

B Online Appendix: Examples of Equilibria with Fairness and Loss Aversion Preferences

To illustrate the impact of fairness and loss aversion, we discuss three theoretical scenarios. The parameter values are chosen in accordance with the elicited fairness and loss aversion parameters.

- *Fairness and Delay.* Let $\beta_{B,L} = \beta_{B,H} = \beta_{S,L} = 0.5$ and $\beta_{S,H} = 0.2$.²⁸ Following the mean MAO in the fairness task, let $\alpha_B = \alpha_S = 4.7$.²⁹ We continue to assume loss neutrality. In equilibrium, there are now 7 stages which is the median trading stage with H-types observed in our data. The (rounded) equilibrium price sequence is (844, 875, 1092, 1364, 1706, 2132, 2665), where $2665 = \bar{p}_{S,H}$, and the ex-ante acceptance probabilities of the L-type seller are (0.918, 0.008, 0.008, 0.011, 0.018, 0.037, -). The H-type seller accepts the last offer and the L-type accepts in stage 1 with more than 90% probability. This concentration on early acceptance reflects that the buyer's belief to face an H-type seller must be very large in order for him to be willing to raise his offers.³⁰
- *Fairness and Trade Failures.* Keep the parametrization of the first scenario, except that $\beta_{S,L} = 0.75$. The L-type seller now feels entitled to a higher share of the gains from trade ($\bar{p}_{S,L} = 1082$), while the buyer insists on the 50-50 norm ($\bar{p}_{B,L} = 1029$). There is no price for which both parties obtain a positive utility when trading the low quality good. It follows that the high quality good is not traded either due to the presence of adverse selection.
- *Loss Aversion and Delay.* Abstract from fairness preferences. According to the lottery task, on average subjects were indifferent between rejecting and accepting a 50-50 lottery between winning 6 and losing 3.5, which implies $\lambda \approx 1.7$. In this case, the equilibrium price sequence involves 6 offers given by (819.2, 1024, 1280, 1600, 2000, 2500) with corresponding L-type acceptance probabilities (0.092, 0.340, 0.249, 0.162, 0.157, -).

²⁸The lower value for $\beta_{S,H}$ does not affect the qualitative results. We choose it because it fits well with the data, as H-type sellers rarely insisted on offers as high as 3000.

²⁹Note that assuming $\beta_{i,L} = 0.5$, which seems appropriate for the fairness task, a MAO of 16.5 implies $\alpha_i = 4.7$.

³⁰It is possible to get a similar screening duration without such a high first-stage acceptance probability. For example if $\alpha_B = \alpha_S = 0.5$ the number of stages is still 7, the price sequence looks similar, but the L-type accepts in the first stage at a price of 762 with a probability of 50%.

C Online Appendix: Instructions

Instructions Treatment D50

Welcome to this economic experiment. From now on you are not allowed to communicate in any other way than specified in the instructions. Please obey to this rule because otherwise we have to exclude you from the experiment and all earnings you have made will be lost. Please also do not ask questions aloud. If you have a question, raise your hand. A member of the experimenter team will come to you and answer your question in private.

In this experiment you can earn money with the decisions you make. How much you earn depends on your own decisions, the decisions of other participants as well as random events. We will not speak of CHF during the experiment, but rather of experimental points. All your earnings will first be calculated in points. At the end of the experiment the total amount of points you earned will be converted to CHF at the following rate:

$$100 \text{ points} = 0.3 \text{ CHF}$$

In addition, you will receive a show up fee of 10 CHF.

The experiment consists of two parts [note: three parts in some of the sessions] that are independent of one another. For each part you will receive specific instructions. These instructions will explain how you make decisions and how your decisions and the decisions of other participants influence your earnings. Therefore, it is important that you read the instructions carefully.

In case you should make losses, the show up fee of 10 CHF is used to cover for these losses. If you make losses exceeding 10 CHF, you will have the option to leave immediately and earn 0 CHF.

We will now describe the **general setting** you will face during the experiment. At the beginning of the experiment the participants will be divided into buyers and sellers. Half of the participants will be buyers and the other half will be sellers. When you are a buyer (respectively, a seller) you will stay a buyer (respectively, a seller) throughout the experiment. A decision situation (explained below) will be repeated for 10 periods. In each period a buyer and a seller are randomly matched. In other words, the participants are divided into pairs and each pair consists of one buyer and one seller. You will not get to know the identity of the buyer or seller you are paired with, neither during nor after the experiment. The participant who is paired with you will also not get to know your identity. In each period new pairs will be formed randomly.

The **decision situation** will be the same for all ten periods. We will now describe one such period. After the buyer and the seller have been matched, they face the following situation. The seller can be of two different types: type A or type B. A seller of type A can only produce a high quality good at cost 2500. A seller of type B can only produce a low quality good at cost 0. The buyer's valuation for the high quality good is 3500. The buyer's valuation for the low quality good is 1750.

The seller knows whether she is of type A or type B and therefore also knows how much the good is worth to the buyer. However, the buyer does not know the seller's type and hence, the buyer does neither know whether his valuation for the good is 3500 or 1750 nor whether the cost of the seller to produce the good is 2500 or 0. The type of the seller will be determined randomly according to the following probabilities at the beginning of each period: the probability that the seller is of type A (high cost / high quality good) is 0.4 (40%) and the probability that the seller is of type B (low cost / low quality good) is 0.6 (60%).

To acquire the good, the buyer makes offers to the seller. The offers must be between 0 and 4000 and can be as exact as to the first decimal place. If you enter an offer that is not allowed, the computer will tell you and you will have to change your offer. Upon seeing the buyer's offer, the seller can accept or reject the

offer. If the seller accepts the offer, she produces the good and sells it to the buyer at the agreed price. The buyer does not make further offers and the trading pair has to wait until all other pairs have finished their trading process and buyers and sellers are rematched to form new pairs in the next period.

If the seller rejects the offer, the buyer can make a new offer to the seller which can again be accepted or rejected. There can be at most 50 stages, i.e., a buyer can make at most 50 offers to a seller. Likewise, a seller can reject up to 50 offers. If all 50 offers are rejected, the good is not produced (and not traded) and both parties earn 0.

In which stage trade takes place does matter. The buyer and the seller both discount the future at the discount factor $d = 0.8$. This means that a profit (or loss) realized in stage n is discounted according to the given discount factor. For instance, if the buyer makes a profit of x experimental points in stage 1, he earns x experimental points since there is no discounting. If the buyer makes a profit of x experimental points in stage 3, he earns $x * 0.8 * 0.8 = x * 0.8^2$ experimental points.³¹ Generally, if an offer is accepted in stage n , the payoffs are determined as follows.

$$\begin{aligned} \text{The buyer's payoff} &= (\text{Valuation of the Good} - \text{Accepted Offer}) * d^{n-1} \\ \text{The seller's payoff} &= (\text{Accepted Offer} - \text{Production Cost}) * d^{n-1} \end{aligned}$$

For convenience the valuations and costs are summarized below:

- Buyer's valuation for the high quality good = 3500
- Buyer's valuation for the low quality good = 1750
- Seller's cost of producing the high quality good = 2500
- Seller's cost of producing the low quality good = 0

Once all pairs have traded the good at some price or all offers have been rejected, the computer randomly matches buyers and sellers anew and the next period starts. The experiment ends after period 10.

Instructions Lottery Task

In this part of the experiment, you will have the choice to participate in a lottery in which you can win or lose money. Any profits or losses will be added (or subtracted) to your earnings from the previous part of the experiment and paid to you in cash at the end of the experiment.

On the next screen a series of lotteries will be shown. For each lottery, you may choose to accept the lottery or decline the lottery. After you have made a selection for each of the lotteries, one of the lotteries will be randomly selected by the computer. If you chose to decline the selected lottery, nothing happens and your income remains unchanged. If you chose to accept the selected lottery, the computer randomly determines the outcome in this lottery according to the given probabilities (it will be a 50-50 chance for each lottery). If you win the lottery, you earn the corresponding amount. If you lose the lottery, you will lose the corresponding amount.

³¹Subjects were give a calculator to ensure correct expectations about discounting.

Figure 5: Lottery Task

Lottery	Decline or Accept
1. a 50% chance of winning 6 CHF and a 50% chance of losing 2 CHF.	Decline <input type="radio"/> <input type="radio"/> Accept
2. a 50% chance of winning 6 CHF and a 50% chance of losing 3 CHF.	Decline <input type="radio"/> <input type="radio"/> Accept
3. a 50% chance of winning 6 CHF and a 50% chance of losing 4 CHF.	Decline <input type="radio"/> <input type="radio"/> Accept
4. a 50% chance of winning 6 CHF and a 50% chance of losing 5 CHF.	Decline <input type="radio"/> <input type="radio"/> Accept
5. a 50% chance of winning 6 CHF and a 50% chance of losing 6 CHF.	Decline <input type="radio"/> <input type="radio"/> Accept
6. a 50% chance of winning 6 CHF and a 50% chance of losing 7 CHF.	Decline <input type="radio"/> <input type="radio"/> Accept

Instructions Fairness Task

In this part of the experiment, you will be randomly matched with one other participant in the room.

Both you and the participant you are matched with will then be asked to make two choices. First, you and the other participant will choose how to split 40 experimental points between the two of you. This will be the role of the PROPOSER. Second, you and the other participant will also specify a minimal acceptable amount between 0 and 40. This will be the role of the RESPONDER.

One participant in a pair (either you or the other participant) will then be chosen to be the proposer. For this participant the choice he or she made as a PROPOSER will be relevant. The other participant in the pair is chosen to be the responder. For this participant the choice he or she made as a RESPONDER will be relevant. Which participant in a pair will be in the role of the proposer or the responder is randomly determined, after both participants have made their choices for both roles.

If the share of the 40 experimental points the PROPOSER chose to allocate to the responder is larger than (or equal to) the minimal acceptable amount specified by the RESPONDER, the 40 points are distributed according to the proposer's decision. However, if the amount the PROPOSER offers to the responder does not cover the RESPONDER's minimal acceptable amount, both players in a pair earn 0.

Please use the fields below to tell us what is the offer you will make to the responder and the amount you propose to keep for yourself if allocated the role of the PROPOSER. Recall that the total amount to be distributed between the responder and you is 40.

Your decision as PROPOSER Your share: _____ Other's share: _____

Please use the field below to tell us what is the minimum offer you are willing to accept if allocated the role of the RESPONDER. Recall that the proposer will propose how to distribute the 40 points between himself / herself and you.

Your minimal acceptable amount as RESPONDER: _____

The exchange rate in this part of the experiment is 1:5. That is, each point earned is worth 0.2 CHF.