more expertise than their clients, no career repercussions from underperformance and no financial stake in the decision, they still imposed their preferences onto client investments. This money manager-centric bias becomes more pronounced the more the client's preferences differ from their manager's, especially if the client would prefer high risks. There are two sides to this observation. On the one hand, money managers follow their client's wishes more if these are relatively cautious, so agency, in our setting, does not inflate investment risks on the market. On the other hand, it leads to deviations from the ex-ante optimal outcomes, as the investment game we are using has a positive expected return. Overall our findings contribute to the ongoing policy debate about when and how managers fail to invest in line with their client's needs. Despite the traditional view that financially literate managers should direct their less financially literate clients to invest as they would invest (Gennaioli et al., 2015), there is growing evidence that clients, as well as legislators, want managers to better represent their risk preferences. For example, Aimone and Pan (2020) found that stakeholders rewarded trustees based on the outcome of their choices, but equally rewarded them for emulating what they would have chosen for themselves, independent of the outcome. Our findings suggest that managers focus on achieving a favourable outcome by imposing their risk preferences in investments, yet, considering the chronic underperformance of manager-led funds (Bergstresser et al., 2009; Fama & French, 2010), it seems clients might actually receive a more satisfactory service if managers focused on matching their clients' risk preferences. However, our findings also suggest that this may only be achieved if managers were matched with clients according to risk preference.

References

Ackfeld, V., & Ockenfels, A. (2021). Do people intervene to make others behave prosocially? *Games and Economic Behavior*, *128*, 58–72. https://doi.org/10.1016/j.geb.2021.03.005

Aimone, J. A., & Pan, X. (2020). Blameable and imperfect: A study of risk-taking and accountability. *Journal of Economic Behavior and Organization*, *172*, 196–216. https://doi.org/10.1016/j.jebo.2020.02.007

Allen, F., & Gorton, G. (1993). Churning Bubbles. *The Review of Economic Studies*, *60*(4), 813–836. https://doi.org/10.2307/2298101

Ambuehl, S., Bernheim, B. D., & Ockenfels, A. (2021). What Motivates Paternalism? An Experimental Study. *American Economic Review*, *111*(3), 787–830. https://doi.org/10.1257/aer.20191039

Andersson, O., Holm, H. J., Tyran, J.-R., & Wengström, E. (2016). Deciding for Others Reduces Loss Aversion. *Management Science*, *62*(1), 29–36. https://doi.org/10.2139/ssrn.2347332

Angeli, M., & Gitay, S. (2015). Bonus Regulation: Aligning Reward with Risk in the Banking Sector. *Bank of England. Quarterly Bulletin*, *55*(4), 322–333.

Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An Investigation of Adults with Asperger Syndrome or High Functioning Autism, and Normal Sex Differences. *Journal of Autism and Developmental Disorders*, *34*(2), 163–175. https://doi.org/0162-3257/04/0400-0163/0

Batteux, E., Ferguson, E., & Tunney, R. J. (2017). Risk preferences in surrogate decision making. *Experimental Psychology*, *64*(4), 290–297. https://doi.org/10.1027/1618-3169/a000371

Batteux, E., Ferguson, E., & Tunney, R. J. (2019). Do we make decisions for other people based on our predictions of their preferences? evidence from financial and medical scenarios involving risk. *Thinking & Reasoning*, 1–30. https://doi.org/10.1080/13546783.2019.1592779

Bergstresser, D., Chalmers, J. M. R., & Tufano, P. (2009). Assessing the Costs and Benefits of Brokers in the Mutual Fund Industry. *Review of Financial Studies*, *22*(10), 4129–4156. https://doi.org/10.1093/rfs/hhp022

Bhattacharya, V., Illanes, G., & Padi, M. (2019). Fiduciary duty and the market for financial advice. *NBER Working Paper*, *No. w25861*. https://doi.org/10.3386/w25861

Bogle, J. C. (2009). The Fiduciary Principle: No Man Can Serve Two Masters. *Journal of Portfolio Management*, *36*(1), 15–25. https://doi.org/10.3905/JPM.2009.36.1.015

Bolton, G. E., Ockenfels, A., & Stauf, J. (2015). Social responsibility promotes conservative risk behavior. *European Economic Review*, *74*, 109–127. https://doi.org/10.1016/j.euroecorev.2014.10.002

Brosig, J., Weimann, J., & Yang, C.-L. (2003). The Hot Versus Cold Effect in a Simple Bargaining Experiment. *Experimental Economics*, *6*(1), 75–90. https://doi.org/10.1023/A:1024204826499

Charness, G., Gneezy, U., & Halladay, B. (2016). Experimental methods: Pay one or pay all. *Journal of Economic Behavior and Organization*, *131*, 141–150. https://doi.org/10.1016/j.jebo.2016.08.010

Charness, G., Gneezy, U., & Imas, A. (2013). Experimental methods: Eliciting risk preferences. *Journal of Economic Behavior and Organization*, *87*, 43–51. https://doi.org/10.1016/j.jebo.2012.12.023

Charness, G., & Jackson, M. O. (2009). The role of responsibility in strategic risk-taking. *Journal of Economic Behavior and Organization*, *69*(3), 241–247. https://doi.org/10.1016/j.jebo.2008.10.006

Crosetto, P., Weisel, O., & Winter, F. (2019). A flexible z-Tree and oTree implementation of the Social Value Orientation Slider Measure. *Journal of Behavioral and Experimental Finance*, *23*, 46–53. https://doi.org/10.1016/j.jbef.2019.04.003

Damasio, A. R. (1996). The somatic marker hypothesis and the possible functions of the prefrontal cortex. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, *351*(1346), 1413–1420. https://doi.org/https://doi.org/10.1098/rstb.1996.0125

Dworkin, G. (1972). Paternalism. *The Monist*, *56*(1), 64–84.

Eriksen, K. W., & Kvaløy, O. (2010). Myopic Investment Management. *Review of Finance*, *14*(3), 521–542. https://doi.org/10.1093/rof/rfp019

Fama, E. F., & French, K. R. (2010). Luck versus Skill in the Cross-Section of Mutual Fund Returns. *Journal of Finance*, *65*(5), 1915–1947. https://doi.org/10.1111/j.1540-

6261.2010.01598.x

Fehr, E., & Schmidt, K. M. (1999). A Theory of Fairness, Competition, and Cooperation. *The Quarterly Journal of Economics*, *114*(3), 817–868. https://doi.org/10.1162/003355399556151

Foerster, S., Linnainmaa, J. T., Melzer, B. T., & Previtero, A. (2017). Retail Financial Advice: Does One Size Fit All? *Journal of Finance*, *72*(4), 1441–1482. https://doi.org/10.1111/jofi.12514

Füllbrunn, S., & Luhan, W. J. (2015). Am I My Peer's Keeper? Social Responsibility in Financial Decision Making. *Ruhr Economic Papers*, *No. 551*, 1–38. https://doi.org/10.2139/ssrn.2618439

Füllbrunn, S., & Luhan, W. J. (2020). Responsibility and limited liability in decision making for others – An experimental consideration. *Journal of Economic Psychology*, *77*, 102186. https://doi.org/10.1016/j.joep.2019.06.009

Füllbrunn, S. C., & Luhan, W. J. (2023). *Mimeo*.

Gangadharan, L., Grossman, P. J., Jones, K., & Leister, C. M. (2018). Paternalistic giving: Restricting recipient choice. *Journal of Economic Behavior and Organization*, *151*, 143–170. https://doi.org/10.1016/j.jebo.2018.03.007

Gennaioli, N., Shleifer, A., & Vishny, R. (2015). Money Doctors. *The Journal of Finance*, *70*(1), 91–114. https://doi.org/10.1111/jofi.12188

Gilovich, T., Vallone, R., & Tversky, A. (1985). The Hot Hand in Basketball: On the Misperception of Random Sequences. *Cognitive Psychology*, *17*(3), 295–314. https://doi.org/https://doi.org/10.1016/0010-0285(85)90010-6

Gneezy, U., & Potters, J. (1997). An Experiment on Risk Taking and Evaluation Periods. *The Quarterly Journal of Economics*, *112*(2), 631–645. https://doi.org/10.1162/003355397555217

Golman, R., Loewenstein, G., Moene, K. O., & Zarri, L. (2016). The Preference for Belief Consonance. *Journal of Economic Perspectives*, *30*(3), 165–188. https://doi.org/10.1257/jep.30.3.165

Jacobsson, F., Johannesson, M., & Borgquist, L. (2007). Is altruism paternalistic? *The Economic Journal*, *117*(520), 761–781. https://doi.org/https://doi.org/10.1111/j.1468-0297.2007.02049.x

Kling, L., König-Kersting, C., & Trautmann, S. T. (2019). Investing for Others: Principals ' vs. Agents ' Preferences. *Working Paper*.

Krawczyk, M., & Wozny, L. (2016). An Experiment on Temptation and Attitude Towards Paternalism. *SGH KAE Working Papers Series*, *2016/018*. https://doi.org/10.2139/ssrn.2912427

Laby, A. B. (2018). The fiduciary structure of investment management regulation. In J. D. Morley & W. A. Birdthistle (Eds.), *Research Handbook on the Regulation of Mutual Funds* (pp. 79–110). Edward Elgar Publishing.

Linnainmaa, J. T., Melzer, B. T., & Previtero, A. (2021). The Misguided Beliefs of Financial Advisors. *The Journal of Finance*, *76*(2), 587–621. https://doi.org/10.1111/jofi.1299

Loewenstein, G. (2005). Hot-cold empathy gaps and medical decision making. *Health Psychology*, *24*(4S), S49–S56. https://doi.org/https://doi.org/10.1037/0278-6133.24.4.S49

Ludvig, E. A., & Spetch, M. L. (2011). Of black swans and tossed coins: is the description-experience gap in risky choice limited to rare events? . *PLoS ONE*, *6*(6), e20262. https://doi.org/10.1371/journal.pone.0020262

Molnar, A., & Loewenstein, G. (2020). The Othello Effect: People are more disturbed by others' wrong beliefs than by different beliefs. *Working Paper*, *January*.

Mullainathan, S., Noeth, M., & Schoar, A. (2012). The Market for Financial Advice: An Audit Study. *Working Paper 17929*. https://doi.org/10.2139/ssrn.1572334

Murphy, R. O., Ackermann, K. A., & Handgraaf, M. J. J. (2011). Measuring Social Value Orientation. *Judgment and Decision Making*, *6*(8), 771–781. https://doi.org/10.2139/ssrn.1804189

O'Connell, G., Christakou, A., Haffey, A. T., & Chakrabarti, B. (2013). The role of empathy in choosing rewards from another's perspective. *Frontiers in Human Neuroscience*, *7*(174), 1–5. https://doi.org/10.3389/fnhum.2013.00174

Rose, J. (2023). Same same, not different: Client-Advisor Matching in the Finance Industry. *Working Paper, Rotterdam*.

Schroeder, J., Waytz, A., & Epley, N. (2017). Endorsing Help For Others That You Oppose For Yourself: Mind Perception Alters the Perceived Effectiveness of Paternalism. *Journal of Experimental Psychology: General*, *146*(8), 1106–1125.

https://doi.org/10.1037/xge0000320

Stone, E. R., Choi, Y., Bruine de Bruin, W., & Mandel, D. R. (2013). I can take the risk, but you should be safe: Self-other differences in situations involving physical safety. *Judgment and Decision Making*, *8*(3), 250–267.

Tversky, A., & Kahneman, D. (1971). Belief in the law of small numbers. *Psychological Bulletin*, *76*(2), 105–110. https://doi.org/https://doi.org/10.1037/h0031322

Van Boven, L., & Loewenstein, G. (2005). Empathy gaps in emotional perspective taking. In B. F. Malle & S. D. Hodges (Eds.), *Other minds: How Humans Bridge the Divide Between Self and Others* (pp. 284–297). Guilford Press. http://www.cmu.edu/dietrich/sds/docs/loewenstein/EmpathyGapsEmotPersp.pdf%5Cnp apers2://publication/uuid/E8DA7AFC-02C5-4C76-AD82-DD19FC3919E5

Appendix A. Instructions

Introduction

Investing for Others

Welcome to the experiment. You will be paid a **fixed payment of £1.70** for completing this study, but you will also be able to earn a **bonus payment** depending on your decisions, or the decisions of another participant. You will receive the fixed payment and the bonus payment once we have had responses from all participants which could take **up to 3 weeks.**

The study will be in **two parts**, but you will **receive the bonus payment for only one of these parts**. Which part you receive your bonus payment from will be randomly determined at the end of the experiment, however, **you must complete both parts and answer all comprehension questions correctly to receive your payment.** Once you have completed part one and part two, the study will end with a questionnaire which you must complete to earn your payment.

Please check that the stated Prolific ID is correct, and provide your age and the gender you would describe yourself as, to verify that these match your prolific profile. Then click the box to verify the captcha below.

Prolific ID

_____

Age (in years)

_____

Gender

- Male
- Female
- Prefer not to say

Verify

Part One (OWN)

<u>**Investing for Others**</u>
<u>**Instructions for Part One**</u>

In this part (part one), you receive £2.25 in real money.

You can choose to invest any amount of your £2.25, into a **risky 'project'**, in increments of 25p (£0.25, £0.50, £0.75 etc.). This risky project can either be a **success** or a **failure**.

·   If the project is **successful**, you will get your investment back, plus an **additional 2.5 times your investment**. So, if you invested £1, you would get the £1 you invested back, plus an extra £2.50 (2.5 x £1) as a return for the investment.

·   If the project is a **failure**, you would *lose the amount you invested*. So if you invested £1, you would lose that £1.

Anything of the £2.25 that you choose *not* to invest in the risky project, you keep as 'safe' – that is, you would not make any return on that money, but there would also be no risk of losing it.

So, as an example, let's say you invested **£1 of your £2.25**…

If the project was a **success** your payment would be **£4.75** total, because you would receive:

·   *The £1.25 that you did not invest.*
·   *The £1 that you invested back.*
·   *Plus an extra £2.50 (2.5 x £1) as a return for the investment.*

If the project was a **failure** your payment would be **£1.25** total, because you would lose your £1 investment and only receive:

·   *The £1.25 that you did not invest.*

Whether the project is a success or a failure is randomly determined by an algorithm at the end of the experiment. A number between 1 and 3 will be generated on screen.

- *If the number is a **3**, the project was **successful.***
- *If the number is a **1** or a **2**, the project was a **failure.***

This means that the project has a **1/3rd** chance of success and a **2/3rd** chance of failure. You will only find out the outcome of your investment at the end of the experiment.

The money you earn in this part is real money. If this part is chosen for the payout at the end of the experiment, this will be your bonus payment.

On the next screen, you will answer some comprehension questions to test that you have understood the task. You will make your investment decision once you have answered these correctly. After that, you will receive instructions for part two.

Part One Comprehension Questions

Investing for Others

Please answer all of the following questions to make sure you understand the task correctly. You will only be able to continue with the experiment if all of your answers are correct.

1. What is the probability that the risky project will be successful?

- ○ 3/3
- ○ 2/3
- ◉ 1/3

2. What is the probability that the risky project will be a failure?

- ◉ 2/3
- ○ 1/3
- ○ 3/3

3. If you invest £0.00 into the risky project, what will your bonus payment for part one be?

- ○ £0.00
- ○ £1.00
- ◉ £2.25

4. If you invest £1 into the risky project and it is a failure, what will your bonus payment for part one be?

- ◉ £1.25
- ○ £0.00
- ○ £1.00

5. If you invest £1 into the risky project and it is a success, what will your bonus payment for part one be?

- ○ £3.00
- ◉ £4.75
- ○ £1.25

Part One Decision Screen

<u>Investing for Others</u>

You have received £2.25. How much of it will you invest in the risky project?

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

As a reminder:

If the project is successful, your bonus payment would be
- *£2.25 plus your investment multiplied by 2.5*

If the project is a failure, your bonus payment would be
- *£2.25 minus your investment*

>>

Part Two (OTH)

Investing for Others
Instructions for Part Two

Thank you for completing part one.

In part two you will make the same investment decision as in part one. However, rather than deciding how much of your own £2.25 to invest, you will now decide how much of **another random participant's £2.25 to invest on their behalf.** This means that **your decision in part two will determine the bonus payment received by another participant completing this experiment.**

You will not earn any money for making this investment decision, however, another random participant will invest on your behalf in part two. The person determining your bonus payment in part two will **not** be the same person as the person you are investing for.

As a reminder of the task, you can invest any amount of **your recipient's £2.25,** in increments of 25p (£0.25, £0.50, £0.75 etc.), into a risky 'project'. Anything you do not invest is kept by **your recipient**. The risky project can either be a **success** or a **failure**.

· _If the project is **successful**, your **recipient** will get the investment back, plus an additional 2.5 times the amount you invested on their behalf._
· _If the project is a **failure**, they would lose the amount that you invested for them._

Whether the project is a success or a failure is randomly determined by an algorithm at the end of the experiment, and the project has a **1/3rd** chance of success and a **2/3rd** chance of failure. You will only find out the outcome of the investment at the end of the experiment.

The money invested in this part is real money. If this part is randomly selected for the pay out at the end of the experiment, this will be your recipient's bonus payment.

Investing for Others

Like you, the recipient of your investment decision also made this investment decision for themselves in part one.

Because you do not know what they invested for themselves in the first part – **i.e. they could have invested either £0.00, £0.25, £0.50, £0.75, £1.00, £1.25, £1.50, £1.75, £2.00 or £2.25 for themselves - you will make one investment decision for each possible choice they could have made for themselves. That is, you will make one investment for the possible scenario where they had invested £0.00, one investment for the possible scenario where they had invested £0.25… and so on.**

Whatever they chose in part one, we will use your corresponding decision to determine their payment in part two.

Take a look at the two examples in the picture below:

Your recipient has received £2.25. How much of it will you invest in the risky project on their behalf? If…

Your recipient chose to invest **£0.75** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£1.25** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

- If the recipient invested £0.75 for themselves in part one (first example), you chose to invest £0.25 for them in part two (highlighted in blue).

- If the recipient invested £1.25 for themselves in part one (second example), you chose to invest £2.00 for them in part two (highlighted in blue).

If it then turns out that your matched recipient <u>did</u> invest £0.75 for themselves, only your answer to the first question would determine their payment and you would invest £0.25 on their behalf.

This means **all 10 of your decisions could determine your recipient's bonus payment, but we will only use the decision that matches your recipient's ACTUAL choice in part one.** You can invest as much for your recipient **as you want** and you will not be told who your recipient is and your recipient will not be told

who you are.

On the next screen you will answer some comprehension questions to test that you have understood the task. Once you have answered these questions correctly, you will then make the investment decisions.

Part Two Comprehension Questions

Investing for Others

Please answer all of the following questions to make sure you understand the task correctly. You will only be able to continue with the experiment if all of your answers are correct.

1. If you invest £0.00 into the risky project, what will your recipient's bonus payment for part two be?

- ○ £0.00
- ◉ £2.25
- ○ £1.00

2. Whom will you be investing for in part two?

- ◉ Another random participant who will also complete this experiment
- ○ Myself

3. In the example picture below, how much will you have invested for your recipient in part two if they invested £1 for themselves in part one?

Your recipient has received **£2.25**. How much of it will you invest in the risky project on their behalf? If...

Your recipient chose to invest **£1.25** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£1.00** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

- ○ £0.00
- ○ £1.00
- ◉ £2.00

4. If the person investing for you in part two invests £0.00 on your behalf, what would **your** bonus payment for part two be?

- ○ £0.00
- ○ £1.00
- ◉ £2.25

Part Two Decision Screen

Your recipient has received £2.25. How much of it will you invest in the risky project on their behalf? If...

Your recipient chose to invest **£1.25** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£0.75** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£0.00** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£1.75** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£2.25** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£2.00** in part one for themselves

| £0.00 | £0.25 | £0.50 | £0.75 | £1.00 | £1.25 | £1.50 | £1.75 | £2.00 | £2.25 |

Your recipient chose to invest **£1.00** in part one for themselves

Thank you

Thank you for completing part two. You will now proceed to the questionnaire.

Questionnaire

Questionnaire

You will now complete the questionnaire.
Please answer all questions truthfully. The answers are anonymous and cannot be linked with your identity.

Please state briefly how you decided what to invest for the recipient in part two of the experiment

_____

The recipient will only be paid for either part one or two.
Do you think your recipient would earn more money from **their own** investment in part one, from **your** investment for them in part two, or **the same amount** in both parts?

If you guess correctly which part would earn them more money, **an additional £0.30 will be added to your bonus payment.**

- ○ Part one (their investment for themselves)
- ○ Part Two (my investment for them)
- ◉ Both parts would earn them the same payoff

SVO Slider measure – 6 primary items

In this task, imagine that you have been randomly paired with another person, whom we will refer to as **the other**. This 'other' **is hypothetical** and has no relation to your recipient from part two of the experiment. Imagine this other person is someone you do not know and will remain mutually anonymous. All of your choices would be completely confidential.

You will be making a series of decisions about allocating resources between you and this other **hypothetical** person. For each of the following questions, please indicate the distribution of money you would prefer most by selecting your preferred payoff allocations. **This payoff allocation is hypothetical** and you will not receive money for this aside from your £1.70 fixed payment. You can only make one selection for each question. Please make your decisions as if they would yield money for both yourself and the other person.

In the example below, a person has chosen to distribute the payoff so that he/she receives £50, while the anonymous other person receives £40.

This is a hypothetical situation and you will not earn any money from these decisions.

EXAMPLE

You Receive	20	25	30	35	40	45	50	55	60
Other Receives	70	65	60	55	50	45	40	35	30
	○	○	○	○	○	○	●	○	○
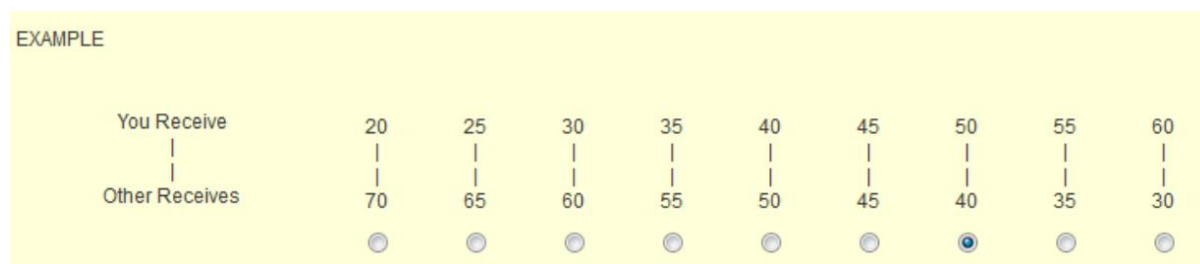
There are no right or wrong answers, this is all about personal preferences. After you have made your decision, **select the resulting distribution of money by clicking on your choice**. As you can see, your choices would influence both the amount of money you receive as well as the amount of money the other would receive.

You Receive | Other Receives

You Receive	85	85	85	85	85	85	85	85	85
Other Receives	85	76	68	59	50	41	33	24	15

You Receive	85	87	89	91	93	94	96	98	100
Other Receives	15	19	24	28	33	37	41	46	50

You Receive	50	54	59	63	68	72	76	81	85
Other Receives	100	98	96	94	93	91	89	87	85

You Receive	50	54	59	63	68	72	76	81	85
Other Receives	100	89	79	68	58	47	36	26	15

You Receive	100	94	88	81	75	69	63	56	50
Other Receives	50	56	63	69	75	81	88	94	100

You Receive	100	98	96	94	93	91	89	87	85
Other Receives	50	54	59	63	68	72	76	81	85

Empathy Quotient – 40 primary items

Below is a list of statements. Please read each statement carefully and rate how strongly you agree or disagree with it by selecting your answer.

In order for the scale to be valid, you must answer every question.

	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
1. I can easily tell if someone else wants to enter a conversation.	O	O	O	O
2. I find it difficult to explain to others things that I understand easily, when they don't understand it first time.	O	O	O	O
3. I really enjoy caring for other people.	O	O	O	O
4. I find it hard to know what to do in a social situation.	O	O	O	O
5. People often tell me that I went too far in driving my point home in a discussion.	O	O	O	O
6. It doesn't bother me too much if I am late meeting a friend.	O	O	O	O
7. Friendships and relationships are just too difficult, so I tend not to bother with them.	O	O	O	O
8. I often find it difficult to judge if something is rude or polite.	O	O	O	O
9. To check you are reading the questions carefully, answer 'strongly disagree' to this question	O	O	O	O
10. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	O	O	O	O
11. When I was a child, I enjoyed cutting up worms to see what would happen.	O	O	O	O

	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
12. I can pick up quickly if someone says one thing but means another.	O	O	O	O
13. It is hard for me to see why some things upset people so much.	O	O	O	O
14. I find it easy to put myself in somebody else's shoes.	O	O	O	O
15. I am good at predicting how someone will feel.	O	O	O	O
16. I am quick to spot when someone in a group is feeling awkward or uncomfortable.	O	O	O	O
17. If I say something that someone else is offended by, I think that that's their problem, not mine.	O	O	O	O
18. To check you are reading the questions carefully, answer 'strongly agree' to this question.	O	O	O	O
19. If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.	O	O	O	O
20. I can't always see why someone should have felt offended by a remark.	O	O	O	O
21. Seeing people cry doesn't really upset me.	O	O	O	O
22. I am very blunt, which some people take to be rudeness, even though this is unintentional.	O	O	O	O

	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
23. I don't tend to find social situations confusing.	○	○	○	○
24. Other people tell me I am good at understanding how they are feeling and what they are thinking.	○	○	○	○
25. When I talk to people, I tend to talk about their experiences rather than my own.	○	○	○	○
26. To check you are reading the questions carefully, answer 'strongly agree' to this question.	○	○	○	○
27. It upsets me to see an animal in pain.	○	○	○	○
28. I am able to make decisions without being influenced by people's feelings.	○	○	○	○
29. I can easily tell if someone else is interested or bored with what I am saying.	○	○	○	○
30. I get upset if I see people suffering on news programmes.	○	○	○	○
31. Friends usually talk to me about their problems as they say that I am very understanding.	○	○	○	○
32. I can sense if I am intruding, even if the other person doesn't tell me.	○	○	○	○
33. People sometimes tell me that I have gone too far with teasing.	○	○	○	○

	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
34. Other people, often say that I am insensitive, though I don't always see why.	○	○	○	○
35. If I see a stranger in a group, I think that it is up to them to make an effort to join in.	○	○	○	○
36. I usually stay emotionally detached when watching a film.	○	○	○	○
37. I can tune into how someone else feels rapidly and intuitively.	○	○	○	○
38. I can easily work out what another person might want to talk about.	○	○	○	○
39. I can tell if someone is masking their true emotion.	○	○	○	○
40. To check you are reading the questions carefully, answer 'strongly disagree' to this question.	○	○	○	○
41. I don't consciously work out the rules of social situations.	○	○	○	○
42. I am good at predicting what someone will do.	○	○	○	○
43. I tend to get emotionally involved with a friend's problems.	○	○	○	○
44. I can usually appreciate the other person's viewpoint, even if I don't agree with it.	○	○	○	○

Investment Outcomes

Investing for Others

Thank you for completing the questionnaire. Either a **1** or a **2** will now be randomly generated to determine whether you will receive bonus payment from **part 1** or **part 2**.

You will be paid for part: **1**

Either a **1, 2** or **3** will now also be generated to determine whether the investment was a **success** or a **failure**. As a reminder, a **3** means that the investment was successful. A **1** or **2** means that the investment was a failure.

The computer generated a: **3**, which means the project was a **SUCCESS**

We will inform you of the amount of your bonus payment once all participants have completed this experiment.

Instructions: End Page

You have now finished the experiment - thank you for your participation.

We will be in contact regarding your bonus payment once all participants have completed this experiment. If you have any concerns regarding this research please contact Georgia Buckle, Principal Investigator at georgia.buckle@port.ac.uk in the first instance, Dr Wolfgang Luhan at Wolfgang.luhan@port.ac.uk in the second, Professor Lester Hunt at lester.hunt@port.ac.uk in the third, or if you have still not received a satisfactory response, you can contact the Data Protection Officer Samantha Hill at samantha.hill@port.ac.uk.

Thank you very much for taking part in this experiment.

Appendix B. Regressions

TABLE B1. Influence of Money Manager and Recipient's Risk Preference on Investments for Others – Linear Mixed Effects

	(1)	(2)	(3)	(4)
Dep(X_{OTH})	All Participants	Without Extreme Types	Answered Part Two	Prosocial or Altruist
Rec. Pref. (X_P^{OTH})	0.19***	0.18***	0.19***	0.20***
	(0.04)	(0.06)	(0.06)	(0.05)
Money Manager. Pref. (X_{OWN})	0.39***	0.45***	0.51***	0.39***
	(0.06)	(0.08)	(0.07)	(0.06)
Gender	-0.12**	-0.12**	-0.25***	-0.10
	(0.06)	(0.06)	(0.09)	(0.06)
Age	0.003	0.002	0.005	0.003
	(0.002)	(0.002)	(0.003)	(0.002)
Constant	0.38***	0.42***	0.29**	0.32***
	(0.11)	(0.14)	(0.14)	(0.12)
Observations	2000	990	950	1490

Notes. Across all models, we take the amount invested in OTH as the dependent variable and the recipient's risk preference and money manager's investment in OWN as the independent variables, with age and gender dummies as controls. The variable Gender was coded as 1 for males and 0 for females. We consider linear mixed-effects models with all participants (model 1), with extreme behavioural types omitted (model 2), with only those who believed their investment would be more beneficial than the recipient's (model 3) and with only those who had an SVO category of prosocial or altruistic (model 4). Robust standard errors clustered on the individual level are included in parentheses. $* \; p < 0.10$, $** \; p < 0.05$, $*** \; p < 0.01$.

TABLE B2. Influence of Money Manager and Recipient's Risk Preference on Investments for Others – Mixed Effects Poisson

Dep(X_{OTH})	(1) All Participants	(2) Without Extreme Types	(3) Answered Part Two	(4) Prosocial or Altruist
Rec. Pref. (X_P^{OTH})	0.18*** (0.04)	0.16*** (0.05)	0.17*** (0.05)	0.20*** (0.05)
Money Manager. Pref. (X_{OWN})	0.38*** (0.06)	0.42*** (0.07)	0.49*** (0.08)	0.38*** (0.07)
Gender	-0.12** (0.06)	-0.11** (0.05)	-0.27*** (0.09)	-0.10 (0.06)
Age	0.003 (0.002)	0.002 (0.002)	0.006* (0.003)	0.003 (0.002)
Constant	-0.66*** (0.12)	-0.56*** (0.14)	-0.79*** (0.17)	-0.72*** (0.13)
Observations	2000	990	950	1490

Notes. Across all models, we take the amount invested in OTH as the dependent variable and the recipient's risk preference and the money manager's investment in OWN as the independent variables, with age and gender dummies as controls. The variable Gender was coded as 1 for males and 0 for females. We consider mixed-effects Poisson models with all participants (model 1), with extreme behavioural types omitted (model 2), with only those who believed their investment would be more beneficial than the recipient's (model 3) and with only those who had an SVO category of prosocial or altruistic (model 4). Robust standard errors clustered on the individual level are included in parentheses. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

TABLE B3. Influence of Preference Difference between Money Manager and Recipient – Linear Mixed Effects

Dep(S_P^{OTH})	(1) All Participants	(2) Without Extreme Types	(3) Answered Part Two	(4) Prosocial or Altruist	(5) Absolute Values	(6) Absolute Values
Pref Diff. (P_{OWN})	-0.76***	-0.82***	-0.87***	-0.76***	0.48***	0.45***
	(0.06)	(0.07)	(0.08)	(0.07)	(0.07)	(0.08)
SVO	-0.002	-0.004	0.0002	-0.007	-0.001	-0.001
	(0.003)	(0.003)	(0.006)	(0.006)	(0.003)	(0.003)
EQ	0.002	-0.001	0.001	0.001	0.003	0.003
	(0.002)	(0.003)	(0.004)	(0.003)	(0.002)	(0.003)
Gender	-0.14**	-0.15**	-0.25***	-0.17**	0.10	0.11*
	(0.07)	(0.06)	(0.10)	(0.08)	(0.06)	(0.07)
Gender x Pref Diff. (P_{OWN})	-0.03	0.07	0.15	0.0001	-0.08	-0.09
	(0.08)	(0.11)	(0.11)	(0.10)	(0.08)	(0.09)
Age	0.004	0.002	0.004	0.004*	0.003	0.003
	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
Pref Above or Below Mean					0.10**	
					(0.05)	
Pref Diff. (P_{OWN}) X Pref Above or Below Mean					0.002	
					(0.06)	
Pref Above or Below Money Managers'						0.01
						(0.07)
Pref Diff. (P_{OWN}) X Pref Above or Below Money Managers'						0.11
						(0.08)
Constant	-0.13	0.21	-0.08	0.08	-0.01	-0.005
	(0.16)	(0.19)	(0.25)	(0.30)	(0.15)	(0.16)
Observations	2000	990	950	1490	2000	1800

Notes. Across models 1-4, we take the money manager's shift from the recipient's preference as the dependent variable and the difference between the money manager's risk preference and the recipient's risk preference as the independent variable with SVO score, EQ score, age, gender dummies and an interaction term between gender and preference difference as controls. In models 5 and 6 we take the absolute value of the dependent variable and the main independent variable (preference difference), with the same set of control variables as models 1-4. In addition, we add dummy variables for whether the recipient's preference was above or below the mean (model 5), or whether the recipient's preference was above or below the money manager's (model 6), with terms interacting each with the absolute preference difference. We consider Linear mixed-effects models with all participants (models 1 and 5), with extreme behavioural types omitted (model 2), with only those who believed their investment would be more beneficial than the recipient's (model 3) and with only those who had an SVO category of prosocial or altruistic (model 4). The variable Gender was coded as 1 for males and 0 for females. Robust standard errors clustered on the individual level are included in parentheses $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

Appendix C

Money managers were categorised as 'projective paternalists' if they invested for their recipient as they invested for themselves across all recipient preferences, as a 'simulator' if they followed the recipient's preference exactly, as a 'cautious shifter' if they always invested less than or equal to their own investment, and as a 'risky shifter' if they always invested more than or equal to their own investment, regardless of the recipient's preference. From studying our data, a final behavioural type was observed; those who reversed their recipient's preference, who we have termed 'reversers'. As there is no theory that predicts this pattern of behaviour, we did not test for the potential mechanism behind this in our initial experiment. However, from questionnaire open responses, many reversers expressed that they wanted to "try to balance" the other's investment, such that "if they invest more i invested less". This suggests that they either misunderstood that only part one or two was paid, or they were trying to moderate the recipient's risk preference if they viewed it as too extreme. The latter explanation would benefit from being examined in further study.

Through this categorisation exercise, we identified 101 participants who were considered extreme types, with the remaining 99 either placing weight on multiple factors (e.g. considering their own preference, the recipient's preference, the preference difference, norms of caution and attenuating their own preference) or were driven by other factors which have not yet been addressed in previous theory. The frequency of each type, their average personal investment, SVO score, EQ score and average investment by recipient preference is displayed in Table 4.

TABLE 4. Behavioural Types: Frequency, SVO, EQ and Average Investment

Type	N	OWN	SVO	EQ	£0.00	£0.25	£0.50	£0.75	£1.00	£1.25	£1.50	£1.75	£2.00	£2.25
					Other's Preference									
Projective Paternalists	10	£0.98	26.02	30.90	£0.98	£0.98	£0.98	£0.98	£0.98	£0.98	£0.98	£0.98	£0.98	0.98
Simulators	22	£1.22	27.18	35.64	£0.00	£0.25	£0.50	£0.75	£1.00	£1.25	£1.50	£1.75	£2.00	2.25
Cautious Shifter	35	£1.64	26.19	38.11	£0.88	£0.91	£0.93	£0.81	£0.99	£0.90	£0.91	£0.82	£0.82	0.84
Risky Shifter	17	£0.54	28.63	37.53	£1.03	£0.97	£1.18	£1.15	£1.25	£1.26	£1.32	£1.50	£1.60	1.59
Reversers	10	£1.15	31.93	44.20	£2.25	£2.00	£1.75	£1.50	£1.25	£1.00	£0.75	£0.50	£0.25	0.00

Notes: The table displays the five behavioural types found in our data, alongside the number of participants who fit the type, each type's average SVO and EQ score, and each type's average investment across recipient preference.