1. Introduction

Empathy is described as an ideal mechanism to form the basis of altruism in response to someone else’s needs, pain, and distress (De Waal, 2007). It is stated that altruistic motivation emerges along with empathy towards a person in need (Batson, 1990). In the study of Adam Smith (1759), the concept of sympathy is known to be actually used instead of empathy since then the term empathy had not been used yet. Ashraf, Camerer & Loewenstein (2005) put forward Adam Smith’s seminal work as a preliminary study of behavioral economics and supported it with many examples of empathy. Smith (2010 [1759]) stated that sometimes people lack empathy, whereas sometimes they exhibit too much empathy. For instance, people from another country who hear the news that people have died due to an earthquake in a country tend to go on with their daily routine after getting upset about it. According to Smith, it is, after all, a lack of empathy. However, for example, a mother’s pain for her sick child may be more painful for herself than the child’s illness, which is excessive empathy. Throughout history, it has been also seen from studies that altruistic behaviors with a feeling of empathy as sharing one’s property or money with people with whom he/she never got acquainted without considering his/her own interest (Kamilçelebi & Gürsoy, 2020).

In cooperation based on altruism, induced by empathy, people are expected to sell at any price a good is worth. Likewise, the buyers are not expected to purchase the product at a price below such value. In other words, being the owner or buyer of a good should not affect the value of that good. Nevertheless, various experiments have indicated that the owner tends to attribute more value to a good than its actual worth, whereas the buyer tends to attribute lesser value. In one of the first experiments on the subject, the difference between the willingness to pay for a good, and the
willingness to accept to pay compensation was examined (Knetsch & Sinden, 1984). The lottery tickets were distributed randomly to half of the group consisted of 79 persons, and $3 was given to each person in the other half. Those with lottery tickets were given the option to choose between a $70 worth of gift voucher and $50 cash to be spent in a bookstore in case they won. After a while, both groups were offered both lottery tickets and $3 cash options once again.

In fact, it should have not mattered if the participants were randomly awarded cash or lottery tickets at the beginning of the game. They should have chosen the lottery ticket if they attributed more value to it higher than $3, otherwise, they should have preferred the cash. However, 82% of those who started with lottery tickets continued to keep the ticket, whereas merely 38% of those who started with cash wished to purchase lottery tickets. Thus, it influenced the initial random distribution preferences and revealed that people were more likely to retain what was originally distributed, even if randomly. Furthermore, Knetsch and Sinden estimated the probability that a randomly selected individual would be willing to accept different payment levels, and that a randomly selected individual would be willing to pay various amounts, and determined an expected value from the data for willingness to pay and willingness to accept. Then, when they multiplied those probabilities by the respective amounts ($1, $2, $3, or $4) to get an expected value, they determined the willingness to pay as $1.28, and the willingness to accept as $5.18. Therefore, their evidence was consistent with the survey evidence that estimated the willingness to pay four to five times higher than the willingness to accept (Kamilçelebi, 2019).

By further developing such a difference between the willingness to pay and willingness to accept, the endowment effect experiments have been designed. A coffee mug engraved with the logo of a university was utilized in the experiment, which revealed the endowment effect. The market price of the coffee mug was around $6. Coffee mugs were randomly distributed to half of the participants who volunteered in the experiment, and they were referred to as the sellers. The sellers were requested to exhibit the coffee mugs on their desks for a while, and consequently so that the buyers who have not been given any mugs would have gazed at these mugs. The sellers were asked to set the selling price, whereas the buyers set the purchasing price. The sellers also had the right not to sell their mugs. As a result of the experiment, the average purchasing price was determined as half of the average selling price. The predicted number of purchases was found lower than half the number predicted by the standard theory. In the study, the sellers who were initially given coffee mugs wished to sell their mugs at a high price, while the majority of them did not wish to sell their mugs at all, whereas the buyers offered low prices,
and the endowment effect, which refers to the abandonment of selling or overvaluation due to the ownership of a good, occurred (Kahneman, Knetsch & Thaler, 1990).

In another experiment that revealed an endowment effect, approximately half of the students in a class were given pens, while others were given a token that could have been paid for an unspecified gift. Later on, all participants were given an option to choose between a pen and two bars of chocolate. In that experiment, the endowment effect was also revealed. The pens were preferred by 56 percent of those who owned them, but merely 24 percent of the other participants chose the pens. The authors explained that as the heavily weighing pain of giving up ownership of a good (Loewenstein & Kahneman, 1991).

In another experiment, selectors were included besides the buyers and sellers. The buyers can purchase the coffee mugs with their own money. Selectors, on the other hand, can either choose the coffee mug or money of which they can determine the amount. Upon considering the results, the value of the mug was determined as $7.12 by the sellers. The selectors set a lower figure ($3.12) than the sellers did. The figure set by the buyers for the coffee mug ($2.87) was lower than the figure set by the other two groups. The difference between prices determined by the sellers and buyers was noteworthy. The authors attributed the reason underlying the sellers' high pricing for the coffee mug and their reluctance to give up the items in their possession to the pain of losses which was twice as high as the gains, and they stated that the sellers perceived it as a loss (Kahneman, Knetsch & Thaler, 1991). Those experiments have been repeated by other authors, and it has been described as an egocentric lack of empathy due to the endowment effect, whenever people did not wish to value the goods in their possession and did not wish to sell them, or the owners determined the selling price much higher than the market price and the purchasing price (Van Boven, Dunning & Loewenstein, 2000; Van Boven, Loewenstein & Dunning, 2003). In an experiment, it was detected that people who did not have an item in their possession estimated the value to which those who had the items attributed as low, and even underestimated the value to which they would have attributed if they had the items themselves (Van Boven, Dunning & Loewenstein, 2000; Loewenstein, O'Donoghue & Rabin, 2003).

In another experiment, a certain group of students was given coffee mugs, but not the other group. In that experiment, unlike the other experiments, both groups were asked to set the selling price. Those who possessed the coffee mugs set a price for their mugs at $6.37, whereas those who did not possess set a price at $1.85. Those who had mugs in their possession were asked to estimate the price at which those who have not been given any mugs would have purchased those mugs, and those who
had no mugs were asked to estimate the price at which the mug owners would have sold their mugs. The mug owners’ average estimates were $3.93. Although that price was lower than the selling price, they reported in the first experiment, its average was higher than either of the two reported purchasing prices. The average price for the buyers without mugs was $4.39 which was higher than their average purchasing price, but lower than the average selling price. Here, the erroneous estimates made by the projection bias of the buyers about how valuable the mugs would have been to themselves if they had mugs were statistically revealed. It was claimed to be stemming from the egocentric empathy gap (Van Boven, Dunning & Loewenstein, 2000). The projection bias caused people to overestimate reference-dependent goods and exaggerate the endowment effect. The underlying reason for that was the inability to empathize with the decisions made (Loewenstein, O'Donoghue & Rabin, 2003; Kamilçelebi, 2020a).

Loewenstein & Adler (1995) proved in another experiment that predicted selling prices were significantly lower than actual selling prices. Therefore, the empathy gap has emerged as a result of people's misconceptions about their next predictions and their inability to put themselves in the other's place. The desire of individuals to satisfy their current desires and emotional states may cause them to not comprehend the feelings of the other persons (Loewenstein, O'Donoghue & Rabin, 2003; Loewenstein & Schkade, 1999) and reveal their feelings of commitment to the goods in their possessions (Kogut & Kogut, 2011).

In order to induce empathy behaviors of individuals and to observe the differences in empathy behaviors, there are also studies priming a certain word group, certain emotional behaviors, visualization, and video prior to experiments (Higgins, Rholes & Jones, 1977; Srull & Wyer, 1979; Bargh & Pietromonaco, 1982; Shariff & Norenzayan, 2007; Posten, Ockenfels & Mussweiler, 2014). For example, in an experiment designed as an empathic dictator game, a video clip with the image of a mother who passed away was featured and the game was played following that video clip. In the other group, a non-emotional (neutral) video clip was watched by the participants and the standard dictator game was played. Upon comparing both groups, a significant relationship was found between the empathic dictator game and empathy/altruistic behavior, and it was revealed that the video clip that caused empathy significantly predicted generosity (Klimecki et al., 2016). The first case of Covid-19 in Turkey was reported on March 11, 2020. Due to the Covid-19 pandemic, various mandatory rules such as wearing masks have been introduced to individuals in Turkey. Those who do not wear a mask are being fined (Provincial Public Health Decision No. 60). There are studies which claimed that individuals who ignored social norms should have been imposed an informal punishment (Boyd et al., 2003; Kamilçelebi, 2020b).
With the sense of empathy, individuals can help people with whom they never get acquainted at all, or sometimes use this as an altruistic method of punishment to fine those who do not care for the other's interests, those who do not fulfill their responsibilities for protecting the well-being of other people. This is considered as a punishment caused by altruism induced by empathy in the literature (Fehr & Gächter, 2002). In this study, the endowment effect experiment is designed based on those experiments and it is one of the original and pioneering studies in the literature that deals with the extent to which the Covid-19 pandemic affects people's feelings of empathy, in particular, and whether or not it would reduce the egocentric empathy gap mentioned in the literature. Moreover, it is considered whether or not the subjects would impose an altruistic punishment by selling the pen at a price higher than the market price compared to those who do not wear masks.

2. Method

2.1. Subjects

The experiment is designed in a way similar to the endowment effect game and performed by the participation of the students of the Economics Department, Istanbul University using “Istanbul University”-engraved pens. The game is played by a total of 133 individuals. 71 of the participants are female, and 62 of them are male. Their average age is 22. There are four groups in the experiment consisting of two control groups of non-empathy-primed buyers and sellers, and two groups of empathy-primed buyers and sellers related to the Covid-19 outbreak.

2.2. Procedure and Materials

The data is designed as a game that generates a standard endowment effect. The experiment is performed on September 21, 2020. The token and “Istanbul University”-engraved pen are utilized in the experiment. The average selling price of the pen is TRY 10 in the market. Participation in this survey is voluntary. The survey questionnaires are sent to the e-mail addresses of the students of the Faculty of Economics, Istanbul University who voluntarily participate in the survey. Students (sellers) who own property are shown a photo of the “Istanbul University”-engraved pen, and they are told that if they can sell the pen in their possession to the students (buyers) who have not been given any pen by setting a sale price if they wish to do so. The same item’s image is shown to the buyers, and they are told that this item is given to another student group (sellers) in the game, that they would set a purchasing price if they wish to do so, and if the seller wishes to sell at the purchasing price, they can purchase the item. Since the game is played through an online questionnaire, in order for the pen to generate an endowment effect, the sellers are asked to write down a shipping address. It is stated in the
questionnaire that if a shipping address is not requested from the group to which the item is not given if they prefer to purchase the item and the seller accepts the amount of money offered, their shipping address would be requested and the amount of money would be delivered to them through the experimenter. Before the game in which the endowment effect is to be tested, a visual with which they can empathize similar to the video image used in Klimecki et al. (2016) is shown to the empathy-primed buyer and seller groups. This image is obtained from a documentary video of the official national channels in Turkey (TRT Documentary).

In the video image, a medical doctor's statements regarding a colleague who has died due to the Covid-19 pandemic are subtitled. The doctor asserts that the person who just passed away due to respiratory failure caused by Covid-19 was a friend and staff member of Istanbul University, that he is shocked and upset, and that the same thing could happen to himself. Apart from this empathy-primed group in the experiment, there are also two control groups. The same procedure applies to them, and instead of an empathy-priming visual image, a neutral office image that does not express any emotion is shown to them before the game is played. In this image, men and women work at their desks, on their computers in the office.

In certain places in Turkey wearing masks requirement was brought since April 2020 (Provincial Public Health Decision No. 20). That is why all groups are also asked the price at which they would sell the pen to the masked and unmasked persons and it is determined whether or not the empathy gap occurs due to price differences. For this purpose, photographs of average reliable Turkish women and average Turkish men in the study of Saribay et al. (2018, p. 16) are utilized. These photos are shown both with and without masks. All groups are asked within the range of minimum TRY 1 and maximum TRY 20. Upon completing the experimental questionnaire is completed, the money transfer of those with the same price offered by the sellers and the prices offered by the buyers are made through the experimenter. If those who wish to sell the pen cannot find a buyer at the price offered, a pen is sent to them.

3. Results

The results are obtained with the Stata software. The Cronbach’s alpha value is 0.7280. The students in each group are asked to indicate which of the positive, negative, and neutral emotions that the shown images evoke, and the relationship between pen purchasing and selling is evaluated.
Tab.1: Relationship between the Emotions in Images Shown to
Buyers and Sellers and Purchase-Sell Decisions

<table>
<thead>
<tr>
<th>Groups</th>
<th>p</th>
<th>Adj. $R^2$</th>
<th>Std. Err.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pen Owner (Seller), n=43, Empathy Group</td>
<td>0.000</td>
<td>0.8907</td>
<td>.0996</td>
<td>18.53</td>
</tr>
<tr>
<td>Buyer, n=30, Empathy Group</td>
<td>0.000</td>
<td>0.4082</td>
<td>.2618</td>
<td>4.58</td>
</tr>
<tr>
<td>Pen Owner (Seller), n=31, Control Neutral Group</td>
<td>0.002</td>
<td>0.2712</td>
<td>.3388</td>
<td>3.49</td>
</tr>
<tr>
<td>Pen Buyer, n=29, Control Neutral Group</td>
<td>0.005</td>
<td>0.2250</td>
<td>.3486</td>
<td>3.02</td>
</tr>
</tbody>
</table>

As can be seen in Table 1, a positive ($R^2 = 0.8907$) and strong relationship is found between the negative image, which is the dependent variable, and the sale of the pen in the possession of the empathy group. In the buyer group, a significant relationship is found between negative image and buying process ($R^2 = 0.4082$). A significant but weak relationship is detected between selling ($R^2 = 0.2712$) and purchasing ($R^2 = 0.2250$) the pen, based on the dependent variable, which is the neutral image in the control group with the office photo.

Tab.2: Pen Sale of Pen Owners and Predicted Purchasing – Selling Prices

<table>
<thead>
<tr>
<th>Groups</th>
<th>“Istanbul University”- engraved pen (TRY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The price at which you wish to sell</td>
</tr>
<tr>
<td>Pen Owner, n=43 Empathy Group</td>
<td>9.51*</td>
</tr>
<tr>
<td>Pen Owner, n=31 Control Neutral Group</td>
<td>7.5**</td>
</tr>
</tbody>
</table>

*(n=30), **(n=9) Note: Their averages are stated.
As seen in Table 2, it is detected that the participants who are given pens are affected by the images shown to them and 70% of them determine a selling price by expressing that they are willing to sell the pens in their possession at an average price of TRY 9.51. On the other hand, 29% of the control group state that they are willing to sell their pens at an average price of TRY 7.5. As can be seen here, the empathy group is more sharing. They also state a price lower than the average market price of the pens. A lower price is determined in the control group, despite the low number of individuals who are willing to sell. Upon comparing all prices, it is seen that the empathy group reports higher prices than the control group, except for the selling price to the man with mask. Here, it can be explained that the passing of the Istanbul University member in the image may have an effect on them as a student, and considering the highest prices at which they would prefer to sell, they feel more belonging and valued in this respect than the other group. It is revealed that both groups wish to sell the pen to the individuals with masks at a lower price in the selling price for women and men with and without masks.

Tab.3: Pen Purchase of the Buyers and Predicted Purchasing – Selling Prices

<table>
<thead>
<tr>
<th>Groups</th>
<th>“Istanbul University”-engraved pen (TRY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The price at which you wish to purchase</td>
</tr>
<tr>
<td>Buyer, n=30, Empathy Group</td>
<td>3.6*</td>
</tr>
<tr>
<td>Buyer, n=29, Control Neutral Group</td>
<td>3.5**</td>
</tr>
</tbody>
</table>

*(n=15), **(n=8) Note: Their averages are stated.

As seen in Table 3, it is detected that the participants who are given any pens are affected by the images shown to them and 50% of them determine a purchasing price by expressing that they are willing to purchase the pens in their possession at an average price of TRY 3.6. 28% of the control group state that they can purchase the pens in the visual
image at an average of TRY 3.5. As can be seen here, the empathy group is more sharing. They state a price much lower than the average market price of the pens compared to the sellers. Upon comparing the prices, it is seen that the empathy group reports lower prices than the control group in all the questions except for the purchasing price. Here, just like the endowment effect, there are serious differences between the purchasing and selling prices. It is revealed that both groups wish to sell the pen to the individuals with masks at a lower price in the selling price for women and men with and without masks. There is a difference of TRY 5.91 between the selling and purchasing prices. The control group buyers, who are not induced by empathy, assert that although they wish to purchase the pens at TRY 3.5, they would offer a sale price higher than the market value if they had them. Therefore, the matching number of the prices at which the seller wishes to sell and the prices at which the buyers wish to purchase are low, and the pens and tokens are transferred through the experimenter.

4. Conclusion

According to the analysis results, it was revealed that the value attributed to the pens by the participants who were given a pen is higher than of those who were not given a pen, similar to the literature. As stated in the literature; the egocentric empathy gap, which is caused by the price differences due to the high value attributed to a property owned, somewhat decreases here. Although the participants do not have the knowledge of the item’s market price, the majority of the pen holders wish to sell the item at a bit lower than the market price. However, 30% of them do not wish to sell the item. This is justified by a significant conclusion drawn regarding the doctor’s image, which mentions the Istanbul University staff who have lost their lives due to Covid-19, which affects the students emotionally who empathize with it. Nonetheless, the buyers tend to attribute less value to an item they do not own in compliance with the literature. Therefore, although the presence of an empathy gap that consists of both those who do not wish to sell the item and the price difference is detected, it is apparent that the price differences cannot be compensated by the buyers who underestimate the value of the item, not because the sellers, i.e. the item owners, who overestimate the pen.

These differences arise when the maximum price at which an average pen owner would sell is compared with the maximum price at which the sellers would sell the pens. In the buyers’ group, those who wish to purchase the pens are few in number, and the value they attribute to the pen is even much lower. This reveals the endowment effect, and thus, the lack of empathy. In sales decisions for those who wear masks and those who do not wear masks, it is revealed that all groups approach individuals with masks at a lower price than those without masks, and they prefer to sell pens at a higher price to those who do not wear masks. It is determined
that the empathy-primed group tends to sell to an individual without masks at higher prices in comparison to the control group. This result reveals that individuals whose empathy is induced by visual images impose altruistic punishment on those who ignore social rules through which they empathize with individuals wearing and not wearing masks. Therefore, it is apparent that all individuals look after the other and approach the other emotionally regarding the mask. In this sense, the study also reveals the presence of sensitivity to wearing a mask.
References


