

The Development of Children's Fairness Preference

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Abstract. Fairness is an important part of children's moral development research. Children of different ages have different understandings and fairness preference. The game paradigm is introduced in psychology to study children's fair distribution behavior and explore children's fairness preference. This paper mainly discusses the related concepts of children's fairness preference, research paradigms, factors affecting children's fairness preference, and future research prospects.

1. Introduction

Fairness preference, known as unfair aversion, refers to a phenomenon in which an individual pays attention to the individual's own maximum income, and also pays attention to whether the distribution of income is fair, manifested as a strong pursuit of fairness and aversion to unfairness (Tian Liyan, 2015). Psychology first used dual story and the dilemma story to study child's fairness preference. With the development of the discipline, psychologists gradually adopt the game paradigm in experimental economics to study the development of children's fairness preference (Dong Shenghong et al., 2016). Exploring children's fairness preference is helpful to understand the critical period of children's fair behavior development, help us better understand the motives of children's unfair behavior, predict children's decision-making in fair situations, and provide a basis for children's fairness education.

2. Research paradigm

2.1 Dictator Game (DG)

In the dictator game, the two participants are called the proposer and the recipient. The experimenter gives the two sides some attractive resources (when studying children's fairness preference, they usually choose the materials that children like, such as candy, stickers). The proposer then proposes a resource allocation plan to decide how to distribute between himself and the recipient. No matter how much resources the proposer allocates or even does not allocate, the recipient can only unconditionally agree with the proposer's proposal and has no right to file an objection.

2.2 Ultimatum Game (UG)

In the ultimatum game, the two participants are called proposer and recipient. The experimenter will also provide an attractive resource for both parties, let the proposer allocate, and the responder chooses to accept or not. If the recipient rejects the offer and neither of them can get these resources. In this game, the fair distribution of the distributors can be regarded as having a fairness preference, and the recipient can be regarded as a fairness preference if he/she rejects the unfair distribution plan of the proposer.

2.3 Third-party Punishment Dictator Game (TP-DG)

The third-party penalty game is to add a third party that has the right to make a penalty choice for dictator in the game. Usually, the cost of a unit paid by a third party can reduce the revenue of the three units of the dictator. The third party observes the dictator's distribution behavior and can punish the dictator's unfair distribution behavior, but requires a third party to pay a certain cost. In addition, the third party can also guarantee their own profits without paying a certain cost. (Tian Liyan, 2015).

3. Influencing factors

3.1 The age of the child

In most of the previous articles on children's fairness preference, it was found that younger children showed more self-interested behaviors, while older children often showed altruistic behavior. According to previous studies, children who are roughly 7-8 years old were more able to make a fairer distribution behavior (Zhou Chang, 2010). Liang Fucheng et al. (2015) found that children between the ages of 8 and 10 adhered to the principle of fairness to others, and showed a clear altruistic tendency. It is concluded that 8 years old is the turning age for real fairness preference. However, studies also found children's fairness preference did not change with age (Gummerum et al., 2008; Takezawa et al., 2006; Güroglu et al., 2009).

3.2 Social relations

Social relationship between the proposer and the recipient can affect the child's fairness preference. If they are good friends, the proposer will allocate more resources to the recipient (Frederickson & Simmonds, 2008; Moore, 2010). Zhang Yanjuan (2013) studied the fairness preference of children aged 9-10 in the ultimatum game. He found that children allocated less resources to the strangers and gave more resources to the friends.

3.3 Cultural factors

Different cultures have different levels of emphasis on the principle of fair distribution (Rochat et al, 2009). Zhu et al. (2007) found that Chinese children had slightly higher bids than children of the same age in Germany, suggesting that the developmental track of children's fair behavior may be culturally different. Carson and Banuazizi (2008) compared the similarities and differences between American children and Filipino children. American children paid attention to the performance of the story hero, while Filipino children paid attention to the interpersonal and emotional consequences of uneven distribution. This result is related to the cultural differences between the two countries. American culture emphasizes individual performance, contribution, and justice. Philippine culture advocates others needs and interpersonal harmony.

3.4 Theory of mind

To a certain extent, children may need to make guesses about other people's mental thought activities, anticipate the way others respond, and then adjust their distribution plans (Rabin, 1993; Gummerum et al., 2008). Child's psychological theory ability is higher, he/she will do more fair behavior when he allocates resources (Sally & Hill, 2006; Yu Jing, Zhu Liqi, 2010). Takagishi et al. (2010) found that children who passed the task of misbehavior understanding had significantly higher bids in the ultimatum game than those who did not, indicating that theory of mind plays an important role in children's distribution behavior. Chen Tong and Wu Zhen (2017) believed that Children with poor psychological theory were more considering they own interest and less the interests of both parties.

3.5 Degree of involvement

The involvement level had a certain impact on children's fair distribution behavior (Wang Si, Su Yanjie, 2013). Shaw (2012) found that children under the age of 3-5 were not able to generally show unfair aversion under the conditions of involvement, but under non-involving conditions, they were better able to show unfair aversion. In contrast, children aged 6-8 can generally exhibit unfair disgust

under both conditions. Feng Chunying (2019) believed that children's fair cognition under non-involving conditions was significantly higher than the level of fair cognition under the conditions of involvement.

3.6 The intention of the proposer

With the development of time, scholars pay more and more attention to children's fairness preference. Güroglu et al. (2009) found that more than 60% of 9-year-old children were more inclined to reject unfair distribution behavior regardless of whether the proponents were intentionally or maliciously assigned, but children aged 12-18 would allocate resources according to the intention of the other party. Liu Wen et al. (2016) found that the intentional fairness began to appear at the age of 11-12, and showed a trend of increasing the intention to consider year by year. The above study can conclude that older children are considered to be more likely to consider the proponents' fairer intentions than the younger ones, not just the distribution of distribution results.

4. Research outlook

4.1 The age characteristics have not been unified yet.

Studies at home and abroad have examined the fairness preference of children of different ages. These studies focus on the overall developmental characteristics of children's fairness preference. From previous studies, some studies have found that children are more and more fair in distribution with age, and some studies show that children's fairness preference have no age difference. There is still no unified conclusion about the age development characteristics of children's fairness preference, and there are still big differences in the researchers' discussion of children's fairness preference. This may also be related to many other factors, such as cultural differences, different growth environments. Future research should consider this, and it would be better if the age could be further divided.

4.2 The selection of the subjects can be more extensive

Most of the previous studies have focused on studying a small range of ages, such as children aged 4-6 years. And many of the subjects in the study were concentrated in the same primary school or kindergarten, so the representation would be weakened and may not be popular. Therefore, in the future research, we can choose a wider range of subjects. For example, children aged 1-12 can be selected to make the age span larger, which is conducive to vertical comparison and clear understanding of the age development of children's fairness preference. The urban and rural subjects can also be appropriately expanded, which is conducive to the comparison between the subjects, making the results more representative.

4.3 Research methods need to be more perfect

In the current study, most of the articles on children's fairness preference are based on the classic game paradigm in economics, such as the dictator game or the ultimatum game. Through the fixed situation, the subjects are selected to explore children's fairness preference. The research method is relatively simple. In the future, we can take some research methods to explore, or combine experimental economic paradigms with psychological research paradigms, which deserves our attention.

4.4 Pay attention to the type of resource allocation

In the past research, most of the experimental materials used were candy and stickers. Such experimental materials need to consider the gender of the subjects. For example, the little girl would like candy more than the little boy, then do we need to consider whether she will be more inclined to allocate more resources to herself and less to the other party. When the allocation of resources is something that the proposer hate, will the situation change? Therefore, in future research, we need to consider the preference of the participants for the experimental materials. We should try to avoid this

situation, make the research results more accurate, or compare them with two kinds of allocated resources, so that we can get the results more convincing.

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