Tendencies in Young Adults to Share in Scenarios of Inequality Items of Little Value When Object is Given or Earned

Hannah Lueptow Evolution of Cooperation April 18, 2012

Humans practice sharing, however there are instances in which sharing is more or less likely to occur. Often times, objects considered valuable are less desirable to share than those that are of lesser value. In this experiment, I will look into the tendencies young adults have towards sharing when small items of little value are given to them and in a second scenario, earned by them. Studies have shown that children aged 7-8 have an extremely high inclination to share based off of fairness. In this experiment I observe subjects to see if, in an unequal or unfair situation if subjects are more likely to share candies given to them with an accomplice who has no candies, and compare those results to an identical experiment in which subjects earn the candy.

In general humans practice altruistic behavior such as sharing. There is no immediate personal benefit to sharing other than feeling good about oneself. Humans generally share in hopes of future reciprocation. Sometimes people are selfish, but this is often because the object that is being shared has special qualities about it, such as being expensive, rare, precious, or important to the subject. Things can be special to us because we work hard for it and get the gratification of knowing we earned it. In other situations, we are attracted to things purely because we like it, not necessarily because it was earned. Many parents will make their children save their own money to buy an expensive toy, in hopes of giving their child a sense of earning and accomplishment. Working to reach your goals to get what you want is engrained in our capitalistic society. But what about fairness and sharing? Are adults concerned with these ideas and what effects these decisions to share?

I wonder if the idea of earning something and feeling that sense of personal value through hard work is apparent in young adults. Are people are more inclined to share when they have earned something or when it is given to them at no personal cost. Is a test subject more likely to share when they are given a gift rather than earning it? If they are competing against another for a 'prize' is there less incentive to share? How much does fairness and sharing matter to us? In Stefan Kohler's paper called *Altruism and Fairness* in Experimental Decision Making he writes, "Experimental evidence from dictator games and simple choice situations indicates concerns for fairness and social welfare in human decision making. At the same time, models of inequality averse agents fail to explain the experimental data of individuals who reduce their payoff below a fair split in order to maximize social welfare." In many studies, research has shown that people in different experiments such as the public goods game and the ultimatum game where subjects, to their own disadvantage, try to prevent unequal payoffs. In an experiment by Ernst Fehr, Helen Bernhard, and Bettina Rockenback, they found that children aged 7-8 are more inclined to share with others and show a concern for equality². Are adults concerned with fairness and equality? Is the willingness to share affected by how hard the giver worked

for the item being shared? Additionally, people who are friendly to each other may have a higher tendency to share. In an experiment conducted by S.B. Dreman and Charles W. Greenbaum looking at the behavior or Israeli Kindergartners they found evidence that verbal communication and behavior affected the amount of sharing. "A content analysis of reasons for sharing showed a clear relation between verbal expressions of altruism and actual altruistic behavior." Students were more likely to share and more concerned with inequality when they were with children who were in the same class as them. When they were around students who were not in their class, they were less inclined to share. This raises the question of the relationship between the two subjects where sharing occurs and the potential familiarity among participants will likely increase the amount of sharing, and whether it is a single interaction or not.

There are three hypotheses in the experiment. Either those who are given a gift will

be more willing to share (Scenario A), those who work and then earn the prize are more likely to share (Scenario B), or the two groups are equally likely to share. Given the first hypothesis, I predict that I will observe more sharing in subjects who are given their prize by mere chance. In Scenario B I predict that I will observe less sharing in subjects because there is more attachment to the prize. Additionally, there is an added element of competition between subjects (because they are taking a short written test) which I predict will decrease chances of subjects sharing.

Material and Methods

I tested my hypothesis and predictions with a series of two tests. The first test, Scenario A the test subject walks into the testing room where I wait with an accomplice disguised as another test subject. I sit them down at a small table facing each other. They are handed a sheet of paper with five identical questions. I read the instructions as follows:

Subjects are to complete the test. You are allowed to speak to eachother and/or work together if you feel compelled to do so. Your tests will be evaluated after completion. You may begin.

The accomplice is instructed not to prompt conversation, but if prompted by test subject accomplice is instructed to cordially cooperate with test subject. The accomplice remains constant throughout all experiments. After completing test I tell subject and accomplice that as a thank you I have some M&M's, however there is not a lot left, so I will flip a coin to determine who will get them. The coin toss is rigged so that the test subject always wins. The candies are in a small Dixie cup rather than a pack to prevent subjects from pocketing candies for later, forcing them to consume them on the spot. Each subject will be given 20 M&M's. Once subject has candies, I leave the room telling subjects I forgot something in the other room. I return precisely one minute later with a short follow-up survey and give one to each subject.

The Given Scenario will be tested 15 times by 15 different people aged between 18-25 years old. The Earned Scenario is exactly the same, except after the test is completed they are graded. The grading is rigged to that the subject always has the higher score. I tell the

test subject they will receive a prize for getting a higher score than the other participant. Subject is given a cup of 20 M&M's. I excuse myself saying I forgot something in the other room. After precisely one minute I will return with the follow up questionnaire that is identical to the questionnaire in the Given Scenario. The Earned Scenario will be tested 15 times by 15 different people aged between 18-25 years old. The quiz subjects take will remain constant through both scenarios.

Results

The collected data from the experiment conducted with 30 different participants showed that those given candy in the coin toss gave an average of 3 candies while those who earned candies gave an average of 2 candies (Figure 1). Based on the results, participants were more likely to share when given candies rather than earning them. A total of 60% of those given candies shared with the accomplice in contrast to the 47% of participants who shared when candy was earned (Figure 2). Only seven participants shared with the accomplice in the "earned" scenario (Figure 3.1) while nine of the participants shared in the Given Scenario (Figure 3.2). Except for one participant who gave the accomplice all of the candies in the Given Scenario, the amount of candies subjects would give to the accomplice was relatively similar with the Given Scenario being slightly lower than those in the Earned Scenario (Figure 3).

Discussion

Evidence from certain dictator games and simple choice situations in Stephan Kohler's research favors data found from this experiment. The social welfare for the group is a general interest. In both scenarios, those who shared gave equal or close to equal (keeping more for themselves) to the accomplice. Like the children in Fehr's experiment, fairness is taken into account with adults as well. In single-scenario situations, even when people do not know eachother, I found in my experiment that young adults were still concerned with fairness involving low cost goods. It would be interesting to further the research to see if the same results occur when objects of higher value are at stake. Additionally, I could conduct identical experiments with a greater amount of candies. Since there were so few of such a low cost item, results may differ with greater value or quantity.

There were a few control elements of the experiment that may have added some room for error in the data. These include changes in location of experiment multiple times, some participants knowing the accomplice and some not, as well as participants ranging in age and gender. In Figure 3.2 there is one subject who shared all of their candies which occurred in the Given Scenario. Either the subject did not like or want the candies, or they were exceptionally generous. This is a small "fluke" in the data that may have swayed the results. To try and average out this inconsistency, I could have furthered the experiment with more test subjects. With the exception of this subject, the amount of candies shared was relatively similar between scenarios, however the Given Scenario had two more participants share than in the Earned Scenario.

Research Sources

Kohler, Stephan. Altruism and Fairness in Experimental Decisions. Journal of Economic Behavior and Organization, Vol. 80, Issue 1 (Sept., 2011), pp. 101.

² Fehr, Ernst, Bernhard, Helen, Rockenback, Bettina. Egalitarianism in young children. Nature. Vol. 454. 28 August, 2008. Macmillian Publishers Ltd. 2008. pp. 1079.

³ Dreman, S.B., Greenbaum, Charles W. Altruism or Reciprocity: Sharing Behavior in Israeli Kindergarten Children. Child Development. Vol. 44, No. 1, Mar., 1973. Blackwell Publishing on the behalf of the Society for Research in Child Development. pp. 61.

⁴ Gurvan, Michael. Reciprocal Altrurism and Food Sharing Decisions among Hiwi and Ache Hunter-Gathers. Behavioral Ecology and Sociobiology, Vol. 56, No. 4 (Aug., 2004), pp. 366-380, Springer publication.

5 Schwartz, Barry. Why Altruism is Impossible....and Ubiquitous. Social Service Review, Vol., 67,

No. 3. Altruism (Sept., 1993), pp. 314-343. University of Chicago Press.

⁶ Pfeiffer, Thoman, Rutte, Claudia, Killingback, Timothy, Taborsky, Michael, and Bonhoeffer, Sebastian. Evolution of Cooperation by Generalized Reciprocity. Proceedings: Biological Sciences, Vol. 272, No. 1568 (Jun., 7, 2005), pp. 1115-1120.

⁷ Nowak, Martin A., and Sigmund, Karl. The Alternating Prisoner's Dilemma. Dec., 13, 1993.
Trivers, Robert L. The Evolution of Reciprocal Altruism. The Quarterly Review of Biology, Vol. 46, No. 1 (Mar., 1971), pp. 35-57.

⁸ Dreber, Anna, Rand, David G., Fudenberg, David, Nowak, Martin A. Winners Don't Punish. Nature, Vol. 452, March 20th, 2008. Nature Publishing Group, 2008.

9 O'Connor, Lynn E., Berry, Jack W., Weiss, Joseph, Schweitzer, Dina, Sevier, Mia. Survivor Guilt, Submissive Behavior and Evolutionary Theory: The Downside of Winning in Social Comparison. British Journal of Medical Psychology, Vol. 73, Issue 4, pp. 519-530, December 2000. The British Psychological Society, 2000.

¹⁰ Roberts, G. Competitive Altruism: From Reciprocity to the Handicap Principle. Proceeding of the Royal Society London B. Vol. 265 no. 1394 (pp. 472-431).



Figure 1: Shows average number of candies shared between subject and accomplice. Those who were given candies in Scenario A in which subjects were given the candies, gave one more candy to the accomplice than participants in Scenario B in which subjects earned the candy, who gave an average of two candies.



Figure 2: Top pie chart shows percentage of those who shared in Scenario A. Bottom pie chart shows percentage of those who shared in Scenario B.



Figure 3: Figure 3.1 shows the amount of sharing each subject showed in Scenario A when candies were earned. Figure 3.2 shows the amount of sharing each subject showed in Scenario B when candies were given.

Quiz subjects were given:

1) What lines determine time zones around the world?

a) Parallels

b) Meridians

c) Latitude

d) Longitude

2) The Denmark Straight is between which two countries?

a) Great Britain and Norway

b) Denmark and Norway

c) Denmark and Sweden

d) Iceland and Greenland

3) Antigua and Barbuda lie in which Sea?

a) Red Sea

b) Caribbean Sea

c) Mediterranean Sea

d) Adriatic Sea

4) Beijing, the capitol of China used to be called what?

a) Nanjing

b) Tianjin

c) Peking

d) Guangzhou

5) Which Australian province has 'New' at the beginning of it?

a) South Wales

b) Queensland

c) Victoria

d) Tasmania

Survey Subjects were given:

On a scale of 1-10 how difficult did you think the test was?

On a scale of 1-10 how much did the other participant help you? On a scale of 1-10 how much did you help the other participant? If you received the bag of candy, did you share with the other participant? If yes, how many candies?

If you did not receive the bag of candy, did the other participant share with you? If yes, how many candies?