Experimental Instructions to
"Moral Property Rights in Bargaining with Infeasible Claims"

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1 Experimental Instructions and Questionnaires

The experimental instructions and and the questionnaires were originally written in German.

1.1 Instructions

General explanations for participants

You are now participating in an economics experiment that is financed by several scientific institutions. If you are reading the following explanations carefully you can - depending on your decisions - earn (besides the fixed show-up fee of ATS 70,-) additional money. It is, therefore, important that you carefully read the following explanations. At the end of the experiment you will be instantly paid in cash - together with the show-up fee - all the money you have earned according to your decisions.

During the experiment we will speak of points instead of Austrian Schillings. Thus, all your income will be counted in points. The total number of points you have earned during the experiment will be exchanged into Austrian Schillings at the end of the experiment, where

1 point = 10 Groschen.

The instructions you have received are for your private information only. **During the experiment you are not allowed to communicate.** If you have questions then please direct them to us. If you do not follow this rule you will be excluded from the experiment and all payments.

On the following pages we will describe the exact procedure of the experiment.

Information about the exact procedure of the experiment

In the experiment you are now participating you are randomly paired with another person in the other computer lab. You will be paired with this other person throughout the whole experiment. Nobody, however, will be informed about who is paired with whom.

In the experiment you and your partner act in the role of a **head of department** in a firm. Imagine that in this firm there is a **total budget of 2490 points** for your and your collegue's salary. **In the past** the policy of the firm was to pay the salary according to **performance**. (How the performance is determined in the experiment will be explained below.) The head of department with the higher performance was paid a salary of **1660 points** and the head of department with the lower performance was paid a salary of **830 points**. There is now the possibility that, due to bad economic conditions for the firm the top management is forced to cut back the salary budget, with the consequence that the hitherto valid salary claims cannot be satisfied anymore. The new total salary budget then amounts to **2050 points**.

If this situation materializes the top management does not want to dictate a new salary distribution. Therefore, you are asked by the top management to take the new situation into account and to bargain the new salary distribution with your bargaining partner. If you are not able to find an agreement within a prespecified time you are 'fired', that is, you are not paid any salary. In case the demand does not become worse the top management sticks to its present, historically grown salary policy and you and your partner receive - dependent on your performance - a salary of 1660 points and 830 points, respectively.

The experiment consists of two parts. The first part consists of the **determination of your performance** as head of department. If necessary, in the second part bargaining over the new salaries take place.

Determination of performance

In this experiment performance will be measured with a **general knowledge quiz**. The department head who gives correct answers to a greater number of questions than the other

department head has shown the better performance, and has therefore, given the firm's previous policy, earned a salary claim of 1660 points. The department head with the lower performance previously received a salary of 830 points.

The determination of performance is done as follows. Each participant has to answer questions, where there is **exactly <u>one</u> correct answer** and several wrong answers. The questions concern several fields of knowledge. In total there are 16 questions. Each participant receives the same questions. The head of department with the most correct answers has the higher performance. You will answer the questions on the computer. You will have at most **8 minutes** to answer all questions. A question looks like this:

```
                                                          8:00
 Which color is contained in the flags of all islamic countries?

 red             < 1 >
 blue            < 2 >
 green           < 3 >
 yellow          < 4 >
 orange          < 5 >

 According to my knowledge the correct answer is < >.

 After you have typed the number, please press <Enter>.
```

You answer a question by typing the **number of the answer** and by striking the <**Enter**>-key. The next question then shows up automatically. After you and your collegue as head of department have answered all questions (or the time is over) you will see on the screen who has answered more questions correctly, i.e., who has the higher performance.

Previously, your firm's salary budget was 2490 points that was distributed according to performance. The head of department who has answered more questions correctly has the higher performance and has, therefore, given the historically grown firm policy, a **salary claim of 1660 points**. The head of department with the lower performance, i.e., the one who has answered fewer questions correctly, has, given the present salary policy, **only a salary claim of 830 points**. (The sum of the salaries is, therefore, 2490 points.)

If both have answered the same number of questions correctly a random device will determine who of you has the higher salary claim. If this happens you will be explicitly informed on the screen.

After it is clear who of you has the higher performance you have to fill in the salary claims of both heads of department into the **documentation sheet**. This finishes the first part of the experiment and the second part begins.

As already mentioned at the beginning, the firm is willing to spend a total salary budget of 2490 points only if the development of demand - which depends on the economic trend - is in favor of the firm. Therefore, at the beginning of the second part a random device decides whether the economic development and, thus, the demand for the firm is favorable or not. In case the economic development stays favorable, you get - according to the present firm policy - paid out your performance based salary claim. In case of a bad economic development and, hence, an unfavorable demand development for the firm the top management of the firm has decided to cut back the salary budget. The top management does not want to dictate the new salaries. Therefore, it has decided to let you and your collegue as head of department bargain over the distribution of the new salary budget of 2050 points.

The from the viewpoint of the firm randomly determined economic development is implemented in the experiment as follows. After the determination of performance you receive a die from us.

Now, everybody has to throw it. After you have thrown the die please fill in the number you have thrown in the computer and, thereafter, also in your documentation sheet. The computer will then tell you the number thrown by your bargaining partner. Please fill in this number also in your documentation, in the therefore prespecified space. There are now two possibilities:

1. If the **sum of dice numbers is smaller or equal to 10** we interpret this situation as bad for the return of the firm. Therefore, you have to **bargain over the distribution of the new salary budget of 2050 points** that is at your and your bargaining partner's *joint* disposal. In this case you get paid out the number of points in Schillings according to the agreement between you and your bargaining partner.

2. If the **sum of dice numbers is larger than 10**, i.e., is 11 or 12, we interpret this outcome as favorable for the firm. In this case you will get paid out your performance based salary claim **anyway**. Nevertheless, you have to bargain about the distribution of 2050 points with your bargaining partner. However, this bargaining is only **hypothetical**, that is, you have to bargain **as if** you would have only 2050 points at your joint disposal, which you have to distribute between you. However, you get paid out your earned claim and not the distribution you have agreed upon.

Example 1: Suppose you have answered more questions correctly than your partner and, therefore, you have the higher performance. According to the present salary policy of your firm you have, therefore, earned a salary claim of 1660 points, whereas your collegue has only earned a salary claim of 830 points. Thereafter, you throw a 4 and your bargaining partner a 6. The sum of dice numbers is 10. Therefore, the firm's situation is bad and your earned salary claim cannot be paid out to you. You have now to find an agreement on the distribution of a new salary budget of 2050 points, which is at your *joint* disposal. **You only get paid out the amount in Schillings on which you agree with your bargaining partner.**

Example 2: Suppose you have answered less questions correctly than your partner and, therefore, you have the lower performance. Your salary claim is only 830 points, whereas the salary claim of the other department head is 1660 points. Suppose you throw a 5 and your bargaining partner a 6. Thus, the sum is 11. Therefore, the firm's situation is positive and the earned salary claims are actually paid out. Therefore, you get credited 830 points whereas your bargaining partner gets credited 1660 points. Nevertheless, you have to bargain with your bargaining partner **as if** you would have a salary budget with only 2050 points at your joint disposal. **However, for your payment the bargaining result in not relevant but only the earned salary claims.**

<div align="center">

Summary of determination of performance

The head of department who has answered more questions correctly has the higher performance!

If the number of correct answers is the same a random device decides who has the higher performance.

Present salary policy of the firm:

Salary claim with higher performance: 1660 points

Salary claim with lower performance: 830 points

</div>

Sum of dice numbers smaller or equal to 10: only the bargaining agreement on the distribution of the new salary budget of 2050 points will be paid out.

Sum of dice numbers greater than 10 (11 or 12): the earned salary claims will be paid out; hypothetical bargaining over the distribution of 2050 points.

The bargaining

After the throwing the dice it is determined whether you have to bargain **actually** or **hypothetically** over the distribution of the new salary budget. The **bargaining procedure** is the same in both cases, however. You have a maximum of **15 minutes** to reach an agreement on the distribution of the new salary budget of 2050 points, which is at your joint disposal. You do not have to use up all the bargaining time but must not exceed it. **If you actually bargain and you do not agree on a distribution within 15 minutes, then you will get paid nothing! If you do agree on a distribution then you will get paid out your share.**

If you **bargain hypothetically** you get paid out the earned salary claims in any case.

The bargaining is done via the computer. During bargaining you will work with two different screens; the information screen and the offer screen, which we will explain in what follows.

The **information screen** serves mainly for the documentation of the current state of bargaining and is build up as follows. The screen consists of four parts, which are separated by horizontal

1. In the top part the claims are shown. The clock right on the top shows how much bargaining time is still remaining.

2. In the second part you see the currently valid proposal und the accompanied message of your bargaining partner.

3. The third part shows your own currently valid proposal together with your message.

4. The last two rows inform you which keys you have to press if you want to make, send, or accept an offer, respectively.

If you want to make a **proposal** you have to press the **key <E>**. Thereafter the **offer screen** shows up. Here you can fill in the proposal and your message to your bargaining partner in the corresponding fields. The following rules apply:

4

```
 X run                                                          _ □ ×
         ┌──────────────────────────────────────────────────────────┐
         │              Mein Anspruch ist:          1660        11:52│
         │              Der Anspruch meines Partners: 830            │
         │──────────────────────────────────────────────────────────│
         │Zuletzt erhaltener Vorschlag:  Mein Anteil:  321    Mein Partner: 713│
         │Erhaltene Mitteilung:                                     │
         │■ustertext 2                                              │
         │                                                          │
         │                                                          │
         │                                                          │
         │──────────────────────────────────────────────────────────│
         │Mein aktueller Vorschlag:      Mein Anteil: █     Mein Partner:│
         │Meine Mitteilung:                                         │
         │                                                          │
         │                                                          │
         │                                                          │
         │                                                          │
         │──────────────────────────────────────────────────────────│
         │Bitte Bestätigen Sie jede Zeile mit <ENTER> und drücken Sie dann <ESC>│
         └──────────────────────────────────────────────────────────┘
```

1. A **proposal** consists of an **amount of points for you** and an **amount of points for your bargaining partner**. You have to enter your proposal in the row "Mein aktueller Vorschlag" in the fields "Mein Anteil" and "Mein Partner", respectively. To switch a field forward you have to press the <Enter>-key (↵).

2. **The sum of points must not exceed 2050.** Smaller sums are allowed.

3. Only **integer** offers are allowed.

4. A sent offer is **binding**, that is, if your bargaining partner accepts your proposal bargaining is finished and both of you get the points on which you have agreed upon. The same holds if you accept a proposal of your bargaining partner. You can only accept the current proposal; earlier proposals are not valid any more.

5. In addition to your proposal you can also write a **message** to your bargaining partner. You write a message by entering it in the field "Meine Mitteilung". You can reach this field with the help of the <Enter>-key (↵), again. In the message window you have six rows at your disposal. If you want to change something in the message window please use the <Backspace>-key (←). This key deletes the text before the actual position of the cursor.
It is absolutely necessary that you **end each row** in the message-window with the **<Enter>-key**.
Messages alone are not allowed. A proposal has in any case to contain a distribution of points.

6. All messages that do **not** contain **threats** and do **not** open the possibility to **reveal your identity are allowed.** Messages that do not obey this rule will not be allowed by the experimenter and will be send back to the sender. Except your bargaining partner nobody else will get informed about your proposals and messages.

If you want to **send** a **proposal** (and a message) press first the <**Esc**>**-key** (you will then see the **information screen** again) and thereafter the <**S**>**-key**. As long as you have not pressed the <Esc>-key you can correct your message with the help of the <Backspace>-key. If you also would like to change your offer press first the <Esc>-key and then the <E>-key. Hence, as long as you have not pressed the <S>-key you can still change the offer and the message. A sent proposal is binding and shows up (with the message) on the information screen of your bargaining partner as well as on your own information screen.

If you want to **accept an offer** you have to press the **key <A>**. After you have pressed <A> you will be asked once more if you really want to accept the offer. If you would like to do that press the **<J>-key**. In case you change your mind hit the **<N>-key**; the information screen will then pop up again. **Attention:** Should you receive a new offer *after* you have pressed the key <A> but *before* you have pressed the key <J> then this new offer is the current one.

If you have agreed upon a distribution you have to enter it in the corresponding column in your **documentation sheet -** depending on whether you have bargained actually or hypothetically.

Do you have any questions?

Participant No.:

DOCUMENTATION
of bargaining with salary claims

(a) My salary claim: ....

(b) Salary claim of my bargaining partner: ....

The firm's situation:

My die number: .....

Die number thrown by my bargaining partner: .....

Sum: .....

Bad economic situation of the firm Sum of dice numbers 2 to 10	Good economic situation of the firm Sum of dice numbers 11 or 12
ACTUAL BARGAINING	*HYPOTHETICAL* BARGAINING
Bargaining result: (c) Salary for me: .... points Salary of my bargaining partner: .... points The payoff is as under item (c)!	**Bargaining result:** Salary for me: .... points Salary of my bargaining partner: .... points The payoff is as under item (a)!

One point is 10 Groschen!

Hints for bargaining over the computer.

1. To be able to **make an offer** you have to press the <**E**>-key.

2. To switch from the field "Mein Anteil" to the field "**Mein Partner**" you press the <**Enter**>(↩)-key.

3. To switch from the field "Mein Partner" to the field "**Meine Mitteilung**" you press the <**Enter**>(↩)-key.

4. If you would like to send **no message** to your partner press the <**ESC**>-key.

5. If you would like to send **a message** to your partner write the text, and **confirm EACH row** with the <**Enter**>(↩)-key.

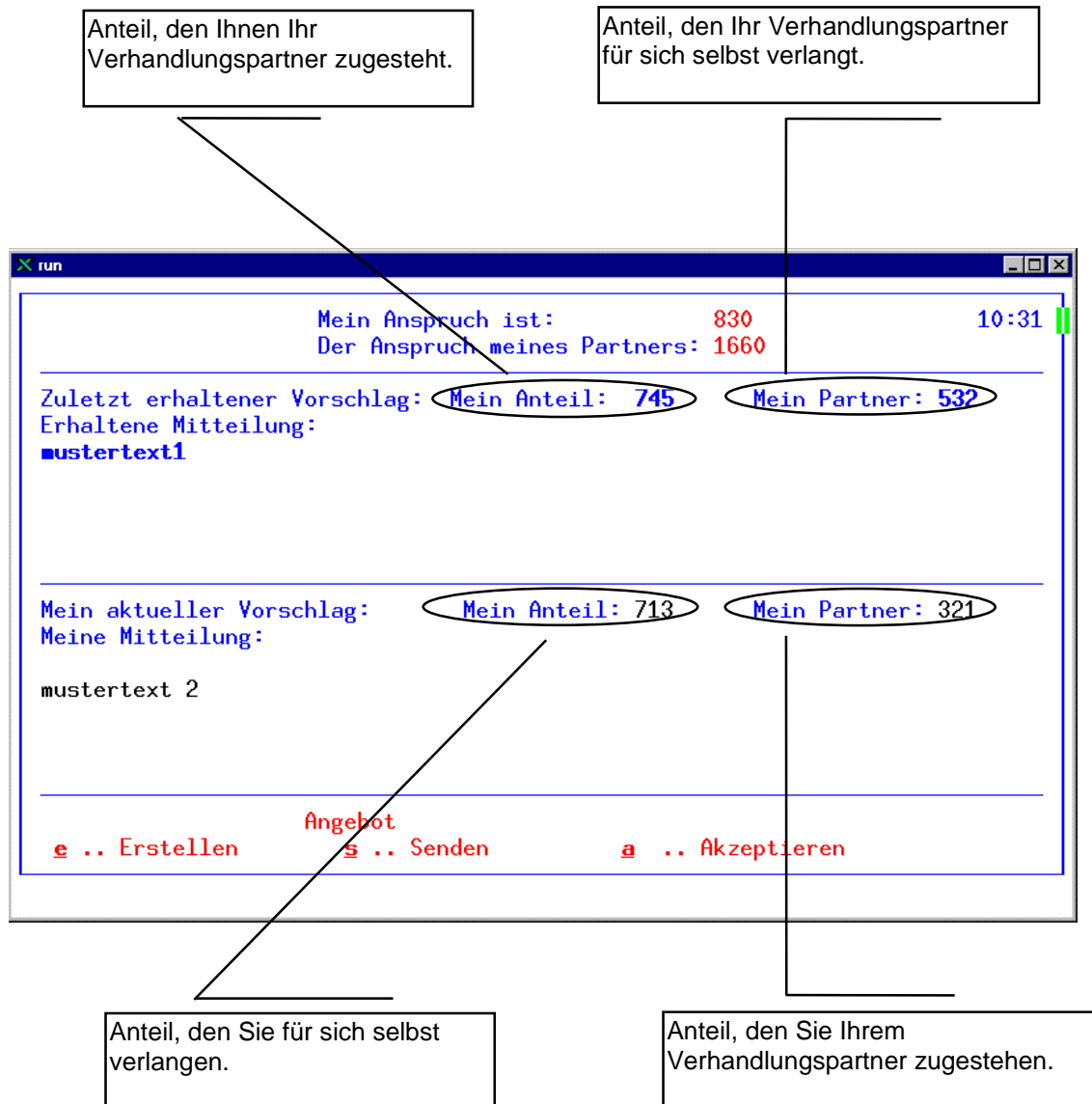## ATTENTION
A row that is not confirmed with <Enter> will not be sent off!

6. When you have **finished** your **entries** press the <**ESC**>-key.

Now you can **send** your **offer**. For sending, hit the <**S**>-key.
To **accept** an **offer** hit the <**A**>-key and, thereafter, for **confirmation** the <**J**>-key. Only after you have confirmed it with the <**J**>-key the offer is accepted.

How the bargaining screen has to be read.

Anteil, den Ihnen Ihr Verhandlungspartner zusteht.

Anteil, den Ihr Verhandlungspartner für sich selbst verlangt.

```
X run                                                        _ □ ✕

                    Mein Anspruch ist:           830            10:31 ▮
                    Der Anspruch meines Partners: 1660
_____
Zuletzt erhaltener Vorschlag:  (Mein Anteil:  745)  (Mein Partner: 532)
Erhaltene Mitteilung:
■ustertext1




_____
Mein aktueller Vorschlag:     (Mein Anteil: 713)   (Mein Partner: 321)
Meine Mitteilung:

mustertext 2




_____
                      Angebot
  e .. Erstellen        s .. Senden        a .. Akzeptieren
```

Anteil, den Sie für sich selbst verlangen.

Anteil, den Sie Ihrem Verhandlungspartner zugestehen.

A new experiment

Now a new experiment takes place that proceeds precisely as the experiment you have just completed. The only difference is that you now have a new - randomly assigned - bargaining partner. For technical reasons this random assignment takes place through changing to another computer.

Otherwise the experiment proceeds precisely as the earlier one. Firstly, again the determination of performance with your new collegue as head of department takes place (of course, you will get 16 new questions) and, thereafter, again the random device determines if the development of demand is good or bad for the firm. In case it is good you get paid out the performance based salary claims. In case of a bad development you have to bargain with your new bargaining partner about the distribution of the reduced salary budget of 2050 points. Again, these points will be exchanged to Schillings at a rate of 10 to 1 (one point is 10 Groschen). In case of no agreement within 15 minutes both bargaining partners receive nothing. As before you will not be informed about the identity of your bargaining partner.

Otherwise the same rules as before apply. Please, enter the bargaining result in the new documentation that comes along with these new instructions.

At the end of the bargaining the experiment is finished, and you get paid your bargaining result and the earned salary claims, respectively, from the earlier part of the experiment and the bargaining result and the earned salary claims, respectively, from this part of the experiment. The points you have earned in the earlier experiment will not be touched by the result in this experiment.

Do you have any further questions?

2 Questionnaires

2.1 Arbitrator Question

According to your opinion, what would - in case of the bad economic condition for the firm - be a 'fair' distribution of the salaries from the vantage point of a non-involved **neutral** arbitrator? (Please use **exact amounts**; no intervals! **The amounts have to sum up to 2050 points!**)

Your opinion on the distribution by the arbitrator:

Salary for the head of department with the higher performance: ....

Salary for the head of department with the lower performance: ....

2050

2.2 Post-Experimental Questionnaire

2.2.1 Questionnaire A

The following questions concern the determination of performance in the knowledge quiz. Please, indicate for **all** questions - by crossing the appropriate field - how strongly you agree with the statement.

1. In a knowledge quiz like this nature decides who is able to answer more questions correctly.

   Not at all |___|___|___|___|___|___| Very

2. The one with the better general knowledge is able to answer more questions correctly.

   Not at all |___|___|___|___|___|___| Very

3. In my view the knowledge questions have been difficult.

   Not at all |___|___|___|___|___|___| Very

2.2.2 Questionnaire B

We would now like to know from you how you assess your own general knowledge. Not all people have an equally good general knowledge. We ask you, therefore, to compare your own knowledge with that of the other participants in this experiment. By definition, of course, there is somebody who has the least general knowledge and somebody who has the best general knowledge. We ask you to indicate on the scale below where you position yourself with respect to your general knowledge, within the group of the participants of this experiment. Of course, since you do not know all participants of this experiment this is a difficult task. Nevertheless we ask you to make your self-assessment as accurate as possible.

Please, position yourself by crossing the percentage interval - on the table below - where you think your own position relative to the other participants in this experiment is with respect to general knowledge.

If you think, for example, that you are with your general knowledge at the top ten percent, then cross the percentage interval 91-100. If you think, for example, that you are with your general knowledge at the lowest ten percent, then cross the percentage interval 0-10.

Your estimation of your position within the group of the participants of this experiment with respect to your general knowledge:

Percentage interval of of general knowledge	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Please cross only one interval!										

2.2.3 Questionnaire C

At the end some statistical questions:

1. Age: ....
2. Sex: female   ☐   male   ☐
3. Study: ....
4. How much money per month do you have at your disposal (net of accomodation costs)? ....

Thank you very much for your participation!