Risk Taking With Social Consequences

Paul Clist*, Ben D'Exelle & Arjan Verschoor

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Abstract

Strong egalitarian norms and preferences may affect entrepreneurship. If people feel guilty of their success they may take fewer risks, whilst if they expect their successes to be celebrated, they would take more risks. In this paper we ask whether anticipated social consequences influence risky choices. Do people take more, less or the same risk when inequality results from risky choice? We provide experimental evidence from rural Uganda. Subjects choose lotteries for themselves and a partner under different risk resolutions, allowing us to identify their type. We find anticipated social consequences influence risk taking for most people, as only one quarter are indifferent. Two-fifths are ex post inequality seeking, holding their own pay off constant, and take more risk when inequality is common. This possibility is not considered by previous experiments in the West, but is the largest category for our sample. Only one-third are ex-post inequality averse, reducing inequality of outcomes at a cost to their expected earnings. We show types are robust, and document large gender-based heterogeneity. These results imply inequality-aversion is not holding back risk taking on average. Rather there is great heterogeneity in how people respond to anticipated social consequences.

Keywords: Risk Preferences, Social Preferences, Inequality Aversion, Process fairness, Outcome Fairness, Efficiency

*Corresponding author: paul.clist@uea.ac.uk. `https://paulclist.github.io/` *orcid*: 0000-0001-9338-9446.
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1 Introduction

Risk-taking is essential for growth and development. It often has social consequences, which are most obvious when investments lead to inequality. For example, a farmer betting on a new cash crop hopes for an abnormal profit, but unfortunate weather conditions could render her poorer than her peers. The amount of risk sets the stakes, but fortune decides on the winners and losers. In other cases our success is bound up with another's, such as business partners who thrive or fail together. A given risky choice's social consequences will differ, but the link between risk and inequality is common place.

In this paper we study how anticipated social consequences affect risky choice. This matters because a strong concern for equality of outcomes could perpetuate poverty by reducing sensible risk taking. With a sub-Saharan context in mind, Platteau (2000, p.208) argues "...egalitarian norms such as those found in tribal societies are inimical to growth." In this account, a poverty trap exists because of the mutual reinforcement of low levels of income and low levels of risk taking (Zimmerman and Carter, 2003; Genicot and Ray, 2017), which may be perpetuated by social concerns. This has triggered interest in the effects of social preferences on risk-taking and the effects of inequality on risk-management in settings such as microfinance and microinsurance (Gallenstein et al., 2020; Gallenstein, 2022; Dhami et al., 2022). Whilst it is easier to examine social consequences using direct social effects in a laboratory setting, Mobarak and Rosenzweig (2014) give compelling evidence from India that individual risky choices can affect others indirectly through general equilibrium effects. This underlines the importance of considering how social consequences affect risk taking.

If a risky choice has anticipated social consequences, there are three possible responses. First, people could simply ignore them, making risky decisions without regard for differences in final outcomes. This could be because they simply do not care about others' outcomes, or because they only care about ex ante differences. This later explanation corresponds to an *ex ante* or *process fairness* interpretation of social preferences, where the correlation of outcomes is irrelevant if expected outcomes are constant.

Second, people could take less risk if it leads to inequality. This *ex post inequality aversion* or *outcome fairness* interpretation of inequality aversion focuses on reducing the inequality of outcomes by reducing risk taking. The consequences of this view logically include lower economic growth. Platteau (2000, p.xxi) argues "the prevalence of strong egalitarian norms [in sub-Saharan Africa]... slow down entrepreneurship and capital accumulation" as ex post inequality aversion discourages sensible investments at the margin. This view could be due to an inherent dislike of inequality (e.g. envy or guilt), or because of anticipated social taxes on successful risk-taking.[1] Social taxes have received more attention in the literature (Lewis, 1955; Di Falco and Bulte, 2011; Jakiela and Ozier, 2016; Squires, 2024), but our contribution is to focus more on the inherent social preferences.

Third, people could take more risk when it increases ex post inequality, holding constant their expected pay off, and be called *ex post inequality seeking*. This prediction is an alternative implication of the well-documented egalitarian culture in sub-Saharan Africa (Platteau, 2000): the corollary of an individual doing well is that others may benefit if egalitarian norms prevail. This could be because of social transfers, as discussed by the literature on social taxes. The

stronger are egalitarian norms, the more it ceases to matter to which specific individual a gain in resources accrues, since individuals doing better than others will be expected to share their success. Put conversely, from an individual's point of view, given their own income, it would be preferable to raise the income of somebody else even if that raises inequality. The reason is that this increases total resources available: raising inequality is efficient. Consistent with this, Fafchamps (2003) argues that whilst risk sharing could discourage risk taking by taxing success, it also encourages it by reducing the cost of failure. This fundamental idea is supported by experimental evidence from Zimbabwe (Barr and Genicot, 2008). Moreover, the very notion of taxing success may be a misnomer when egalitarian norms prevail. Along these lines, D'Exelle and Verschoor (2015) find that Ugandan subjects are more willing to take risks if they can share profits with a friend. Far from taxes on success reducing investment, this implies some subjects take more risks in order to share success. This hints that some subjects could take greater risks precisely because they care about other's income. Our Ugandan subjects' egalitarian norms could then lead to being ex post inequality seeking in risky choice, because people celebrate others' success, and are happy to share their own.

To identify types we use a lab-in-the-field experiment in Eastern Uganda, where 320 subjects choose a lottery that affects both themselves and an anonymous partner. We compare the lottery chosen under three different risk resolutions, where risks are positively, negatively or idiosyncratically correlated. As inequality is absent with positive risk correlation and common with negative risk correlation, each view makes distinct predictions which do not rely on strong assumptions over functional forms. More specifically, if a subject takes less risk with a negative (compared to a positive) risk correlation they are ex post inequality averse. If they take the same risk, they are either inequality indifferent or have only ex ante inequality aversion. If they take more risk they are ex post inequality seeking. We observe which motivation dominates, if it is sufficient to affect their behaviour. Each participant makes choices for each of the three risk resolutions in two consecutive rounds. In each round, they are paired with a different partner, who is either from the same or a different village. For this we recruit subjects from 20 villages, ensuring we can vary social distance between paired subjects. We examine robustness (at the population level) and consistency (at the individual level) by using variation along three dimensions: between rounds, partners, and definitions (i.e. changing the resolutions used to define types).

Our results are summarised as follows. First, for our sample, roughly two fifths are ex post inequality seeking, one third are ex post inequality averse and one quarter are ex post inequality indifferent. The size of these categories is robust at the population level to differences in round, partner and definition. The size of the ex post inequality seeking category is surprising, given its exclusion from previous experimental work and the common view that egalitarian norms reduce risk taking. Second, despite population-level robustness, individuals mix strategies. Only a slim majority of subjects adopt the same view with different partners, but differences are not systematic. Third, the sample-level categories hide large, significant and robust gender differences. Around a third of men adopt each view. By contrast a little over two fifths of women are ex post inequality seeking, a little under two fifths are ex post inequality averse and one fifth are ex post inequality indifferent. The largest difference is that women are 16

percentage points less likely to be ex post inequality indifferent.

We contribute to work at the intersection of risk and social preferences, examining how social consequences are incorporated into risky choice. Our approach builds on four previous experimental approaches. First, some add a risky element to classic social preference games (Krawczyk and Lec, 2010; Brock et al., 2013; Cappelen et al., 2013), typically using Western students in laboratory settings, finding a mix of ex ante and ex post views explains behaviour. Second, others add a social preference element to risk games (Linde and Sonnemans, 2012; Friedl et al., 2014), by providing information to a decision maker about others' payouts. Third, bespoke experiments include asking subjects to choose between different correlations for lotteries that affect multiple players (Rohde and Rohde, 2015; Koch et al., 2021), often finding gender differences and the familiar mix of ex ante and ex post inequality averse types. Fourth, the most similar experimental designs to our own are López-Vargas (2014) and Friedl et al. (2020): subjects choose how much risk to take for themselves and a partner, under different risk resolutions. Both focus on a sample's average effects, though Friedl et al. (2020) break their sample down by country and gender. Their German sample is ex post inequality averse on average, with women more inequality averse. Neither of these effects were found in their sample from Papua New Guinea, implying sample-level heterogeneity. Our novel combination of elements uses choices between paired lotteries under different risk resolutions to identify types, adding ex post inequality seeking to averse and indifferent types.

The rest of this article proceeds as follows: section 2 introduces the experimental design and associated theory, section 3 outlines the empirical strategy, section 4 presents the results and section 5 concludes.

2 Experimental Design, Theory and Procedures

The experiment consists of three parts. In part 1, subjects are asked to choose one of the eight lotteries shown in Table 1. Moving from the degenerate lottery 7, both expected values and the spread between winning and losing increase. Choosing a lower lottery number indicates lower risk aversion. This design is similar to the ordered lottery selection design of Eckel and Grossman (2002) and the investment game of Gneezy and Potters (1997), which ensures a good degree of understanding among subjects (Charness et al., 2013).

Table 1: Lottery Options

Lottery Number	Low p=.5	High p=.5	Expected Value	Spread
7	7,000	7,000	7,000	0
6	6,000	10,000	8,000	4,000
5	5,000	12,000	8,500	7,000
4	4,000	14,000	9,000	10,000
3	3,000	16,000	9,500	13,000
2	2,000	18,000	10,000	16,000
1	1,000	20,000	10,500	19,000
0	0,000	22,000	11,000	22,000

In part 2, participants are anonymously paired and again asked to choose one of the eight lotteries, which now also affects their partner. In other words, each participant acts as a 'dictator' (Bolton and Ockenfels, 2010) and chooses for both themselves and their partner. This design feature means the other's payoffs are salient, as in a standard dictator or public goods game, with the payoffs of Table 1 applying to each player. Other experiments (discussed in the introduction) use disinterested spectators or information on others, but we wish to make others' payoffs truly salient for subjects. Subjects make three choices in part 2, one for each risk resolution, in a random order. In 'positive covariate' risk resolution the outcomes of both subjects in a pair are perfectly positively correlated (i.e. both subjects in a pair have either a high or a low outcome). In 'negative covariate' risk resolution subjects in a pair have opposing outcomes. In 'idiosyncratic' risk resolution there is no correlation between partners' payouts.

In part 3, participants are faced with the same set-up as in part 2, with the only difference being the partner they are paired with. In particular, in parts two and three each subject is anonymously paired with either a co-villager or a non-co-villager (in a random order), which creates an exogenous source of variation in social distance. According to key informants, villages in the study area historically consisted of residents of a single clan, although in more recent years in-migration has diluted the extent to which villages consist of relatives only. Villages do still connote kinship, though.

In sum, we vary the risk resolution mechanism and partner for the six 'dictator choices', such that each participant makes seven decisions in total, as presented in Table 2.

Table 2: Within-subject Treatment Design

Part	Partner	Risk Resolution
1	None	Idiosyncratic
2 or 3	From the Same Village	Positive, Negative and Idiosyncratic
2 or 3	From a Different Village	Positive, Negative and Idiosyncratic

Note: The order of co-villager is randomised, as is the order of the risk resolution in rounds 2 and 3.

2.1 Theory: Identifying Types

For round 1 decisions, let

$$U(X) = v_{self}(X) \tag{1}$$

describe the utility a decision-maker gets from choosing lottery X which only affects herself, denoted using the subscript $self$. For expository purposes, let us write lottery X as $(x_H, x_L) = (22 - 2x, x)$. This is accurate for $x = [0, 6]$, i.e. for seven of the eight lotteries. They choose x^* to satisfy $v'(X) = 0$ and $v''(X) < 0$, maximising their utility with reference to their risk aversion and/or loss aversion (relative to the 7,000 reference). Our experiment does not depend on a specific functional form for risk preferences, and so $v_{self}()$ is left undefined.

Now consider a choice in round 2 or 3 where the lottery affects the decision-maker and their partner. An outcomes-based interpretation of Fehr and Schmidt's (1999) social preferences leads to a simple model where people may care about ex post differences in outcomes (Engelmann, 2012). Whilst we never observe them separately, we use the standard notation where β captures advantageous inequality and α captures disadvantageous inequality. Utility in the positive (+), idiosyncratic (i), and negative (-) resolutions is described by:

$$U_{(X_+)} = v(X) \tag{2}$$

$$U_{(X_i)} = v(X) - 0.25 \cdot (\alpha + \beta) \cdot (x_H - x_L) \tag{3}$$

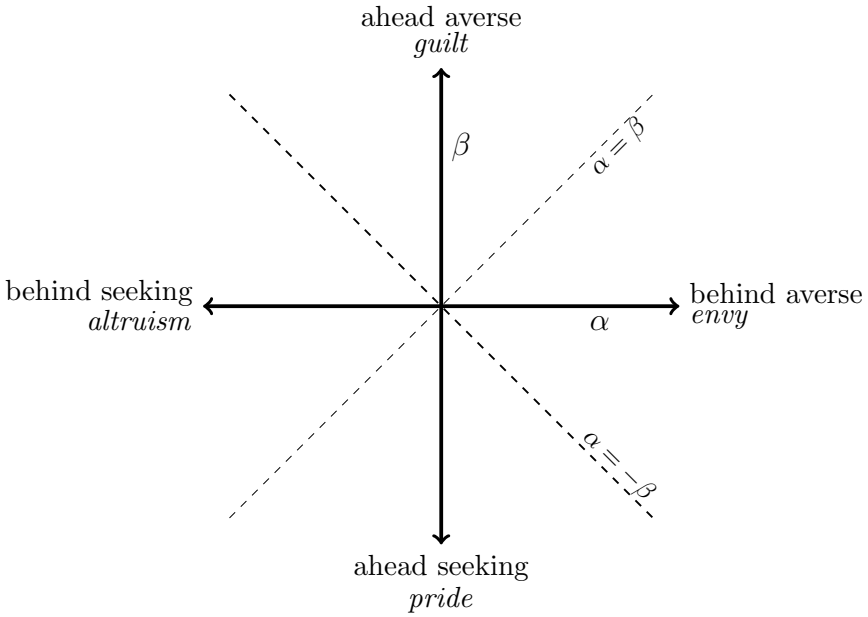
$$U_{(X_-)} = v(X) - 0.5 \cdot (\alpha + \beta) \cdot (x_H - x_L) \tag{4}$$

The first term captures risk preferences, which could differ when choosing for both players (Vieider et al., 2015). For example, people may be more cautious because they feel responsible for another's outcomes, even if there is no inequality. The second term captures ex post inequality, and should be interpreted holding constant the expected value of lotteries which are captured in the first term. By comparing someone's choices in two resolutions, say the positive and negative resolution, we can identify them as one of three types. If $(\alpha + \beta) = 0$ a person will choose the same lottery in both resolutions and be labelled as ex post inequality indifferent. If $(\alpha + \beta) > 0$ they may take more risk in the positive resolution, and be labelled ex post inequality averse. If $(\alpha + \beta) < 0$ they may take more risk in the negative resolution and be labelled ex post inequality seeking. We now discuss each view in turn, with first and second order conditions found in the Supplementary Material section A.

Ex post inequality aversion is perhaps the best-known view. Trautmann (2009) discusses the outcome-based interpretation of Fehr and Schmidt (1999) style social preferences, which expects $\alpha > 0$, $\beta > 0$ and $\alpha > \beta$, i.e. subjects feel both envy and guilt, but envy looms larger. In our experiment, subjects with sufficiently strong ex post inequality aversion would seek to take less risk in the negative resolution than the positive. As they experience ex post inequality $(x_H - x_L)$ as a disutility, they seek to reduce it by trading off some expected value $(v(X))$. A sufficiently strong ex-post interpretation of Fehr and Schmidt's (1999) social preferences predicts greater risk-taking when ex post inequality is less likely ($X_+ < X_-; X_+ < X_i; X_i < X_-$, where higher lotteries denote higher risk aversion).

Using figure 1, we can see that this is not the only combination in which $(\alpha + \beta) > 0$. A subject with greater envy than guilt would reside in the top right quadrant of figure 1, below the $\alpha = \beta$ line. But if subjects felt very strong envy or guilt they too would take less risk in the negative resolution, even if they felt some pride or altruism, *holding expected values constant.*

Figure 1: A taxonomy of disadvantageous (α) and advantageous (β) inequality



Note: We use the neutral language of ahead/behind and seeking/averse. We also give Fehr and Schmidt's (1999) terms of guilt and envy. Pride and altruism are our own descriptions.

Another type fully consistent with Fehr and Schmidt's (1999) model of inequality are those that are indifferent to ex post inequality, and so chose the same lottery in all resolutions. This could be because a subject only cares about ex ante inequality. Trautmann (2009) presents this process fairness interpretation, with the utility of lottery X with payoffs for self (x) and other (y) is given by:

$$U(X, x, y) = v(X) - \alpha \max\{E[y] - E[x], 0\} - \beta \max\{E[x] - E[y], 0\} \tag{5}$$

In our experiment $E[x] - E[y] = 0$, as both the decision-maker and their partner have the same expected payoffs for any chosen lottery. Such a type does not consider ex post inequality, so $(\alpha + \beta) = 0$ in (3) and (4). In different resolutions the ex ante type's decision problem is identical, so they should choose the same lottery $(X_+ = X_-; X_+ = X_i; X_i = X_-)$.

Another reason to be indifferent to ex post inequality is because a subject is indifferent to all inequality, be it ex post or ex ante. Such subjects would also have $(\alpha + \beta) = 0$ and choose the same lottery in each resolution. To distinguish indifference to all inequality from indifference only to ex post inequality, we rely on the cautious/risky shift literature (Bolton and Ockenfels, 2010; Vieider et al., 2015). As in the second panel of table 3, we can compare people's round 1 lottery choice (which only affects them) to their second round choice in the positive resolution (which implies no ex post or ex ante inequality). Following this literature,

Table 3: Identification of Types

Category	Type	Comparison
Ex Post Inequality	Averse	$X_+ < X_-$
	Indifferent	$X_+ = X_-$
	Seeking	$X_+ > X_-$
Shift	Cautious	$X_+ < X_{self}$
	None	$X_+ = X_{self}$
	Risky	$X_+ > X_{self}$

Note: X denotes the lottery chosen, with subscripts for positive ($+$), negative ($-$) and individual ($self$) choices. Higher lottery numbers reflect greater risk aversion, see Table 1 for details.

any differences here should be related to social preferences. Those with no shift *potentially* do not have social preferences, and so this provides a maximum bound on the proportion of the indifferent type who are actually indifferent to ex post and ex ante inequality.

There is a third alternative, beside aversion and indifference to ex post inequality. Engelmann (2012) highlights ex post inequality seeking (or efficiency-seeking) types. This only makes intuitive sense if we remember that these parameters are expressed *holding constant one's expected payoff*. He notes that there is a temptation to augment social preference utility functions with additional parameters capturing efficiency concerns, but that there is a simpler alternative. Fehr and Schmidt (1999) assume that subjects, holding their own pay off constant, prefer others to have less when they themselves are behind (i.e. players are envious: $\alpha > 0$). If instead subjects want others to have more, holding their own payoff constant, we can relax this constraint on α, and so capture an efficiency-seeking motive. Rather than envy, $\alpha < 0$ then captures a kind of altruism; holding my pay off constant, I obtain positive utility from you earning more, even if you already earn more than me. As long as this altruistic motive is stronger than feelings of guilt (captured by β), then $(\alpha + \beta) < 0$. As per figure 1 various combinations explain $(\alpha + \beta) < 0$, but each implies taking *more* risk when ex post inequality is more likely. Rather than reduce $[x_H - x_L]$, they wish to increase it, as (holding their own pay off constant) they wish to increase other's pay off rather than reduce it. Engelmann (2012) discusses at length how this way of capturing effeminacy seeking motives is superior to alternatives. The predictions are then the opposite to those in the ex post inequality averse case ($X_+ > X_-; X_+ > X_i; X_i > X_-$, where higher lotteries denote higher risk aversion).

Note that ex ante inequality seeking behaviour could also be modelled as risk aversion over the sum of payments, with subjects more willing to take the riskiest lottery if total earnings are guaranteed. This motivation can be understood as not feeling excessively envious if the other wins, or excessively guilty if you win. Rather, you need to feel some pride in your own good fortune or to altruistically celebrate another's success in order to be willing to take on more risk in the negative resolution.

Table 3 summarises predicted behaviour for these three types. We do not need to use the idiosyncratic treatment in order to distinguish types, but is a useful treatment nonetheless. For ex post inequality averse individuals, risk taking would be higher in the idiosyncratic treatment than in the positive covariate treatment and lower than in the negative covariate treatment. For ex post inequality-seeking individuals, the reverse is true. For ex post inequality indiffer-

ent individuals, risk taking should be the same in each treatment, including the idiosyncratic treatment. The idiosyncratic treatment thus provides us with a robustness check: it allows us to investigate whether a similar classification of types is obtained when we make use of it in addition to the other two treatments.

2.2 Sample and Procedures

Our subject pool is the result of a random multi-stage sample from a rural part of eastern Uganda. Once a convenient sub-county was chosen, five villages were randomly selected for each of the four parishes comprising the sub-county, a sampling frame of all adult (18+) members of the selected villages was obtained, and experimental subjects were randomly selected in a transparent and easy to understand way that was witnessed by key village representatives; see Supplementary Materials for the details. About 5% of individuals did not show up and were randomly replaced with another village member. We conducted two sessions per day for four consecutive days, one per parish. In each of the four parishes we used one central location, and experimental subjects from the parish were randomly selected to a session, subject to some restrictions, including that the appropriate number of co-villagers could be utilised. Standard procedures (including voluntary participation and no communication) were used throughout. Subjects received an average payout of just over 11,000 Ugandan shillings (around 4 US$) once an unannounced show-up fee of 2,000 UGX was included. This represents a little under three days' labour in the local economy, while the experiment lasted around 3 hours.

All 320 subjects knew that one decision would be chosen to be played for real, and that risk resolution took the form of retrieving either a red ball (representing the 'Low' amount) or a white ball (representing the 'High' amount) from a bag. These colours were used throughout, from the trays used in explanations to the decision sheet showing all eight lotteries. The different risk resolution mechanisms were described using specific names. Positive covariate risk was introduced as 'pick once', meaning one ball was selected and affected both partners in the same way (e.g. the red ball would mean both partners receiving the low amount). Negative covariate risk was introduced as 'different' meaning that one ball was selected for the first partner, with the other receiving the ball that was left in the bag. The idiosyncratic resolution was introduced as 'pick twice' meaning that after the first ball had been selected, it was replaced and a second draw was made for the second subject.

To ensure understanding of the instructions each of the seven decisions is based on the same basic lottery with consistent visual aids, and so parts 2 and 3 built on part 1. The culturally appropriate explanation of each element of the game, and the use of control questions resulted in high levels of comprehension. On average subjects answered a set of control questions correctly in 95% of cases, with 82.5% of subjects getting all fifteen control questions right. Control questions reveal slightly lower comprehension for the idiosyncratic resolution. Whereas the average level of correct responses for the positive and negative resolutions was 98.4%, this dropped to 90.6% in the idiosyncratic resolution. All responses are included (given the overall high level of understanding) but the differential is worth noting. As literacy cannot be guaranteed all decisions were made with an enumerator.

3 Empirical Strategy

Our cleanest identification of different types comes from using the round 2 decisions, pooling across their partner type (same/different village) and then using the difference between their positive and negative resolutions (see the top panel in table 3). We can examine robustness at the population level and consistency at the individual level by allowing variation along three dimensions.

First, we use third round choices. While we can rely purely on the first set of relevant choices a subject makes, using third round choices means we have an extra dimension along which to test the robustness of our results.

Second, we can examine types separately by partner type. The use of partners from the same and different villages allows a variation in social distance. It has previously been found that lower social distance increased offers in the dictator game but not the ultimatum game (Charness and Gneezy, 2008). This does not easily translate into predictions regarding the popularity of different types, but does suggest an investigation of whether social distance is an important element. If the popularity of classifications differs by partner type, then social distance affects the interpretation of social preferences in a risky setting. If it does not differ, these types would then be rooted in norms that transcend family loyalties.

Third, we can use the idiosyncratic resolution to define types. This has been used before, with Brock et al. (2013) and Krawczyk and Lec (2010) using a comparison between idiosyncratic and negatively correlated resolutions. The idiosyncratic resolution will look like a positive resolution half of the time, and look like a negative resolution half of the time. This means that we can replace either positive or negative lotteries in the top panel of table 3 with the idiosyncratic treatment, and produce the same predictions and definition of types. This is not our preferred method: it is less clean as there are four possible outcomes to consider, rather than two. In risky choice this is perhaps important given probability weighting and/or different responsibility effects (Dana et al., 2007). The comparison between positive and negative resolutions is not confounded by the difference in the number of possible outcomes, and so preferred. However, this allows a robustness check as well as facilitating comparisons with previous literature, and so is included.

We can also examine the potential effect of noisy choices. In any lab experiment subjects could err, for example by choosing lottery 5 when their true preference is for lottery 4. In our setting, noisy choices would have a fairly small effect on classifications because noise is symmetrical. A subject is equally likely to accidentally choose a lottery one higher or one lower than their 'true preference'. This means those wrongly classified will tend to balance each other out, at least partially. We quantify the extent of misclassification, based on different levels of assumed noise, to see whether types are robustly identified.

3.1 Heterogeneity

Once we have established the presence, robustness and consistency of classifications, we turn to analysing heterogeneity. This is useful to see whether different views are adopted by certain types of people, or whether they are spread equally amongst our sample. Previous work has

shown that at least two views (ex ante and ex post inequality aversion) are needed to explain behaviour, but has not considered who adopts which views. Neither Brock et al. (2013) nor Cappelen et al. (2013) investigate correlates of different types. Krawczyk and Lec (2010) discuss weak effects of gender, experience, major and risk aversion, but these results are not reported.

When they are examined separately, there is a body of evidence for common correlates of social and risk preferences. For individual risk aversion the largest effect is gender. Women are typically more risk averse than men (Eckel and Grossman, 2008; Croson and Gneezy, 2009; Charness and Gneezy, 2012). For social preferences in deterministic settings, Bellemare et al. (2008) found inequality aversion at the individual level was positively related to age, education, low income, risk aversion and being male. The gender effect is fairly consistently found (Croson and Gneezy, 2009) and can potentially explain many differences in behaviour by gender (Kamas and Preston, 2015). At a higher level, subject-pool differences are common. Fisman et al. (2015) find law students at Yale to be more efficiency-seeking than the general American public. Likewise, economics students in Germany and Switzerland tend to be more efficiency-seeking than non-economics students, with other effects including location and gender (Fehr et al., 2006; Engelmann and Strobel, 2006).

Do these differences translate to our setting, of examining risky choice with social consequences in Uganda? It is unclear, but gender appears the most likely candidate. The related social taxes literature finds gender effects in Kenya, with different rates of social taxes, and different strategies to mitigate these (Jakiela and Ozier, 2016; Squires, 2024). The papers closest to our own, Friedl et al. (2020), Koch et al. (2021) and Rohde and Rohde (2015), also find gender differences despite using different contexts, but do not consider an ex post inequality seeking type. These findings point to possible correlates in our setting, even though they are from different experiments and countries.

4 Results

Table 4 reports summary statistics. The age, education, wealth and religion of our sample is in line with expectations for the region. However, our sample consists of more women than men, mainly due to men's higher work commitments (see Supplementary Materials for more). This means that sample-level behaviour will overweight women, making the heterogeneity analysis more important. See Supplementary Materials C.3 for results using sampling weights.

The summary statistics reveal that much of our sample has exposure to risk in their economic activities, with an average of 2.2 acres to farm and running 0.8 businesses. In our sample having no exposure to farm land and not having one's own business is relatively rare, with only 18% of the sample having no business and less than 1 acre to farm. This illustrates that our sample has not only the kinds of strong social bonds that Platteau (2000) refers to, but also widespread exposure to risk in everyday life. In this sense, the rural Ugandan setting is a useful sample in which to identify the prevalence of different types.

Table 4: Summary Statistics

Variable	Mean	SD	min	max	Variable	%
Age	35.9	13.7	18	80	Female	67.4
# of businesses owned	0.79	0.88	0	5	**Education**	
Land (acres)	2.17	2.86	0	20	None	20.1
					Some primary	47.6
Lottery Choice					Some secondary	30.7
Round 1	3.50	2.39	0	7	Some tertiary	1.6
Round 2, + resolution	4.02	2.19	0	7	**Religion**	
Round 2, − resolution	3.67	2.23	0	7	Muslim	59.4
Round 2, i resolution	3.87	2.21	0	7	Catholic	8.9
Round 3, + resolution	3.82	2.24	0	7	Born Again	7.9
Round 3, − resolution	3.89	2.23	0	7	Anglican	22.9
Round 3, i resolution	3.83	2.32	0	7	7th Day Adventist	1.0

Note: N=319. 4 people declined to give their religion. In later regressions, education is coded as 0-3. Lower numbered lotteries indicate lower risk aversion: see table 1. The +, − and i resolutions refer to positively, negatively and idiosyncratic resolutions of the lottery.

Table 4 allows a population-level overview of lotteries chosen. The standard methodology for calculating any cautious/risky shift is to compare the difference between an individual choice (round 1) and a positively correlated lottery (we use round 2, as the first paired choice a subject makes). The average difference is 0.52: subjects tend to choose a safer lottery when also deciding for someone else. This cautious shift is in line with previous work in the gains domain (Bolton and Ockenfels, 2010), and is significant (in a paired t-test, t=3.48, degrees of freedom=318, p=0.0006; in the non-parametric Wilcoxon matched-pairs signed-rank test, z=-3.326, p=0.0009). The cautious shift appears to affect all choices for a paired person, as the average lottery chosen for round 1 is the riskiest of the seven choices. Note that we cannot exclude an order effect here, as the individual choice is always taken in the first round. However, where we can test order effects (e.g. the second panel of figure 2), they are mostly insignificant.

4.1 Main Results: Classifying Types

We now turn to identifying different views. Table 5 shows subject's second round choices, in terms of the difference between the negative (x_-) and positive (x_+) resolutions. This gives the percentage of the sample that conform to different theories. If a subject takes more risk in the positive resolution, they are ex-post inequality averse. If a subject does the opposite they must see the higher combined earnings implied by ex-post inequality as a positive thing, and so be ex post inequality seeking. Lastly, if a subject chooses the same lottery in both resolutions, that is consistent with ex post inequality indifference. Supplementary Materials B provides raw data on the actual lotteries chosen, and Supplementary Materials E shows the effects of assuming subjects make noisy choices.

Table 5: Types and Underlying Data, Round 2

Classification	Ex Post Inequality														
	Averse							Indifferent	Seeking						
Percentage	33.2%							26.0%	40.8%						
$x_+ - x_-$	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7
n	0	3	2	9	13	27	52	83	46	35	23	8	7	8	3
Total	106							83	130						
No Shift	16							40	14						

Note: N=319. Lower numbered lotteries indicate lower risk aversion: see table 1. The table shows the size of the difference; this is a noisy measure so we only focus on the classification. If subjects chose randomly, we would expect 40 out of 320 (1/8th) to be classified as ex ante inequality averse, and 140 (7/16ths) in each of the other categories. We can reject this null hypothesis at the 1% level ($\chi^2(318)$=20.1, p=0.00004). 'No Shift' is the frequency of people choosing the same lottery in the first (individual) round and the second round positive resolution. This provides a maximum bound on people who are inequality indifferent. The frequency of cautious shift for the three types above (left to right) are 33, 27 and 88, and for risky shift are 57, 16 and 28.

Table 5 shows that the largest classification is ex post inequality seeking: 41% of the sample take more risk than when there is guaranteed ex post inequality. It is surprising that it is the largest category, given the focus of previous work on the other two categories (Krawczyk and Lec, 2010; Brock et al., 2013; Cappelen et al., 2013). Around a third of the sample are classified as ex post inequality averse, taking more risk when equality is guaranteed.

The smallest category is ex post inequality indifferent: around a quarter of the sample choose the same lottery in positive and negative resolutions. A common difficulty with this category is in distinguishing subjects that are indifferent to both ex ante and ex post inequality from those that are only indifferent to ex post inequality. In order to separate these two, we rely on other decisions. If subjects care about ex ante inequality, we might expect them to have a cautious or risky shift: their first round choice should not equal their choices in round 2 (see the second panel of table 3). The last line of table 5 shows 40 ex post indifferent types chose the same lottery in the first round as they do in negative and positive resolutions in the second round. This indicates that at most half of the ex post inequality indifferent category do not appear to have social preferences at all, and do not allow affecting others' payoffs to affect their decisions. The rest appear to have ex ante, but not ex post, social preferences. This is an imprecise exercise, as the cautious shift is not a direct or clean measure of the strength of social preferences; the size or presence of such a shift may also be driven by expectations and/or beliefs regarding a partner's preferences. However, the best indication available is that at most half of this group are indifferent to inequality.

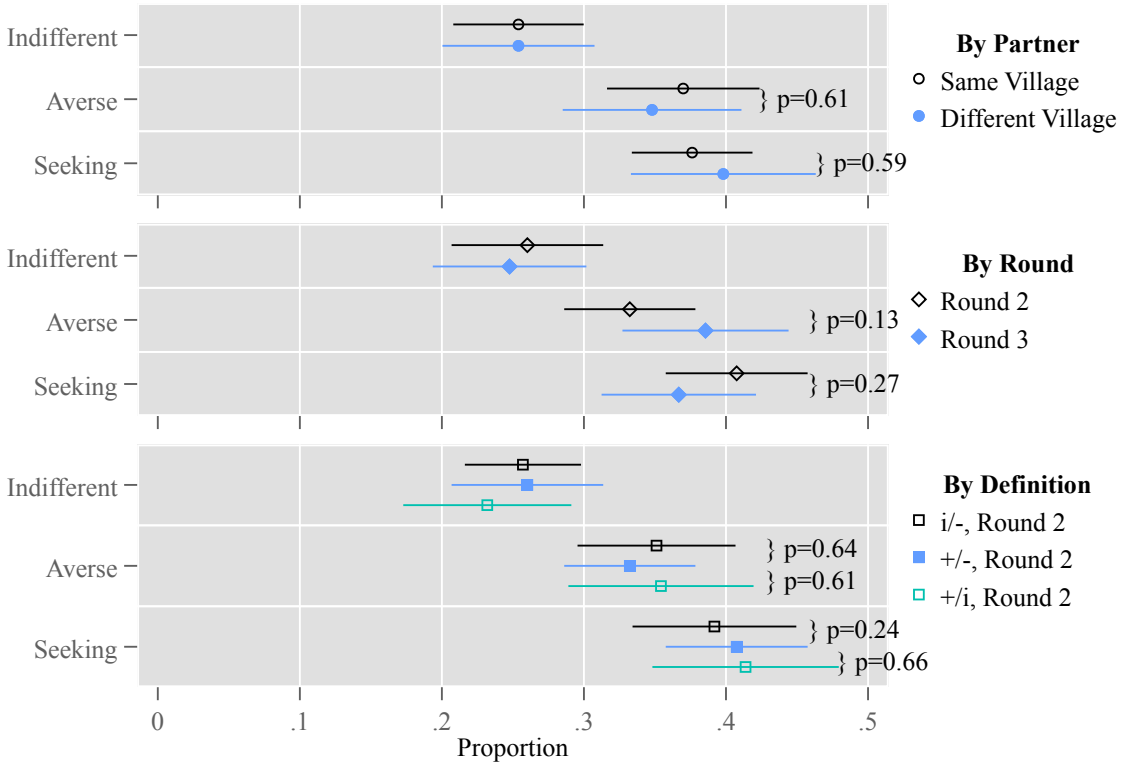
4.2 Population-level Robustness and Individual-Level Consistency

Having presented the popularity of different types, we now turn to testing whether these proportions are robust to different partners, rounds or definitions. In figure 2 we plot the proportion of subjects that is identified as each type, along with the confidence interval. To see whether any differences are statistically significant we report p values from three multinomial logits (one per panel). We pool the relevant decisions, and cluster standard errors at the village level. This

allows an investigation as to whether the category sizes differ by partner, round or definition. The base category is ex ante, and any differences in the base category would be implied by changes in the two other categories.

The first test is whether the size of each category depends upon whether the partner is a covillager or not, using both rounds of data. If social distance plays an important role in determining how social preferences are interpreted in risky choice, then we would expect a difference. Instead, figure 2 shows the size of each category is very similar, with no significant differences.

Figure 2: Robustness of Classifications by Partner, Round and Definition



Note: The proportion is shown with its 95% confidence interval. All p-values are from a multinomial logit model, with standard errors are clustered at the village level. The first test pools rounds. The second test pools partner types. In both cases N=638, and the classification depends upon comparing the lottery chosen in positive and negative resolutions. For the third test only the second round is used. As all three resolutions are used, N=957. $i/-$ uses the idiosyncratic and negative resolutions, $+/-$ uses positive and negative, and $+/i$ uses positive and idiosyncratic.

The second test is whether the classifications differ by round. Again, proportions are very similar and there is no statistically significant difference: the size of classifications are robust to different rounds. This does include the one instance in which ex post inequality seeking is not the largest category: in round 3 more subjects are classified as ex post inequality averse. This is not a statistically meaningful difference, and serves to emphasise that there is not a large difference in the popularity between ex post inequality averse and seeking types.

The third test is whether the population-level proportions are robust to differences in definition. The base definition is the positive-negative comparison, with the (less clean) idiosyncratic

resolution included in the other two cases. Figure 2 again shows that the popularity of each type is similar, and there are no significant differences. In each case, inequality seeking is marginally the largest category, closely followed by inequality averse, with indifferent describing about a quarter of the sample.

We can summarise the above in our first result.

Result 1 *For our sample, ex post inequality seeking is the largest category, closely followed by ex post inequality averse, with indifferent the smallest. The respective sizes are approximately two fifths, one third and one quarter. At the population level, the classifications are robust to differences in the partner, round and definition.*

Next, we move to examining consistency: do subjects play the same strategy with different partners, in different rounds, or according to different definitions? The preceding subsection established robustness at the population level, but this does not imply consistency at the individual level: a more stringent test. We use use the same three dimensions: partner, round and definition. In each of the three definitions, a slim majority of subjects play the same strategy with both partners in the two rounds. We test for systematic differences, finding we cannot reject table symmetry: there are no systematic differences at the individual level by partner or round. (See Supplementary Materials C.1 for details and test statistics.)

Looking at consistency between different definitions, there is a higher level of consistency (around 60%) when at least one of the definitions is the cleanest: the comparison between negative and positive resolutions. If the idiosyncratic resolution is used in defining both classifications, consistency falls to around a third. This complements other reasons why the idiosyncratic resolution is not our preferred resolution: it has lower comprehension and confounds the number of outcomes (four rather than two). Turning to the tests for table symmetry, we again find there are no systematic differences. Given the low levels of individual consistency for the least clean definitions, this is surprising. This can be understood as individuals mixing strategies, but being equally likely to be identified as a given type in any round, with any partner or using any definition. In other words, the mix of strategies at the individual level is not influenced by the round, partner or resolution.

The consistency can be summarised in our next result.

Result 2 *A slim majority are consistent with different partners. With the same partner, consistency is around two thirds with cleaner definitions and one third with less clean definitions. Subjects do mix strategies, but not systematically.*

4.3 Robustness of Classifications

In the Supplementary Materials, we explore whether our empirical strategy is robust to two potential problems: corner choices and noise. Corner choices occur when a subject chooses an extreme lottery in the two resolutions being considered, i.e. they choose lottery 7 or 0 in both resolutions. When a subject chooses the riskiest lottery (0) in both resolutions, we cannot be sure whether our classification of them as ex ante inequality averse is accurate. It is possible that they could have taken even greater risk in the negative resolution (for example), if one had

been available. For this reason, we cannot be sure whether the subject is truly indifferent, or if they may actually be an inequality seeking type. A similar logic operates for indifferent types choosing 7 in two resolutions: they could actually be an ex post inequality averse type. This affects around 7% of the sample (see the Supplementary Materials D for details). The most extreme solution would be to exclude these types, which would slightly reduce the estimated popularity of the indifferent type from around a quarter to around a fifth. Otherwise the qualitative insights are unchanged, with the relative size of the types very similar.

Another potential problem is that subjects could err in their choices, such that their chosen lotteries are affected by noise. In the Supplementary Materials E, we simulate different fractions of the sample being subject to this kind of 'trembling hand' such that they intended to have a difference between resolutions that was one lottery higher or lower than their actual choice. We show that assuming 20% of subjects erred in their choice leaves our results remarkably similar, with around 2 percentage points fewer indifferent types. To add intuition to the small effect of noise, many subjects will be unaffected by a one lottery difference. Further, noise is symmetrical. For every subject we simulate to be wrongly be classified as, say ex post inequality averse when they should be indifferent, there are then some subjects in the reverse situation. Each additional 20% perturbation decreases the indifferent type by around 2 percentage points, with the two other types increasing by approximately 1 percentage point. With the extreme assumption of 60% of the sample choosing the 'wrong' lottery, the indifferent group reaches as low as 18% in one case, rather than the normal 25%. Note that we have no reason to expect such a large percentage of the sample did err when making their choices, we merely wish to demonstrate that our experimental design is robust to even quite large fractions of the population choosing the 'wrong' lottery.

Both of these issues imply that our design, if anything, slightly overestimates the indifferent type. The size of this bias depends on further assumptions. If all of those making corner choices were actually wanting a more extreme option, then the bias is around 6 percentage points. If none of them were constrained, the bias is zero. For noise, if 60% of our sample chose the 'wrong' lottery, we may have overstated the indifferent group's size by around 6 percentage points. If none of our sample chose the wrong lottery, then the bias is zero.

4.4 Heterogeneity: Multinomial Logit Model

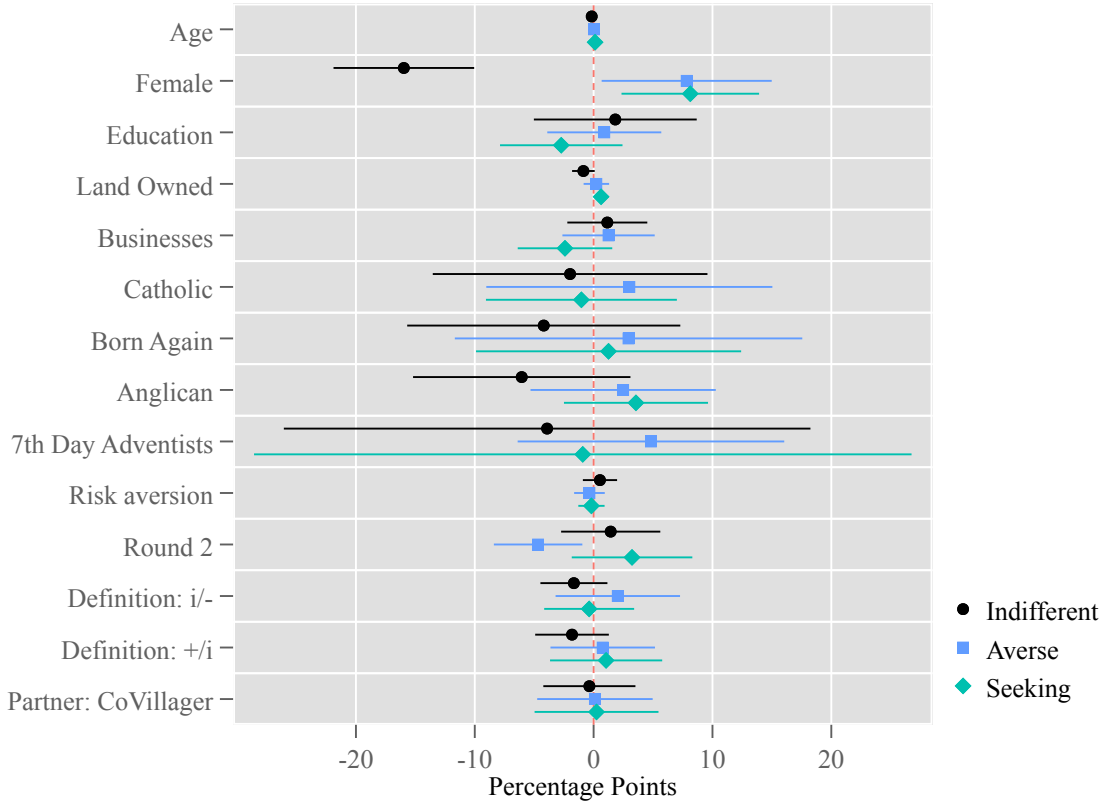
We now examine heterogeneity, using a multinomial logit model. This allows us to measure and control for the influence of subject and experimental characteristics. For subjects, we can include the effects of gender, risk aversion (using the lottery chosen in the first round), age, education, proxies for wealth (the acres of land owned and the number of businesses owned) and religion. As discussed in section 3, there is little directly relevant work showing whether the propensity to take a given view is predictable. However, findings from the distinct risk and social preferences literatures do point to these being likely candidates. Table 4 provides details of sample averages.

To control for experimental features we pool the six paired choices a subject makes, clustering standard errors at the village level. This makes use of all available data. However, this does include the idiosyncratic treatment which is less clean (it has 4 outcomes, not 2) and less likely

to be understood (by 8 percentage points). For experimental characteristics, we can again test whether there are systematic differences by partner, round or definition.

Figure 3 displays the average marginal effects, with the regression results in the Supplementary Materials C.2. Women are 16 percentage points less likely to be classified as indifferent, and 8 percentage points more likely to be either inequality seeking or averse. Other individual characteristics are not significant, with small estimated effects. Age, risk aversion and land owned (all cases with sufficient data and variation) are tightly estimated zeros. The smaller religious affiliation categories (i.e. neither Muslim nor Anglican) have much larger standard errors. In short, gender is the only individual characteristic to have a significant effect. The size of the gender effect is large (the smallest difference is 8 percentage points) and significant (p values range from 0.032 to 0.0000001 in the marginal effects results).

Figure 3: Average Marginal Effects of Personal and Experimental Characteristics



Note: Marginal effects are displayed along with 95% confidence intervals. The category '7th Day Adventists' has only 3 individuals, and correspondingly large standard errors. It is omitted in the above so that the graph is more readable. See the Supplementary Materials C.2 for further details.

Moving to the experimental features of the classification, we mostly confirm previous results that classifications are not influenced by the partner, round or definition. The previous finding that social distance (measured by partner type) is insignificant is confirmed by a tightly estimated zero. The one exception to the pattern of confirming findings is that round 2 choices are around 5 percentage points less likely to be classified as ex post inequality averse (p=0.014). This is the only evidence of an order effect in our experiment. It is not clear whether round

2 choices are more or less likely to be accurate (as subjects are both fresh and inexperienced), or whether this is merely a chance effect. Given the inconsistently significant effect, we do not wish to over interpret it.

4.5 Robustness of Gender Differences

Given large empirical differences in types by gender, we provide three further tests of gender differences. It is possible that the preceding difference is driven by the less clean idiosyncratic resolution, and so we test for the robustness of the differences between genders within each partner, round and definition. This is a stringent test, which lowers statistical power by focusing on sub-groups. Next, we examine whether the differences are driven by different social preferences rather than how social preferences affect risky choice. It is possible that the large gender effects are driven by more men being inequality indifferent, rather than having a different way of incorporating social consequences into their decision making under risk. Lastly, we examine differences in the risky choices themselves, not just the types that come from within-subject comparisons.

First, table 6 reports χ^2 tests for gender differences within partners, rounds and definitions. In all seven cases there is a statistically significant difference at the 5% level. In five cases the difference is significant at the 1% level. Indifference is consistently the least popular strategy for women (only 16-22%), but it is the most popular for men in five of the six cases (32-43%). Women are correspondingly more likely to be averse or seeking of ex post inequality averse. The last line of table 6 pools 6 decisions, totalling almost 2,000 classifications. Men are almost equally likely to adopt any of the three strategies: slightly under a third are classified as indifferent, with a little over a third in both averse and seeking categories. Women are different: a little over two fifths are ex post inequality seeking, a little under two fifths are averse and one fifth are classified as averse.

Table 6: Gender Effects, by Partner, Round and Definition

		Classification, Ex Post Inequality (%)			Test Statistics	
Definition	Gender	Averse	Indifferent	Seeking	χ^2	p value
Co-Villager	Male	38.5	31.7	29.8	14.0	0.0009
	Female	19.1	39.5	41.4		
Non Villager	Male	39.4	30.8	29.8	16.6	0.0005
	Female	18.6	36.7	44.7		
Round 2	Male	34.6	30.8	34.6	6.1	0.048
	Female	21.9	34.4	43.7		
Round 3	Male	43.3	31.7	25.0	28.9	0.0000
	Female	15.8	41.9	42.3		
i/-	Male	37.5	30.8	31.7	11.4	0.003
	Female	21.9	34.4	43.7		
+/i	Male	31.7	26.9	41.3	8.0	0.018
	Female	19.1	39.5	41.4		
All, Pooled	Male	31.7	34.3	34.0	32.5	0.0000
	Female	20.0	38.4	41.6		

Note: For the first six comparisons N=319, as each comparison pools either round or partner. The first two comparisons are pooled across rounds for the +/- comparison. The third and fourth definitions are pooled across partners for the +/- comparison. The fifth and sixth definitions are pooled across partners and use only the second round choices. The seventh pools all six classifications, so N=1,914.

Second, we examine the role of social preferences. As discussed in section 2, the category of indifferent includes people who may or may not be indifferent to ex ante inequality. It is therefore possible that the large gender effects in the multinomial model are driven by more men being ex ante inequality indifferent (Bolton and Katok, 1995; Eckel and Grossman, 1996, 1998; Cox and Deck, 2006; Croson and Gneezy, 2009). To distinguish between these two underlying motives, we can consider whether the cautious/risky shift differs by gender. This is an indication of whether actions reflect an indifference to ex post inequality, or an indifference to a partner's payout. A simple t-test for the difference between the lottery chosen in the first round and the positive resolution in the second round by gender reveals that there is no significant difference in the cautious shift (-0.74 for men, -0.41 for women, degrees of freedom=317, t=1.02, p=0.31; Wilcoxon Rank Sum test: z=1.03, p=0.30). This implies that the difference is not driven by the strength of social preferences.

A complementary approach is comparing how many of those classified as averse have no cautious/risky shift. For Round 2 using the positive and negative resolutions, 20/47 women who are classified as averse have no cautious/risky shift, compared to 20/36 men. For Round 3, those numbers are 14/34 for women and 20/45 for men. In total that means 42% of women that are the averse type seem to be ex ante inequality indifferent, against 49% of men. This bounds the effect of social preferences on the popularity of different types. At the margin men are 16 percentage points more likely to be the indifferent, and those men are c. 8 percentage points more likely to be ex ante inequality indifferent (above), men are approximately 1.3 percentage points more likely to be ex post inequality indifferent. In sum, there are differences in social

preferences, but they play a minor role in this experiment. They do not drive the difference in the popularity of the ex post indifferent type.

Table 7: Gender Difference in Average Lottery Choice, by Round and Resolution

Round :	1	2	2	2	3	3	3
Resolution:	individual	+	−	i	+	−	i
T test, Parametric							
β_{Female}	0.62^{**}	0.29	0.32	0.54^{**}	0.096	0.11	0.44
t	(-2.17)	(-1.10)	(-1.22)	(-2.06)	(-0.36)	(-0.42)	(-1.59)
Wilcoxon rank-sum test, Non-Parametric							
z	(2.17^{**})	(0.85)	(1.16)	(1.87^{*})	(0.35)	(0.33)	(1.43)

Note: * $p < .1$, ** $p < .05$, and *** $p < .01$. Partners are pooled in rounds 2 and 3, so N=319 in all cases. Lower numbered lotteries indicate lower risk aversion: see table 1.

Third, we examine gender differences in risky choice. The results so far establish large gender differences in classifications derived from comparing choices within the second or third round for a given subject. Next, we examine whether there are gender differences in the choices themselves. Is there a gender difference in risky choice when lotteries affect two people? Table 7 shows the mean difference between the genders in each of the seven decisions a subject makes, with parametric and non-paramteric tests. The largest difference is in individual choice, with women found to be significantly more risk averse than men. The difference is over half of one lottery on average, and just over a quarter of a standard deviation. Such findings are common. However, turning to risky choices which also affect someone else, we see that the difference is much smaller. In the cleaner resolutions (positive and negative, which only have 2 possible outcomes and are more widely understood) the gender difference shrinks considerably. The smallest difference finds women are more risk averse by less than one twentieth of a standard deviation. In all cases women are still more risk averse on average, but the size (and hence significance) is greatly reduced.

We can summarise the gender results below.

Result 3 *There are large, consistent and significant gender differences in risk taking with social consequences. Men are roughly equally spread between ex post inequality averse, indifferent and seeking. By contrast, a little over two fifths of women are ex post inequality seeking, a little under two fifths are averse and a fifth are indifferent. The largest difference is that women are 16 percentage points less likely to be indifferent.*

Result 4 *Women are significantly more risk averse than men in individual decisions. When decisions affect two people, the size and significance of this difference shrinks considerably.*

5 Discussion and Conclusion

In this paper, we explore whether social consequences affect risky choice. Experimental subjects choose lotteries for themselves and their partner under different risk resolutions. This varies whether ex post inequality is impossible, possible, or common. Comparing choices made with

different social consequences identifies a subject's type, essentially whether they take more, less or the same risk when inequality is more likely. For our subject pool the smallest group are ex post inequality indifferent subjects, as only one quarter choose the same lottery regardless of the risk resolution. This means the vast majority incorporate ex post social consequences into risky choice. Around one third of subjects are ex post inequality averse, taking more risk if equality is guaranteed. This type will view investments as less attractive if they lead to inequality. Around two fifths take less risk when equality is guaranteed. These ex post inequality seeking types see inequality as a part of greater guaranteed total earnings. This can be understood as a kind of 'social hedge', where one's own losses are linked to another's gains. While this has been relatively neglected in the literature, we find ex post inequality seeking is the largest category.

We test the robustness of these results at the population and individual level. In both cases, category sizes are robust to different partners, rounds and definitions. Subjects do mix strategies, but not systematically. Robustness to different rounds merely builds confidence in the results. Robustness to different partners is somewhat different. Subjects made choices with partners from the same and different villages. With people from the same village, lower social distance implies higher guilt and envy so we would expect more ex post inequality averse types. By contrast, we find social distance is not related to how social consequences affect risky choice. Future research may investigate this further, as our design cannot observe guilt and envy separately.

The robustness to definition has implications for future experimental designs, as well as the relevance of our results. Previous research mainly uses an idiosyncratic resolution (Brock et al., 2013; Cappelen et al., 2013). Our preferred definitions rest on a cleaner comparison between positive and negative resolutions. We dislike the idiosyncratic resolution because it has four possible outcomes rather than two. It is also less well understood (by 8 percentage points in control questions), and individual-level consistency using the idiosyncratic definition is lower. However, in terms of experimental design the size of the categories is robust to different definitions. Despite misgivings, comparing any two resolutions gives similar results. Further, while our preferred definition relies on perfect correlations, outside of the lab there are many less clean situations. Our results hold with the idiosyncratic resolution, implying greater external validity. We should expect investments with different degrees of negative or positive correlation to still affect risky choice.

Having shown robustness, we identify correlates of these types. Building upon the two large research literatures in social and risk preferences, we find large gender differences. No other individual characteristic is a significant predictor of types. Despite reasonable theoretical cases, wealth, age and risk aversion are especially tightly estimated zeros. The gender effect is large: women are 8 percentage points more likely to be either ex post inequality averse or seeking. Men are 16 percentage points more likely to be ex post inequality indifferent, and we show that this is not driven by different underlying social or risk preferences. Further, when examining the underlying risky choices, we find that the well-known gender effect almost disappears when subjects choose a lottery that affects themselves and another.

A limitation of our study is that differential work commitments meant our sample is approximately two thirds women, which could potentially affect their behaviour. Another limitation is

that we do not explore how the prevalence of types would interact with possible transfers, as we use an anonymous design. An obvious prediction would be that if people make choices knowing their identity is public knowledge, they may take larger risks and hope to be compensated. However, this prediction is unlikely to hold, as demonstrated by D'Exelle and Verschoor (2015). In an investment task conducted in the same study area, they found that when the paired person (whose earnings were not directly influenced by the first person's risky choice) was given the option to compensate potential investment losses the first person preferred to take less risk relative to a treatment where this 'loss compensation' option was not available. They argue that directed altruism or expected reciprocity most plausibly explain this finding.

A policy-maker that has absorbed the contemporary conventional wisdom may think that most sub-Saharan villagers are too focused on inequality of outcomes. They would be pessimistic about the social dimension of risk, thinking that fear of higher inequality may diminish risk taking, leading to foregone growth opportunities. Our results are more hopeful. Where risk raises incomes, but creates individual winners and losers, the most popular response is to take more risk. Colloquially, pride and altruism trump envy and guilt. Surprisingly, this difference is driven by women, though there is a high level of individual heterogeneity. If you wish to promote sensible risk taking, emphasising the social dimension will have very different effects on different people.

In the above discussion we have emphasised the results for our subject pool, leading to the question of whether our results can be generalised. This is of particular importance given the literature on (riskless) social preferences that shows large differences by subject pool, even within the same country. Engelmann and Strobel (2004) find great support for efficiency using business and economics students, while Fehr et al.'s (2006) more diverse subject pool (non-economists in Berlin, Munich and Zurich) exhibited greater inequality aversion. Likewise Fisman et al. (2015) found that students at elite universities in the USA are more efficiency-focused than the average American, and Friedl et al. (2020) find different behaviour in their German and Papuan samples. Our subject pool is very different to most others: it is not WEIRD (Western, Educated, Industrialised, Rich and Democratic; Henrich et al., 2010). A popular view holds that in settings such as ours profitable investments are ignored because they will lead to inequality (Platteau, 2000). This type does describe about one third of men and almost two fifths of women. However, the opposite effect is slightly more prevalent. As few others have asked how social consequences are incorporated into risky choice, we cannot be sure how representative our subject pool is. Only further research will reveal whether other subject pools are as likely as rural Ugandan women to take more risk when it results in higher ex post inequality.

Endnotes

[1]Our experiment could underestimate the prevalence of ex post types if two conditions hold. First, that social taxes are a more important mechanism than inherent preferences. Second, that social taxes are not important in our experiment because people are anonymous and paid in private. The first point would seem at odds with Platteau's (2000) view. The second would imply social taxes have a limited scope, given the experiment's occurrence is common knowledge.

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