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THE ROLE OF GROUP MEMBERSHIP AND VALUES ON SOCIAL NORM
ENFORCEMENT AND COMPLIANCE: AN EXPERIMENTAL STUDY

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The Role Of Group Membership And Values On Social Norm Enforcement
And Compliance: An Experimental Study

Grup Üyeliğinin Ve Değerlerin Sosyal Norm Uyumu Ve Yaptırımını
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LIST OF ABBREVIATIONS

BGR Bounded Generalized Reciprocity. 10, 11

ESS21 European Social Survey. 15

MGP Minimal Group Paradigm. 10

PVQ21 Human Values Scale. 15

PVQ40 Portrait Value Questionnaire. 15, 21, 22

SIT Social Identity Theory. 5, 9, 11

SVS Schwartz Value Survey. 14, 15

TwIVI Twenty Item Value Inventory. 15, 21, 22, 35

ABSTRACT

This thesis examines altruistic norm compliance and enforcement within and between minimally designed groups in a controlled laboratory experiment. Utilizing a one-shot third-party punishment game, we follow the experimental design features of the seminal study Bernhard et al. (2006), which investigates the role of parochialism in altruistic norm and enforcement among two indigenous tribes in Papua New Guinea. In the game, an impartial observer monitors the transfer by a dictator to a recipient and can impose a costly punishment on the dictator. We employ four treatments at which (1) all three players are from the same group, (2) the recipient and the third party are from the same group, while the dictator is from the other group, (3) the dictator and the recipient are from the same group, while the third party is from the other group, (4) the dictator and the third party are from the same group, while the recipient is from the other group. Additionally, we run a control treatment at which the game is played without any group framing. We also assess the subjects' value orientations via Schwartz's Values Survey.

We compare our results with those of Bernhard et al. (2006) to investigate whether similar norm compliance and enforcement behaviour could be elicited in minimally designed groups. Although we find no significant differences in the transfers and punishments between treatments, we observe that the third parties tend to enforce norms more leniently when the dictator and recipient are affiliated with the same group. Our results show that higher transfers are punished less. Furthermore, we find that subjects' value orientations have a significant impact on their decisions and beliefs regarding transfers and punishments.

Keywords: Altruistic Norm Compliance, Group Membership, Third-Party Punishment, Minimal Group Paradigm, Schwartz's Theory of Values

ÖZET

Bu tez, kontrollü bir laboratuvar deneyinde minimal olarak tasarlanmış gruplar içinde ve arasındaki özgecil norm uyumunu ve uygulamasını incelemektedir. Tek seferlik bir üçüncü şahıs ceza oyunu kullanarak, Papua Yeni Gine'deki iki yerli kabile arasında özgecil norm uyumu ve norm uygulamasında "parokializm" in rolünü araştıran ufuk açıcı Bernhard et al. (2006) çalışmasının deneysel tasarım özelliklerini takip ediyoruz. Oyunda tarafsız bir gözlemci, bir diktatörün bir alıcıya transferini gözlemler ve diktatöre maliyetli bir ceza verebilir. (1) Üç oyuncunun da aynı gruptan olduğu, (2) alıcı ve üçüncü kişinin aynı gruptan, diktatörün diğer gruptan olduğu, (3) diktatör ve alıcının aynı gruptan, üçüncü kişinin diğer gruptan olduğu, (4) diktatör ve üçüncü kişi aynı gruptan, alıcının diğer gruptan olduğu dört tretman uyguluyoruz. Ek olarak, oyunun herhangi bir grup çerçevesi olmadan oynandığı bir kontrol tretmanı uyguluyoruz. Schwartz Değerler Anketi ile katılımcıların değer yönelimlerini de değerlendiriyoruz.

Sonuçlarımızı Bernhard et al. (2006)'inkilerle karşılaştırarak benzer norm uyumu ve uygulama davranışının minimal olarak tasarlanmış gruplarda ortaya çıkıp çıkmayacağını araştırıyoruz. Tretmanlar arasında transfer ve cezalarda önemli bir fark bulamasak da, diktatör ve alıcı aynı gruptan olduğunda üçüncü şahısların normları daha yumuşak bir şekilde uygulama eğiliminde olduklarını gözlemliyoruz. Sonuçlarımız, daha yüksek transferlerin daha az cezalandırıldığını gösteriyor. Ayrıca, katılımcıların değer yönelimlerinin, transferler ve cezalarla ilgili kararları ve inançları üzerinde önemli bir etkiye sahip olduğunu bulduk.

Anahtar Kelimeler: Özgecil Norm Uyumu, Grup Üyeliği, Üçüncü-Taraf Ceza, Minimal Grup Paradigması, Schwartz Değerler Teorisi

INTRODUCTION

The existence and definition of norms are perhaps one of the most fundamental matters in social sciences. Norms are commonly considered as unwritten rules and expectations that define acceptable and appropriate actions within a social group or society. They are decisive for the evolution of cooperation and maintaining social order. Since it is crucial to understand the role of norms in shaping human behaviour from many aspects, the study of social norms is located at the intersection of multiple social science disciplines such as sociology, psychology, anthropology, economics and political sciences.

From the 19th century, extensive research has been conducted on norms, primarily by sociologists. One of the earliest works, Durkheim (1893), suggests that social norms are the product of collective consciousness and are necessary for the smooth functioning of society. It also states that individuals who violate norms would face social sanctions such as ostracism or punishment. Durkheim introduces the term anomie, the state of normlessness, which emerges when there is an imbalance between culturally imposed goals and the legitimate means available to individuals to achieve those goals.

Since the mid-20th century, the influence of norms on individual behavior has been a focal point for social psychologists. Asch (1951) shows the extent of group pressure on individual judgment, finding that approximately 75% of participants conformed to the majority's incorrect answers. Milgram (1963), also known as The Milgram Shock Experiment, shows that most participants tend to conform to the social norm of obedience to authority figures. Zimbardo et al. (1973), commonly referred to as The Stanford Prison Experiment, showcased how college students rapidly conformed to the perceived expectations of their assigned roles as either prisoners or guards. These studies demonstrate the influence of social norms on individual decisions and actions.

While all behavioural sciences have shown deep interest in norms, their enforcement, compliance, and violation, traditional economic theory has often overlooked this aspect. Over the past three decades, experimental economists have shown increasing interest in studying norms. Akerlof and Kranton (2000) is the first theoretical economics article incorporating social norms. It presents a framework that integrates identity and social norms into classical economic theory. Anteriorly, economic theory has been primarily based on the traditional concept of homo economicus, which is constructed upon the assumptions that individuals are purely rational, consistent, self-interested, utility-maximizing and materialistic beings. As the definition suggests, this concept does not consider the complexities of human decision-making, such as psychological factors, emotional and social influences, or cultural variations.

Akerlof and Kranton argue that individuals do not behave merely in a rational and self-interested way but are influenced by their identities and social norms. They suggest that people's preferences, beliefs and actions are shaped by their social identities, which are connected to social categories such as gender, ethnicity, profession, or membership in certain groups. They propose a new utility function that covers their claims. According to this utility function, individuals derive utility not only from material gains but also from the fulfillment of their social identity and adherence to the norms of their social categories.

Studies on how and why individuals deviate from norms have mainly employed the lying and cheating games, in which there is a conflict between the participant's self-interest and the honesty norm. Individuals justify their norm-violating behaviour as a response to their perception of being treated unfairly by others. For example, Vetter et al. (2010) provide evidence that when participants feel they are unjustly treated, they are more likely to cheat. Keizer et al. (2008) show that people litter significantly more frequently

when the environment is disorderly. They conclude that as a particular norm-violating behaviour becomes more common, it will negatively influence conformity to other norms and rules (Keizer et al., 2008).

One aspect of norms that has not yet been discussed is their emergence within social groups, where expectations and obligations are enforced collectively among group members. Normative obligations are more likely to apply to in-group members because norms and expectations are often based on shared identity and group membership. Thus, out-group persons may not feel obligated to obey these norms since they do not benefit from in-group altruism.

Since sustaining social norms is essential for the survival of social groups, norm violators are punished for cheating (Fehr et al., 2002). Fehr and Schmidt (2006) mention that participants comply with the norms even in one-shot and anonymous game settings, in which not complying would go unpunished. Fehr and Fischbacher (2004) show that most third-parties impose punishments on norm violators regardless of the expense, even when they are not directly harmed by the behaviour or receive no financial benefit from their sanctions. This behaviour is referred to as altruistic punishment.

In evolutionary biology, an organism is said to behave altruistically when its behaviour benefits other organisms at a cost to itself. Although the existence of altruism is puzzling, this cooperative behaviour in many species can be explained by evolutionary selection theories. Edward Wilson, a controversial biologist known as the New Darwin, summarized, "In a group, selfish individuals beat altruistic individuals. But, groups of altruistic individuals beat groups of selfish individuals." (Wilson, 2012).

It's evident that norms that promote cooperation and prosocial behaviour, such as

reciprocity and fairness, have provided evolutionary advantages to individuals and groups. Similarly, human cooperation has mainly been explained by the theories of kin selection, reciprocal altruism and indirect reciprocity. However, the theories mentioned above do not readily account for altruistic punishment because it also occurs among genetically unrelated individuals and under conditions that rule out direct reciprocity and reputation formation (Fehr and Gächter, 2002).

Norm compliance is shaped by various factors, ranging from social pressure and fear of punishment to deeply rooted elements of social identity. Within the realm of experimental economics, research has demonstrated the significant impact of social norms and their enforcement on individuals' behaviour and decision-making, particularly in the context of cooperation. Since social norms play an important role in shaping group behaviour, an individual's adherence to these norms is closely tied to their social identity. Social Identity Theory (SIT), developed by Henri Tajfel and John Turner in the 1970s, posits that individuals form their self-concept based on their group memberships. People categorize themselves as well as others and derive their self-esteem from the in-group. According to this theory, individuals tend to have a favourable view of their group to maintain a positive social identity. This perspective offers profound insights into in-group favoritism, suggesting that prioritizing one's own group over others brings higher utility (Tajfel and Turner, 1979; Tajfel, 1970).

In order to better understand the basis of intergroup discrimination and the minimal requirements for group formation, Tajfel (1970) conducts an experiment that allocates students to two groups based on their artwork preferences. The results reveal that participants display a clear bias towards their own group, which demonstrates that social categorization alone is enough to elicit discrimination and favouritism. These biases occur even in the absence of any meaningful or significant differences between groups,

suggesting that minimal nudges are sufficient to trigger group-based biases.

Building upon the existing literature, this thesis aims to further investigate if these findings remain valid even when groups are minimally designed and artificially labeled, thereby examining the extent to which in-group favouritism can be generated under such circumstances. We employ a one-shot dictator game with third-party punishment, adopting the experimental design of Bernhard et al. (2006) which serves as a benchmark study for this thesis. The article studies parochial altruism — the behaviour of being more altruistic towards members of one's own ethnic, racial or language group compared to members of other groups— with two indigenous tribes in Papua New Guinea. The authors conduct third-party punishment experiments to investigate the impact of group membership and social norms on cooperative behaviour. They hypothesize that if an egalitarian sharing norm exists, dictators should transfer money to the recipients and third-parties should implement altruistic punishment for transfers below the equal split.

Their results show that dictators transfer more when the recipient is in their group; and that third-parties are more sparing when the low-transferring dictator is in their group. They find that punishers protect in-group victims who suffer from a norm violation much more than they do out-group victims, regardless of the norm violator's group affiliation (Bernhard et al., 2006).

We aim to investigate if these findings are albeit partially replicable with minimally designed groups, created by artificial labelling. While the literature has shown that individuals tend to favour members of their own ethnic, racial, or linguistic group in intergroup conflicts, it is unclear how this bias affects norm compliance and altruism in situations where group membership is arbitrary and anonymous. By investigating these dynamics in a controlled experimental setting, this thesis seeks to gain a deeper

understanding of the underlying mechanisms driving in-group favouritism and its impact on normative behaviour. This leads us to our first research question: Do altruistic norm compliance and norm enforcement behaviour in intra- and inter-group settings occur when groups are implemented through minimal group design? In other words, can in-group favouritism behaviour be generated even with minimally designed groups?

In addition to the benchmark study, this thesis utilizes the Schwartz's Theory of Basic Values to measure the participants' value orientations. This theory is a psychological framework that identifies ten broad personal values, proved to be universal across cultures. We intend to establish a connection between the participants' normative behaviour and their values. This leads us to our second research question: Is there a link between the subjects' behaviour and their value orientations? By analysing the association between individual values and cooperative behaviour, we hope to gain insights into the underlying motivations that shape participants' behaviour. Overall, this study seeks to contribute to a better understanding of the relationships between in-group favouritism, norm compliance, and altruistic behaviour in both intra- and inter-group settings.

1 LITERATURE REVIEW

The interplay of altruism, group dynamics and personal values has been a widely studied subject for multiple disciplines, leading to a rich body of literature. This section reviews this literature, beginning with the dictator game. This experimental game, commonly used for measuring attitudes towards fairness, inequality, and altruism, involves a dictator with the task of distributing an endowment between themselves and a recipient.

Fehr and Fischbacher (2004) adds an additional dimension by integrating a third player into the game, extending the game to study the enforcement mechanisms behind distribution and cooperation norms. They find that most subjects punish the norm violators despite the cost and even though they are not directly hurt by the action or gain no economic benefit from their sanctions. Such action is referred to as altruistic punishment.

This mechanism of altruistic punishment is further explored in a variety of group settings, employing the third-party punishment dictator game. Certain studies manipulate group compositions based on identifiers such as nationality, political ideology, or even personal characteristics like sex and attractiveness. For example, Rabellino et al. (2016) define groups on a real nationality basis (Chinese or Italian), which allows them also to examine if parochial instinct emerges. They find that regardless of group membership, the third-party punishes the dictator's unfairness even if it is costly, which is in line with the theory of altruistic punishment (Bowles and Gintis, 2004; Fehr and Fischbacher, 2004; Fehr and Gächter, 2002). Their findings also provide evidence for parochial altruism since all third-parties spend more to punish the dictator when the victim is an in-group member.

Delton and Krasnow (2017) use players' identification as liberals or conservatives to manipulate the group composition and investigate if the third-party punishment evolved to maintain group norms or to deter others from acting against one's interests. They find that out-group defectors are punished more severely than in-group defectors, contradicting the group norm maintenance theory. Instead, they find support for the deterrence theory, with third-parties punishing the most when they anticipated being treated poorly by dictators.

The influence of personal characteristics on punishment decisions has also been investigated. Li and Zhou (2014) examine how the proposers' sex and attractiveness affect fairness consideration and third-party punishment. They find that fairness consideration is mainly affected by the reasonableness of offers. However, both the sex and attractiveness of proposers affected punishment decisions, with male and attractive proposers being punished more harshly. Similarly, Shang and Li (2020) investigate the effects of participants' sex and proposers' facial trustworthiness. They find that proposers perceived as untrustworthy were more likely to be punished, and that male participants were more likely to punish proposers.

Crucial to these discussions is the exploration of group dynamics. In these studies, group membership is either based on naturally existing groups (nationality, political ideology) or is experimentally manipulated. Intergroup bias and discrimination occur regardless of how group membership is determined. Literature shows that individuals are more favourable towards in-group members than out-group (Brewer, 1979; Mullen et al., 1992; Perdue et al., 1990), and many studies using social dilemmas find that people cooperate more with in-group than with out-group members (Goette et al., 2012). In their meta-analysis, Balliet et al. (2014) aims to explain and predict intergroup discrimination in cooperation with two approaches: Social Identity Theory (SIT) (Tajfel and Turner,

1979) and Bounded Generalized Reciprocity (BGR) (Yamagishi et al., 1999).

SIT, originating from sociology, suggests that individuals form their sense of self based on social group membership (Billig and Tajfel, 1973) and derive their self-esteem from the in-group. Thus people engage in behaviours that favour their in-group to enhance their self-esteem. According to SIT, social categorization alone is sufficient to produce in-group favouritism.

SIT is initially proposed to explain why minimal groups engage in in-group favouritism and out-group discrimination. Tajfel (1970) conducts an experiment to explore the foundations of intergroup discrimination and the bare minimum conditions required for group formation. In this experiment, students are assigned to one of two groups based on their preference for certain artworks. The findings reveals that even in these minimally designed groups, where there are no interdependence of interest, there is evidence of in-group favouritism and discrimination against the other group.

However, the Minimal Group Paradigm (MGP) later faced criticism, particularly from Rabbie et al. (1989), who argued that these groups were not as minimal as initially thought. They pointed out the presence of interdependency within these groups, as participants were fully aware that the allocation of money to them was influenced by the actions of other in-group or out-group members. This critique suggests that the dynamics of group behaviour may be more complex than what is captured by the minimal group paradigm

The aspect of interdependency being overlooked spiked questions about whether mere categorization is sufficient to cause in-group favouritism. Karp et al. (1993) design an experiment with more minimal groups to examine in-group bias. The researchers pay

participants a fixed amount of money at the end of the experiment, regardless of their actions, which eliminates the interdependency problem. Surprisingly, they don't find in-group favouritism, which suggests that it is not evoked by social categorization alone.

On the other hand, BGR, rooted in evolutionary psychology, proposes that in-group favouritism is driven by self-interest rather than social identity. According to BGR, individuals engage in cooperative behaviours with in group members to establish a positive reputation and increase their chances of receiving help in the future. This theory suggests that cooperation is based on expectations of indirect reciprocity.

In the meta-analysis by Balliet et al. (2014) the findings were more consistent with BGR than SIT. They find that cooperation is primarily displayed in situations when people are interdependent with in-group members, which implies that cooperation rests, at least partially, on expectations of indirect reciprocity.

Building upon this line of thought, the influence of individual differences, specifically personality traits, on prosocial behavior within interdependent scenarios, becomes crucial. Thielmann et al. (2020) conducted a comprehensive meta-analysis investigating the role of personality traits within games such as the dictator game, among others. Their research reveals that prosocial behaviors are not dictated solely by game-internal variables but are also shaped by the complex interplay of a participant's personality traits and specific situational affordances. Their findings emphasize that different personality traits significantly relate to prosocial behavior across various interdependent situations. This highlights the importance of considering individual personality traits when examining prosocial behavior and punishment decisions in the third-party punishment dictator game.

Thielmann et al. (2020) illuminates how personality traits influence prosocial behavior within interdependent contexts, providing a conceptual bridge to Schwartz's theory. It suggests how individual value systems could translate into actual behavior, offering a more comprehensive understanding of the dynamics at play in third-party punishment decisions.

Since Tajfel, whether and to what extent people interact with in-group and out-group members differently has been widely investigated. The majority of these studies support the conclusion made by Billig and Tajfel (1973) that being a member of a group results in in-group favouritism, which often comes at the expense of the out-group.¹

The question of whether intergroup discrimination is primarily evoked by in-group love, out-group hate, or a combination of both has been a topic of extensive research. Both biological and social scientists agree these two factors work together to increase the in-group's efficiency and success compared to other groups (Dreu et al., 2014). Another aspect of this discussion is the concept of "parochialism", a preference for favouring the members of one's ethnic, racial or language group. Parochial cooperation is thought to be motivated by intergroup competition and conflict (Bowles, 2009).

Boulu-Reshef and Schulhofer-Wohl (2019) employ an experiment that starts with minimal groups but information about social characteristics (locality of origin, age, sex) of each in- and out-group member is provided subsequently. They are able to see the systematic effect that differential social distance has on the participants' actions. They find that higher social distance increases the likelihood of engaging in parochial altruism.

Bernhard et al. (2006), a seminal study on parochialism, is of supreme importance for

¹For overviews on in-group favouritism, see Bernhard et al. (2006), Hewstone et al. (2002), Yamagishi et al. (1999) and for a recent meta study, see Fischer and Derham (2016).

this thesis. The authors investigate the impact of group membership and social norms on cooperative behaviour by employing a third-party punishment dictator game, with two indigenous tribes in Papua New Guinea. They hypothesize that if an egalitarian norm is in fact present, dictators (players A) would transfer money to the recipients (players B) and third-parties (players C) would punish transfers below the equal split. In order to study parochialistic behaviour, the authors employ three treatments where two players are of the same tribe and the third is of the other (treatments AB, AC and BC). All three players are from the same tribe (treatment ABC) in the group treatment.

Contrary to predictions from evolutionary models, which suggest that punishment should only occur within the same group to uphold norms and strengthen group competitiveness, they found similar punishment behaviour across all treatments. These results imply that an egalitarian sharing norm exists across all four conditions instead of only the group treatment. However, punishment is higher in the ABC treatment than in the AB and AC, aligning with selective extinction models. Interestingly, punishment is the highest when the third-party and recipient are from the same group (BC), suggesting that third-parties protect in-group victims more.

As for transfer levels, they are found to be higher in those conditions where the dictator and the recipient belong to the same group. Whereas dictators transfer less on average when the third-party is an in-group member, because the punishment threat is perceived as lower in this case.

These findings challenge current selection theories and models based on reputation formation and indirect reciprocity, as they reveal the presence of egalitarian sharing norms across all treatments, not just within groups.

1.1 SCHWARTZ'S THEORY OF BASIC VALUES

Values are often defined as fundamental beliefs which represent guiding ideals or standards that shape attitudes and actions. They are important in terms of social order and cohesion because they provide a shared framework of norms and principles. They foster a feeling of common understanding and a sense of collective identity among members of a community. This implies that they are deeply rooted in cultural contexts. Because of their abstract and culture-specific nature, values are difficult to categorize and conceptualize, which has been a problem in social sciences until Shalom Schwartz's work. The absence of an agreed-upon values framework has also been problematic in regards to establishing reliable empirical methods for measuring them.

Schwartz's theory of basic values (Schwartz, 1992) identifies ten motivationally distinct types of values that people in all cultures recognize and it specifies the dynamic relations among these values. The basic values are: self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence and universalism. Although the theory discriminates ten values, at a more fundamental level, it posits that they exist on a continuum of connected motives. One basis of the values structure is the fact that actions in pursuit of any value have consequences that conflict with some values but are congruent with others Schwartz (2012). In other words, some values conflict with one another (such as benevolence and power), while others are compatible (such as conformity and security). These dynamic relations and continuum of motivations give rise to a circular arrangement of values, which can be seen in Figure 1.1.

The circular structure of values groups them into higher order values to form two bipolar dimensions. This four higher order value dimensions summarize the oppositions and congruence between the ten values. The openness to change versus conservation

dimension depicts the conflict between independent thought, action, readiness for change (self-direction, stimulation, and hedonism); and order, self-restraint, preserving the past and resistance to change (conformity, tradition, and security).

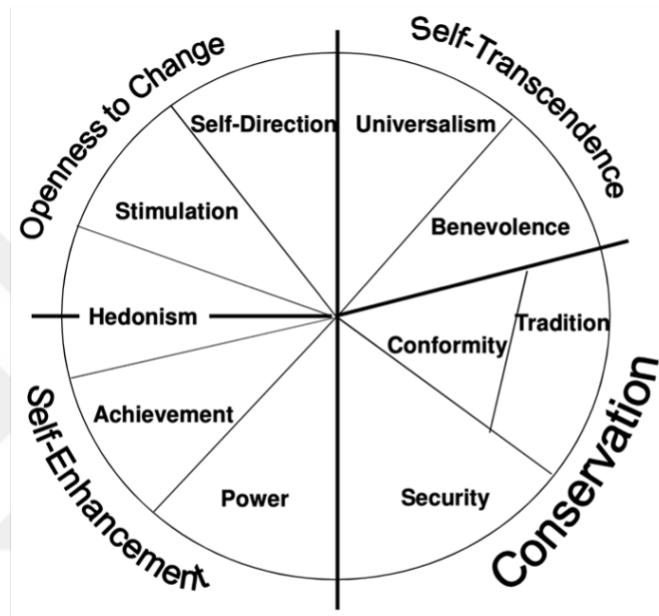


Figure 1.1 Theoretical Model Of Relations Among Ten Motivational Types Of Values
Source: Schwartz (2012)

The self-transcendence versus self-enhancement dimension depicts the conflict between concern for the welfare and interests of others (universalism and benevolence); and the pursuit of one's own interest and dominance over others (power and achievement).

Since the development of the theory in the 90's, various instruments for its measurement has been created. The first one is called the Schwartz Value Survey (SVS) which comprises of 56 items (Schwartz, 1992). The SVS does not offer any details to place the values in a practical perspective and includes rather abstract elements.

Due to the abstract nature of the SVS, Schwartz later developed a more concrete version,

the Portrait Value Questionnaire (PVQ40), which is easier for certain populations, such as children and societies with non-Western educational systems, to understand. PVQ40 presents participants with 40 short portraits of gender-matched individuals, each of which highlights a particular belief or personal goal. Respondents rate how much the person described is similar to themselves, using a 6-point scale ranging from 1 (not like me at all) to 6 (very much like me). For example, a PVQ40 item states, “She seeks every chance she can to have fun. It is important to her to do things that give her pleasure.” The self-report ratings provide an indication of how closely aligned respondents perceive themselves to be with the values and goals expressed in the portraits. PVQ40 is also later shortened as the Human Values Scale (PVQ21), also known as European Social Survey (ESS21) for the European Social Survey.²

In this thesis, we employ a relatively recent version of the PVQ40 called the Twenty Item Value Inventory (TwIVI). TwIVI is a shortened version of the PVQ40, constructed primarily in response to the demand for shorter instruments (Sandy et al., 2017). It’s especially constructed as a subset of the PVQ40, in order to facilitate comparisons across surveys of different lengths. It’s composed of 20 items taken from the original PVQ40, hence it includes two items per value. TwIVI has been evaluated in terms of convergent and discriminant validities, reliabilities and external correlations.³ It met a satisfactory standard of reliability and validity and was able to almost completely reproduce the pattern of predicted relationships with external variables. Thus TwIVI is proven to be a successful shorter version of the well-acknowledged PVQ40. We chose this instrument due to its efficiency and because our primary research interest is not specifically focused on values.

²For a detailed overview of Schwartz’s primary instruments, see Schwartz (2021).

³For further information see Sandy et al. (2017).

1.1.1 VALUES IN GROUP CONTEXT

Schwartz's theory and its instruments have been widely used and recognized in many disciplines in the last thirty years. The instruments have been utilized in various research areas including studies about political orientations, academic achievement, environmental attitudes, consumer behaviour, decision-making, social norms, well-being and quality of life. They are frequently used in cross-cultural research to compare and analyse value orientations across different countries, cultures, or ethnic groups.

For this thesis, we are mostly concerned with personal values in group context. Firat et al. (2018) aim to measure the perceived in- and out-group value differences in a Midwestern sample. They find that respondents were more likely to associate self-transcendence and openness values to their in-group and enhancement and conservation values to their out-group.

This is noteworthy as out-groups are related with a perceived self-interest and disregard for others, values considered less "moral", while in-groups appear to be given the more positively perceived self-transcendence values. These findings are partially supported by the findings of Hitlin et al. (2021), which are that the respondents associate self-transcendence values with their in-groups considerably more than their out-groups, whereas self-enhancement values are associated with their out-groups. The latter study also adds that this assignment of values to in- and out-group contexts transcends cultural distinctions. Andersson et al. (2017) suggest a close correspondence between in-group bias and benevolence. They find that universalism and benevolence are often significantly positively correlated with their behavioural measure of prosociality, which is the dictator giving. Furthermore, their results show that power and achievement are significantly negatively correlated with this measure.

In the context of experimental economics, Lönnqvist et al. (2013) measure behaviour in different types of strategic interactions such as prisoner's dilemma, ultimatum, dictator, trust and gift exchange game. Their most significant finding is that universalism value is more strongly correlated with behaviour in the cooperator role than in any other role. They also find that power value is negatively correlated with the dictators' transfer decisions.

Chuah (2010) selects six experiments that appear to be the most often employed in the research of economic behaviour, in order to investigate whether behaviours observed in experiments can be explained by Schwartz's theory. The experiments consist of parametric tasks and strategic games (such as binary-choice lotteries, time discounting, public good, ultimatum, dictator and trust games). The author concludes that after controlling for demographics, values have an explanatory power for strategic, but not parametric, economic behaviours.

2 EXPERIMENTAL DESIGN

The experiment consists of two stages. The first stage employs a dictator game with third-party punishment, adopting the experimental design of Bernhard et al. (2006) for comparability reasons. The dictator game is followed by belief elicitation questions. The second stage employs a shorter version of Schwartz's Value Survey to measure the subjects' value orientations, followed by demographic questions. The subjects did not know about the second stage until after they were finished with the first stage.

2.1 DESIGN

The design adopts an anonymous, one-shot dictator game with third-party punishment involving a dictator (player A), a recipient (player B) and a third-party (player C). Player A receives 10 points, player B has no endowments and player C receives 5 points. Only players A and C are the decision-makers; they decide on the transfer and punishment levels, respectively. Player B has no decision power. A can transfer any integer amount of her endowment to B. C has the opportunity to punish A's action by spending 0, 1 or 2 points of her endowment. Every point spent on punishment reduces A's endowment by 3 points.

Player C's punishment decision was elicited with the strategy method; she indicated how much she is willing to spend on punishment for each of the possible transfer levels. The transfer and punishment decisions were made simultaneously, C didn't know the actual transfer level until after she made her punishment decisions for each feasible transfer level. Meanwhile, Player B was asked a question about her transfer expectation, which did not have any effect on the outcomes. Because of the strategy method, we were able

to collect information about punishment at transfer levels that A did not actually choose. We collected 11 punishment decisions from each player C; one punishment decision for each feasible transfer level. After players A and C had made their decisions, we also elicited each player's expectations about how the dictators would be punished at the three transfer levels of 0P, 5P and 10P.

The experiment is designed to capture the altruistic enforcement of egalitarian sharing norms. We have four experimental treatments to yield the possible assignments of players A, B and C over two artificially formed groups. In three treatments, two players are of the same group, while the third is of the other. In one treatment, all players are of the same group. We adopt a neutral setting with no group framing in the control treatment, which is an addition to the benchmark study.

2.1.1 MINIMAL GROUP DESIGN AND TREATMENTS

Groups are formed artificially and randomly. We used the minimal group paradigm to induce a sense of group identity in participants. That is, group identities that do not exist prior to the experiment were generated.

To be able to distinguish the effects of group favouritism, we designed a control treatment without any group formation. The control treatment consists of the dictator game with third-party punishment, without any mention of a group. Each player is informed that they are randomly paired with one another.

Because the benchmark study was conducted with real tribes from Papua New Guinea, it wasn't possible to establish a groupless control treatment. We were able to include such

a treatment since we created groups with artificial labelling.

As for the experimental treatments, we included four to yield the possible assignments of players A, B and C over two artificially formed groups. In the ABC treatment, all of the players are from the same group. We didn't distinctly define groups but informed the subjects about their group affiliations with a minimal setting. This is done in order to create a context of an out-group.

For the other three treatments, AB, AC and BC, we created two groups and made a minimal distinction between them. We named the two groups blue and green, in order to create a somewhat sense of group identity and chose the respective colours in order to be as neutral as possible.

In the AB treatment, players A and B are from the blue group, while player C is from the green group. In the AC treatment, players A and C are from the blue group, while player B is from the green group. In the BC treatment, only player A is from the blue group, while players B and C are from the green group.

We also coloured the group names and player roles in the instructions to softly emphasize the groups. We added images of two clusters with the names of their members, one for each group. The instructions and their English translations can be found in the Appendix B. Right before the decision page, subjects were first informed about their group affiliation, and then their role in the game. In the decision page, we informed them about the other two players' group affiliations and roles. The screenshots of the experiment's pages can be found in Appendix C.

2.1.2 BELIEF ELICITATION

We elicited each player's beliefs about how the dictators would be punished at the three transfer levels: 0P, 5P, and 10P. This provided us with insight into how each player perceived the potential outcomes and the actions of others in their respective roles. Additionally, we asked the recipients about their expectations concerning the amount of transfer they would receive.

2.2 SCHWARTZ'S VALUE SURVEY

After the decision stage and belief questions, subjects were asked to complete a survey about their value orientations, followed by demographic questions. The survey was not optional and the subjects received 5 points for participating. They did not know about this until after they were done with the decision stage.

We employ Schwartz's theory of values (Schwartz, 2012) to assess subjects' value orientations. While Schwartz's theory has been transformed into various instruments over the years, we have chosen to utilize the TwIVI. It is introduced relatively recently with the goal of developing a psychometrically sound and briefer, more practical measure of values Sandy et al. (2017). This instrument is based on the PVQ40, wherein participants are presented with brief descriptions of individuals matched to their gender. Using a 6-point scale, participants indicate how closely the described individual resembles themselves, with 1 indicating 'not like me at all' and 6 representing 'very much like me'. For instance, an item from the PVQ40 might describe someone who "seeks every chance she can to have fun. It is important to her to do things that give her pleasure." The values of respondents are inferred based on how similarly they perceive themselves

in relation to the portrayed individuals. Details of the survey questions can be found in Appendix A.

TwIVI is composed of 20 items taken from the original PVQ40, hence it includes two items per value. It is constructed as a subset of the PVQ40, in order to facilitate comparisons across the scales of different lengths. TwIVI has been evaluated in terms of convergent and discriminant validities, reliabilities and external correlations.⁴ It met a satisfactory standard of reliability and validity and was able to almost completely reproduce the pattern of predicted relationships with external variables. Thus TwIVI is proven to be a successful shorter version of the well-acknowledged PVQ40, which is why we chose it.

Following the translation protocol recommended by Schwartz, Demirutku and Sümer (2010) provides a validated Turkish version of the PVQ40. A Turkish version of TwIVI was not available. After reaching out to the authors of Sandy et al. (2017) and obtaining their approval, I carefully selected corresponding translations for each item from the PVQ40 to form the Turkish version of TwIVI. Since TwIVI is a subset of PVQ40, no additional translation was required. The Turkish version of the survey is included in Appendix B, with a screenshot of the survey page in Figure C.18.

Demographic questions include questions about the subject's age, gender, faculty and department, scholarship type and education levels of their parents. We also asked if the subject had enrolled in another experiment before.

⁴For further information see Sandy et al. (2017).

2.3 HYPOTHESES

This sub-section presents the hypotheses of this thesis, which are centred around the investigation of group dynamics, individual value orientations, and their interplay in decision-making and beliefs within our setting.

Drawing from the findings of Bernhard et al. (2006), we build upon their evidence for parochial altruism; dictators transferring more to recipients in their own group, and third-parties punishing low-transferring dictators less severely when they are in their group. These results provide the foundations for our first two hypotheses.

Our first hypothesis focuses on transfer decisions. We aim to explore whether a dictator transfers more to a recipient if they share a group affiliation. Furthermore, we examine whether the presence of any group affiliation influences the amount transferred in comparison to the control treatment without group dynamics.

Hypothesis 1: Transfer decisions

- a. A transfers more to B if they are in the same group, compared to when they are not.
- b. With any group affiliation, the transfers are higher with respect to the control treatment.

Our second hypothesis is concerned with punishment decisions. We investigate whether a third-party player is less severe in their punishment of a dictator when they share a group affiliation. In addition, similar to H1b, we assess whether the presence of any group affiliation results in higher punishments compared to the control treatment.

Hypothesis 2: Punishment decisions

- a. C punishes A less when they are in the same group, compared to when they are not.
- b. With any group affiliation, the punishments are higher with respect to the control treatment.

Next, we extend the exploration to examine participants' beliefs in relation to group affiliations. Specifically, we investigate how group affiliation influences expectations regarding transfers and punishments. Here, we hypothesize that individuals' expectations regarding transfer and punishment will vary depending on whether they share a group with the dictator or the third-party player.

Hypothesis 3: Beliefs

- a. B expects higher transfer when in the same group with A.
- b. A expects lower punishment for 0 transfer when in the same group with C.

While H3b is based upon the findings of Bernhard et al. (2006), H3a is our addition since the authors did not elicit the recipients' beliefs about transfer.

Concerning the second stage of our design, we propose that the participants' value orientations, measured by TwIVI, significantly influence their decision-making and belief structures. Literature consistently shows a positive correlation between self-transcendence values (such as universalism and benevolence) and the amount transferred by dictators, whereas the power value often negatively correlates with transfer decisions.

Based on these findings, we hypothesize that dictators who prioritize self-transcendence (universalism, benevolence) values, focusing on fairness, equality, and the welfare of others, will tend to make larger transfers. In addition, we anticipate that dictators with strong conservation (conformity, tradition) values, which emphasize social order and norm adherence, will also transfer more. On the other hand, we expect that dictators who value self-enhancement (achievement, power) will likely make smaller transfers, due to their focus more on personal success, often at the expense of others' well-being. Given the underlying motivations associated with these value orientations, we propose that conservation and self-enhancement values will positively influence the decisions to punish.

Hypothesis 4: Subjects' value orientations influence their decision making.

- a. Conservation and self-transcendence values positively influence the dictators' transfer decisions, whereas self-enhancement values negatively influence them.
- b. Conservation and self-enhancement values positively influence the third-parties' punishment decisions.

Building on this reasoning, we suggest that those who prioritize conservation values might expect more severe punishments for zero transfers, as they might anticipate third-parties enforcing social norms through punishments. Likewise, dictators who prioritize self-transcendence values might also expect higher punishments, as they might anticipate that third-parties would severely punish non-cooperative behaviour.

Considering recipients' beliefs about transfer, we propose that recipients who prioritize self-transcendence values may expect more cooperative behavior from dictators. Similarly, those who value conservation might anticipate that dictators will conform to social

norms by transferring more points.

Hypothesis 5: Subjects' value orientations influence their beliefs.

- a. Conservation and self-transcendence values positively influence the dictators' beliefs about punishments for 0 transfers.
- b. Conservation and self-transcendence values positively influence the recipients' beliefs about transfer

2.4 IMPLEMENTATION

The education was switched to online countrywide due to the devastating earthquake that occurred in the south of Turkey on February 6. Thus we were not able to do the sessions in the lab as planned. The experiment sessions were held online in the second half of March, 2023. Subjects were invited and recruited from the database of Bilgi Economics Lab of İstanbul (BELİS), through the Online Recruitment System for Economic Experiments (Greiner, 2015). The experiment was programmed using oTree, an open-source platform developed by Chen et al. (2016).

The language of the experiment was Turkish and only native Turkish speakers could take place in the experiment. The sessions were carried out via Zoom meetings to ensure all participants started the experiment simultaneously and to be able to communicate instantly during the experiment. The sessions lasted approximately 30 minutes and the instructions were read aloud at the beginning of each session. Subjects logged in to the experiment via links randomly assigned to each of them. Links were not paired

with any personal information to secure the anonymity of the decisions and participants. Instructions and their English translations can be found in the Appendix C.

A total of 240 students participated in the experiments, permitting us to conduct 80 games with three players each. There were 10 sessions, 2 sessions for each of the treatments, hence 48 participants per treatment. 142 (60%) of the participants were female, and 107 participants had participated in at least one experiment conducted by BELİS. Participant statistics can be found in Table 2.1.

Table 2.1 Participant Statistics

Gender	Female: 142 (59.1%)	Male: 94 (39.1%)
	Engineering: 63 (26.25%)	Business: 51 (21.25%)
Faculty	Social Sciences: 40 (16.6%)	Communication: 35 (14.5%)
	Law: 17 (7%)	Health Sciences: 14 (5.8%)
	Architecture: 10 (4.1%)	Vocational School: 6 (2.5%)
Scholarship	Full: 82 (34.1%)	Half: 139 (57.9%)
	None: 15 (6.25%)	
Experiment Experience	Yes: 107 (44.5%)	No: 129 (53.7%)

Each participant received a show-up fee of 3 points. We chose this amount in order to maintain the show-up-fee-to-endowment ratio in the benchmark study. Total earnings were calculated by adding up the show-up fee, the game payoff and the survey fee. The experimental exchange rate was 4 TL, thus the total points were multiplied by 4 to calculate the final payment. The minimum, maximum and average earnings were 28 TL, 68 TL and 43 TL respectively. The payments were made shortly after the sessions via bank transfers.

Figure 2.1 provides a series of pie charts, each representing the distribution of faculties in which our participants are enrolled, broken down by each treatment. The overall distribution across all treatments is fairly consistent, with the majority of participants coming from the engineering and business faculties, followed by the social sciences and communication faculties.



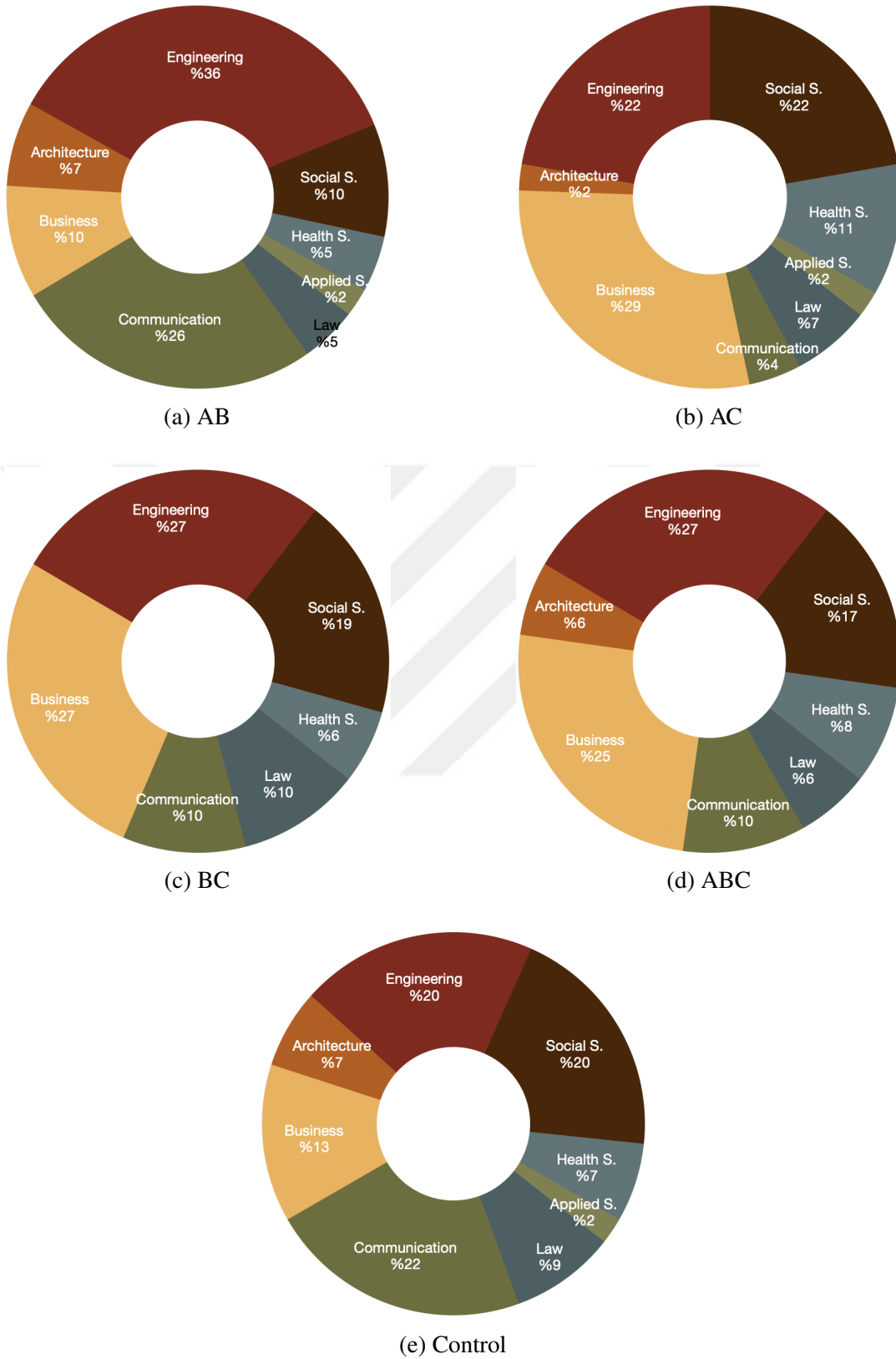


Figure 2.1 Distribution Of Participants By Faculty Enrolment Across Different Treatments

3 RESULTS

This section presents the experimental results, divided into three sub-sections. First, the descriptive statistics overall and across treatments. Then, we further investigate the participants' decisions and beliefs with regression analyses. The third sub-chapter introduces the survey data regarding the participants' value orientations and explores potential correlations between them and the participants' behaviours in the experiment.

3.1 DESCRIPTIVE STATISTICS

This sub-section presents a summary of the participants' decisions and beliefs. The dictators transferred points to the recipients and the third-parties punished low transfers in all treatments.

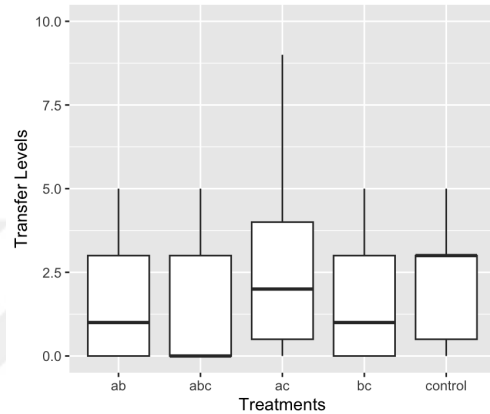
3.1.1 TRANSFER

Table 3.1 and Figure 3.1 presents the descriptive statistics for the transfer levels. The dictators transferred an average of 1.9 points, with variations across treatments. The mean was highest in the AC treatment (2.4 points) and lowest in the ABC (1.4 points).

Table 3.1 Descriptive Statistics For Transfer Levels Across Treatments

Treatment	Mean	Median	S.D.
AB	1.7	1	1.77
AC	2.4	2	2.45
BC	1.5	1	1.71
ABC	1.4	0	1.89
CONTROL	2.2	3	1.58
Overall	1.9	1	1.93

Figure 3.1 Transfer Levels Across Treatments



Interestingly, the median transfer was 0 in the ABC treatment, indicating that at least half of the dictators did not transfer any points. This suggests a lower level of generosity when there is no out-group. In contrast, the median transfer was 3 points in the control treatment, where there were no group affiliations, indicating higher generosity.

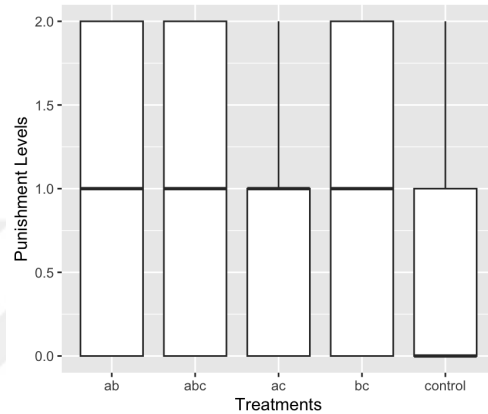
3.1.2 PUNISHMENT

Turning to punishment decisions, as shown in Table 3.2 and Figure 3.2, third-party players deducted an average of 0.87 points from dictators. The mean punishments were the lowest in the AC and control treatments, possibly in response to the higher transfer amounts.

Table 3.2 Descriptive Statistics For Punishment Levels Across Treatments

Treatment	Mean	Median	S.D.
AB	1	1	0.94
AC	0.8	1	0.76
BC	1	1	0.80
ABC	1	1	0.88
CONTROL	0.5	0	0.63
Overall	0.87	1	0.82

Figure 3.2 Punishment Levels Across Treatments



The variability of punishments varied across treatments, with the AB treatment displaying the most variability and the control treatment showing the least.

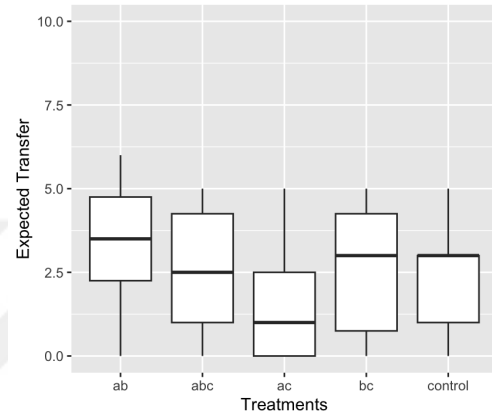
3.1.3 BELIEFS

Regarding beliefs, recipients expected higher transfers when they were in the dictators' group, as observed in the AB treatment (3.2 points). Conversely, the lowest expectations were in the AC treatment (1.5 points), where the recipient was in a different group than the dictator and third-party. The expectations in the BC and ABC treatments were similar, implying that as long as the recipients were in the same group as the third-party, the dictator's group affiliation did not impact their expectations. These statistics can be seen in Table 3.3 and Figure 3.3.

Table 3.3 Descriptive Statistics For Expected Transfer Levels Across Treatments

Treatment	Mean	Median	S.D.
AB	0.9	3.2	1.81
AC	0.6	1.5	1.88
BC	0.9	2.5	1.99
ABC	0.6	2.5	1.93
CONTROL	1.3	2.4	1.80
Overall	2.4	3	1.92

Figure 3.3 Expected Transfer Levels Across Treatments

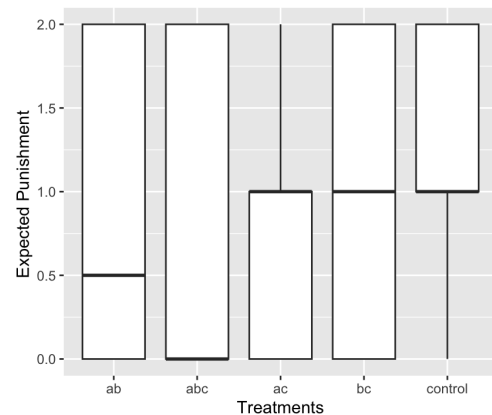


Expectations about punishments, detailed in Table 3.4 and Figure 3.4, were highest in the control treatment. This might suggest a higher norm enforcement in the absence of group dynamics. Interestingly, the actual punishments were generally higher than the expected ones, except for the control treatment.

Table 3.4 Descriptive Statistics For Expected Punishment Levels Across Treatments

Treatment	Mean	Median	S.D.
AB	0.9	0.5	0.92
AC	0.6	1	0.72
BC	0.9	1	0.92
ABC	0.6	0	0.94
CONTROL	1.3	1	0.61
Overall	0.9	1	0.86

Figure 3.4 Expected Punishment Levels Across Treatments



In summary, dictators tended to expect more punishment when they were in a different group from the third-party (as in the AB and BC treatments), while recipients seem to expect more transfers when they were in the same group as the dictator (as in the AB treatment).

3.2 DECISIONS

This sub-section further examines the participants' decisions concerning the transfer and punishment levels and their beliefs using hypothesis testing and regression analyses to understand the effects of different treatment conditions on decision-making.

In all regression tables presented within this thesis, the coefficient values are provided with associated numbers in brackets beneath them. It is important to clarify that the numbers inside these brackets represent p-values, indicating the statistical significance of the corresponding coefficients.

3.2.1 OVERALL DECISION PATTERNS

The Kruskal-Wallis and Wilcoxon Rank Sum tests, both non-parametric tests suitable for non-normal data, were used to assess the differences in transfer and punishment levels. The Kruskal-Wallis test determines if multiple groups have the same distribution, while the Wilcoxon test compares two treatments pairwise. The null hypothesis for the Kruskal-Wallis test assumes no distributional differences in transfer or punishment levels across treatments. Similarly, the Wilcoxon test's null hypothesis assumes no differences between any two treatments.

For the Kruskal-Wallis test, all p-values were higher than the conventional significance level of 0.05, indicating no significant differences across treatments for transfer and punishment decisions.⁵ However, when considering the Wilcoxon test results, specific treatment pairs exhibit p-values significant at the 10% level, as shown in Table 3.5.

Specifically, treatment pairs "ab-control" and "bc-control" have p-values of 0.0588 and 0.0767. These values, being below 0.1, imply that the differences in punishment levels between the AB treatment and the control treatment, as well as between the BC treatment and the control, are significant at the 10% level.

Table 3.5 Wilcoxon Rank Sum Test: Pairwise Comparisons Of Transfer And Punishment Levels Across Treatments

Treatment pair	p-value	
	transfer	punishment
ab-ac	0.3702	0.3264
ab-bc	0.8592	0.6727
ab-abc	0.7462	0.6991
ab-control	0.3343	0.0588*
ac-bc	0.4611	0.5198
ac-abc	0.2602	0.5614
ac-control	0.9073	0.2299
bc-abc	0.6031	1.0000
bc-control	0.3995	0.0767*
abc-control	0.2906	0.1078

⁵The test results can be seen in Table B.1 in Appendix B

While this provides only weak evidence, it might suggest that the presence or absence of group affiliations in the AB and BC treatments might subtly influence punishment decisions when compared to scenarios without any group affiliations.

3.2.2 TRANSFER DECISIONS

Although the differences are not statistically significant, the negative coefficients imply that being in the AB or ABC treatment negatively impacts the transfer level. The regression results, shown in Table 3.6, diverge from our initial hypothesis (*H1a*) which posited that dictators would transfer more to recipients with a shared group affiliation. These results indicate that a shared group affiliation does not necessarily result in larger transfers.

Table 3.6 Tobit Regression: Transfer And Treatments

	Dependent variable: transfer
ab	-0.905 (1.074)
ac	0.272 (1.054)
bc	-0.687 (1.065)
abc	-1.302 (1.096)
Observations	80

Notes: *p<0.1; **p<0.5; ***p<0.01

Additional analysis using the "ac_same" dummy variable revealed a marginal increase in transfer levels when dictators and third-party players share a group affiliation, even though it wasn't statistically significant (Table 3.7).

Table 3.7 Tobit Regression: Impact Of A&C's Same-Group Status On Transfer Level

Dependent variable:	
	transfer
ac_same	0.317 (0.826)
Observations	64
Notes:	*p<0.1; **p<0.5; ***p<0.01

This observation is somewhat contradictory since dictators tend to perceive a lower threat of punishment in AC and ABC treatments. Specifically, only 22% of the dictators expect maximum punishment when transferring 0P if the third-party belongs to their group, compared to 41% expecting maximum punishment if the third-party is from the other group. Thus, dictators expect their third-parties to be lenient, inducing them to transfer little to the recipient (Bernhard et al., 2006). However, our data doesn't support these expectations, differing from benchmark study findings.

For the comparison concerning the control treatment, we formulated an "experimental" dummy variable that takes on the value one if the data originates from the experimental treatments.

Table 3.8 Tobit Regression: Effect Of Experimental Treatments On Transfer Compared To Control

Dependent variable:	
transfer	
experimental	-0.703 (0.839)
Observations	76
Notes:	*p<0.1; **p<0.5; ***p<0.01

While *H1b* proposed that transfers would be higher than those in the control treatment, the data in Table 3.8 suggests the contrary with a negative coefficient. Consequently, neither sub-hypotheses for our first hypothesis find support in our results, leading us to not confirm *H1*.

3.2.3 PUNISHMENT DECISIONS

How do these transfer patterns, together with expectations, shape the punishment levels? Table 3.9 highlights an anticipated inverse relationship between transfers and punishment decisions. Evidently, as dictators transfer less to recipients, they are punished more harshly.

Table 3.9 Ordered Probit Regression: Influence Of Transfer Level On Punishment Decision

Dependent variable: punishment_decision	
transfer_level	-0.198*** (0.015)
Observations	880
Notes:	*p<0.1; **p<0.5; ***p<0.01

The dictators were punished the harshest when they do not transfer any points to the recipient. For instance, in treatments with relatively low punishment levels (AB and Control), 57% of third-parties choose to punish if the dictator transfers nothing, compared to only 10% who choose to punish when the transfer is 5P.

Even though individual treatments did not significantly alter punishment decisions, certain pairs of treatments displayed notable differences. Punishments were significantly lower when the dictator and the recipient share the same group affiliation. To further investigate this difference, a dummy variable “ab_same” was created to represent the conditions where A and B are part of the same group -namely, the AB and ABC treatments. If an observation comes from either the AB or ABC treatments, the "ab_same" variable takes on a value of one; otherwise, it is zero.

Table 3.10 Ordered Probit Regression: Impact Of A&B's Same-Group Status On Punishment For Transfers Of 2

Dependent variable:	
pun2	
ab_same	-0.495* (0.293)
Observations	61
Notes:	*p<0.1; **p<0.5; ***p<0.01

The difference between these conditions is particularly large at the transfer level of 2P. For example, when "ab_same" is true, the average punishment at 2P is exactly one and a half times less than when "ab_same" is not true. When regressed on the "pun2" variable specific for this transfer level, the "ab_same" dummy has a significant negative coefficient, as seen in Table 3.10. This result indicates that, irrespective of their own group affiliation, third-parties are more lenient when the norm violator and the victim belong to the same group.

To test our second hypothesis, we established an "ac_same" dummy variable. However, this variable showed a slightly positive but statistically insignificant coefficient, as reflected in Table 3.11. Thus we fail to confirm *H2a*.

Table 3.11 Ordered Probit Regression: Impact Of A&C's Same-Group Status On Punishment Decisions

Dependent variable: punishment	
ac_same	0.081 (0.087)
Observations	836
Notes:	*p<0.1; **p<0.5; ***p<0.01

Moreover, a comparison with the control treatment revealed no significant variations when group affiliations were introduced, as presented by the "experimental" dummy variable in Table 3.12. This finding fails to confirm *H2b*, which predicted that the presence of any group affiliation would lead to higher punishments compared to the control treatment.

Table 3.12 Ordered Probit Regression: Effect Of Experimental Treatments On Punishment Compared To Control

Dependent variable: punishment_decision	
experimental	0.093 (0.108)
Observations	836
Notes:	*p<0.1; **p<0.5; ***p<0.01

In summary, we fail to confirm *H2*.

3.2.4 BELIEFS

The findings related to participants' beliefs reveal that across all roles and treatment conditions, participants typically anticipated severe punishment for zero transfers. However, the punishment expectations of dictators varied significantly between treatments.

Moreover, we observed an impact of expected punishment on transfer levels, as shown in Table 3.13. The independent variable "belief_0A" corresponds to the dictators' punishment expectations for zero transfers. The significant positive coefficient implies that dictators adjust their transfer levels responsively based on their expectations of punishment.

Table 3.13 Tobit Regression: Relationship between Transfer And A's Punishment Expectations For Zero Transfers

Dependent variable:	
transfer	
belief_0A	1.436*** (0.383)
Observations	80

Notes: *p<0.1; **p<0.05; ***p<0.01

As presented in Table 3.14, dictators in the AC and ABC treatments expected significantly less punishment at 0P compared to the control treatment. This finding suggests that they feel much more protected if the third-party belongs to their group, which supports *H3b*.

Table 3.14 Ordered Probit Regression: A's Punishment Expectations For Zero Transfers Considering Group Affiliations

Dependent variable:	
belief_0A	
ab	-0.472 (0.404)
ac	-0.875** (0.400)
bc	-0.468 (0.399)
abc	-0.838** (0.410)
Observations	80

Notes: *p<0.1; **p<0.05; ***p<0.01

As for the first sub-hypothesis, we observed a positive but insignificant coefficient, as seen in Table 3.15, which means we fail to confirm *H3a* based on these results.

Table 3.15 Tobit Regression: Impact Of A&B's Same-Group Status On B's Transfer Expectations

Dependent variable:	
belief_transfer	
ab_same	0.967 (0.588)
Observations	76

Notes: *p<0.1; **p<0.05; ***p<0.01

3.3 VALUES

This sub-section explores the participants' value orientations as measured by the TwIVI and investigates how these values are associated with their decisions and beliefs.

3.3.1 OVERALL SUMMARY

Table 3.16 and Figure 3.5 presents the summary statistics about the participants' value scores across all treatments. The ten values' names and their corresponding numbers can also be seen in Table 3.16.

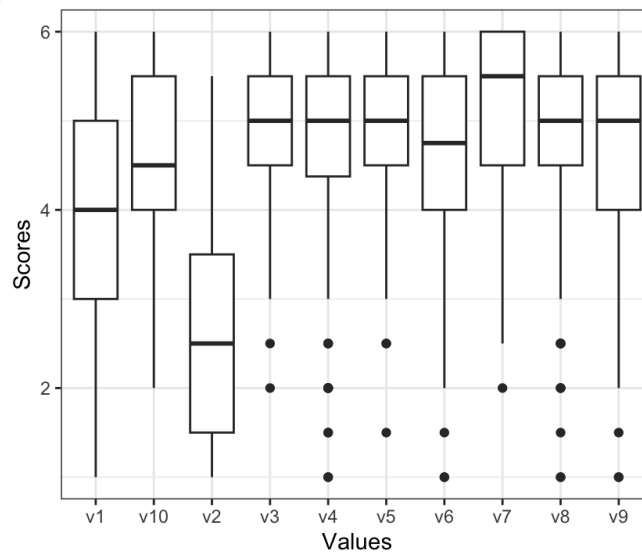


Figure 3.5 Average Value Scores

The participants prioritized benevolence, universalism, self-direction, hedonism, and achievement values, with mean and median scores over 4.8. Conversely, a single

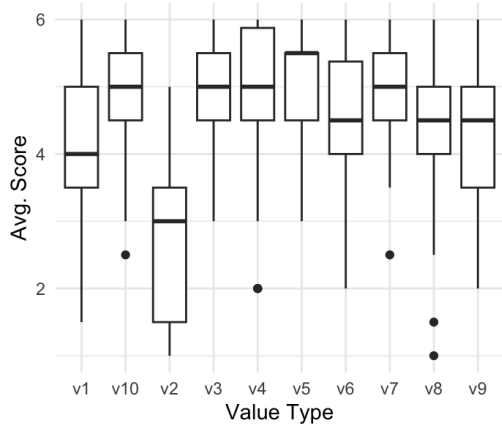
low-score value stood out; tradition with a mean of 2.6. The standard deviations across all values vary quite moderately, which reflects the diversity of value orientations among the participants.

Table 3.16 Descriptive Statistics Of Value Scores

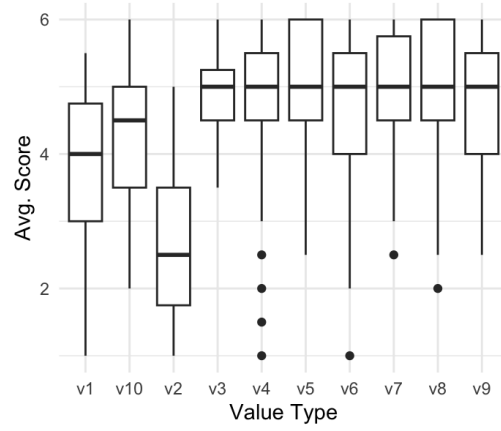
Value	Mean	Median	S.D.
V1. Conformity	3.9	4	1.15
V2. Tradition	2.6	2.5	1.21
V3. Benevolence	5	5	0.74
V4. Universalism	4.8	5	1.09
V5. Self-direction	5	5	0.85
V6. Stimulation	4.5	4.7	1
V7. Hedonism	5	5.5	0.91
V8. Achievement	4.8	5	1.02
V9. Power	4.5	5	1.17
V10. Security	4.5	4.5	0.98

Although particular to our sample, the prioritization of benevolence, self-direction and hedonism values, together with the devaluation of tradition, may signal some information about the characteristics of this generation. The emphasis on benevolence, self-direction and hedonism may suggest an orientation towards individualism, personal fulfilment and openness to change. Conversely, less reliance on tradition may signify a more progressive and accepting mindset, less influenced by conventional norms.

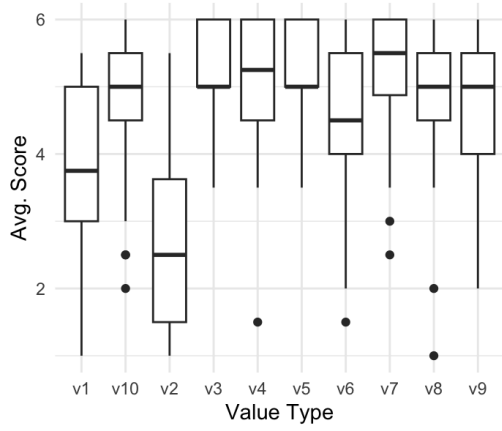
In the next page, Figure 3.6 presents the average scores of participants' values, broken down for each of the five treatments. While there are no major contrasts among them, we can observe some subtle variations in the distributions.



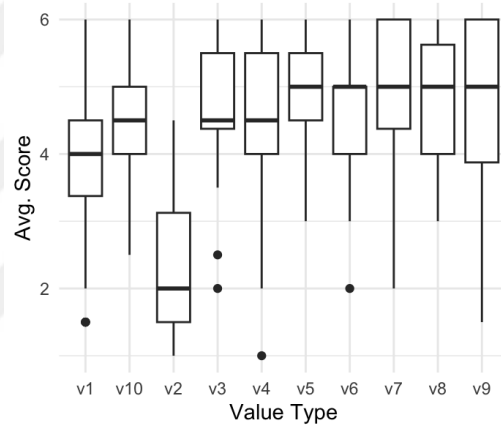
(a) AB



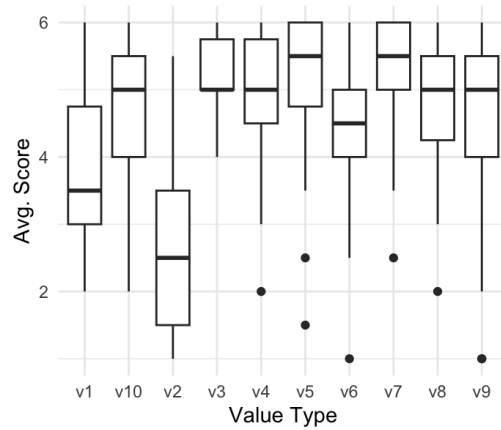
(b) AC



(c) BC



(d) ABC



(e) Control

Figure 3.6 Average Value Scores For Different Treatments

We recognized a potential confounder: the participants' personal value orientations. By chance, some treatments may have consisted of individuals who prioritize certain values. This uneven distribution could distort the effects of our treatments, making our interpretations less accurate. To address this, we specifically examined the value orientations of dictators and third-parties, as they were the ones making transfer and punishment decisions. We performed pairwise comparisons for each value across all treatment combinations. With ten possible treatment pairs, this led to ten comparisons per value. For instance, considering the value of conformity, we compared participants' scores across each of these ten treatment pairs. This methodology helped us determine if there were any significant differences in the distribution of personal values across treatments, enabling us to accurately attribute observed differences to the treatments themselves.

For these pairwise comparisons, we performed the Wilcoxon Rank Sum test. The null hypothesis was that there were no significant differences in the value scores between the two groups being compared. Upon examining the test results, several significant differences in value orientations emerged between treatment pairs. For instance, among dictators (as per Table 3.17), significant variations were most pronounced in values like benevolence (V3) and achievement (V8) across several treatment combinations. Similarly, third-parties (referencing Table 3.18) exhibited significant differences, particularly in values of achievement (V8) and power (V9) among certain treatment pairs.

It is essential to highlight that while a portion of the p-values (18 out of 200) indicated significant differences, the majority did not. This underscores that value orientations, for the most part, were distributed relatively evenly across treatments, reinforcing the trustworthiness of our findings. For detailed results, please refer to the tables mentioned earlier.

Table 3.17 Dictators' Value Score Distributions: Pairwise Comparisons

Pairs	v1	v10	v2	v3	v4	v5	v6	v7	v8	v9
ab vs abc	0.77	0.34	0.27	0.01**	0.11	0.47	0.21	0.11	0.65	0.16
ab vs ac	0.38	0.09*	0.54	0.11	0.16	0.54	0.21	0.01**	0.86	0.35
ab vs bc	0.13	0.85	0.13	0.37	0.79	0.57	0.41	0.01**	0.85	0.36
ab vs control	0.21	0.63	0.15	0.93	0.53	0.34	1.00	0.01**	0.34	0.60
abc vs control	0.21	0.44	0.55	0.10	0.24	0.13	0.15	0.22	0.14	0.59
ac vs abc	0.37	0.31	0.75	0.59	0.65	0.92	0.77	0.51	0.77	0.54
ac vs bc	0.54	0.11	0.65	0.41	0.14	0.94	0.66	0.87	0.95	0.77
ac vs control	0.74	0.04**	0.35	0.28	0.27	0.30	0.18	0.52	0.53	0.72
bc vs abc	0.15	0.73	0.64	0.33	0.15	0.34	0.57	0.39	0.79	0.57
bc vs control	0.95	0.59	0.81	0.49	0.49	0.12	0.33	0.50	0.15	0.86

Table 3.18 Third-Parties' Value Score Distributions: Pairwise Comparisons

Pairs	v1	v2	v3	v4	v5	v6	v7	v8	v9	v10
ab vs abc	0.09*	0.39	0.17	0.69	0.53	0.63	0.88	0.01**	0.03**	0.10
ab vs ac	0.05**	0.84	0.21	0.68	0.90	0.98	0.51	0.01**	0.02**	0.14
ab vs bc	0.16	0.30	0.87	0.87	0.45	0.87	0.79	0.01**	0.19	0.10
ab vs control	0.73	0.91	0.79	0.75	0.56	0.65	0.68	0.29	0.44	0.16
abc vs control	0.05**	0.68	0.17	0.92	0.77	0.41	0.64	0.15	0.20	0.42
ac vs abc	0.40	0.46	0.94	0.45	0.48	0.74	0.36	0.61	0.86	0.60
ac vs bc	0.55	0.43	0.49	0.55	0.31	0.95	0.49	1.00	0.41	1.00
ac vs control	0.02**	0.84	0.26	0.41	0.77	0.66	0.18	0.05**	0.16	0.59
bc vs abc	0.84	1.00	0.27	1.00	0.64	0.65	0.85	0.62	0.38	0.88
bc vs control	0.07*	0.59	0.95	0.84	0.71	0.68	0.87	0.05**	0.45	0.46

3.3.2 DECISIONS & VALUES

Prior to regression analyses, the value scores were normalized to control for differences in scale use and ensure comparability across participants. Following the standard procedures, the participants' answers were centred on their mean for all items (Verkasalo et al., 2009). Scores for each of the 10 value items were obtained by dividing the sum of the appropriate items by the personal mean of all items multiplied by the number of items on the scale. Consequently, the resulting value scores represent the relative importance of each value type in relation to the other types. For example, the score of value power was calculated as in equation 3.1:

$$\text{Power} = \frac{\text{Item 9} + \text{Item 19}}{2 \times \text{personal mean of all items}} \quad (3.1)$$

3.3.2.1 Transfer & Values

First, the overall relationship between the dictators' transfer decision and their value orientations are investigated, without considering the treatments. Given that the dependent variable "transfer" is bounded at both ends, the Tobit model is considered to be the most appropriate statistical tool for this analysis.

As seen in Table 3.19, five out of ten values - tradition, self-direction, stimulation, hedonism, and power - have significant coefficients that influence transfer decisions. Tradition exhibits a positive coefficient, indicating that dictators who prioritize this value tend to transfer more. Conversely, the other four have negative coefficients, suggesting that dictators emphasizing these values are inclined to transfer less.

Table 3.19 Separate Tobit Regressions Of Each Schwartz's Value On Transfer

	Dependent variable:									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
V1. Conformity	2.467 (1.511)									
V2. Tradition		2.915** (1.235)								
V3. Benevolence			3.802 (2.870)							
V4. Universalism				1.714 (1.586)						
V5. Self-direction					-3.636* (2.050)					
V6. Stimulation						-4.172** (1.903)				
V7. Hedonism							-3.369** (1.657)			
V8. Achievement								-0.382 (2.452)		
V9. Power									-2.773* (1.624)	
V10. Security										0.947 (1.897)
Observations	76	76	76	76	76	76	76	76	76	76

*p<0.1; **p<0.05; ***p<0.01

After this overall assessment, specific group compositions were examined to see if they influence the impact of values on dictators' decisions. The data was filtered as "ab_same", "ac_same" or "bc_same", similar to the approach with the dummy variables.⁶ For instance, employing the "ab_same" filter means that the observations for the related regression come exclusively from the AB and ABC treatments.

Different group compositions appear to highlight the influence of different values. Notably, while benevolence did not show significance in the broader analysis, it displays a strong positive relationship with transfer decisions when dictators and recipients are of the same group (when the data is filtered for "ab_same"). The positive coefficient implies that dictators with higher benevolence scores tend to be more generous towards in-group recipients. This finding is consistent with the benevolence value's defining goal of enhancing the welfare of one's in-group.

Filtering the data for "ac_same" and "bc_same", further emphasizes the negative impacts of the stimulation and hedonism values on transfer decisions. Additionally, the "bc_same" filter uncovers a significant influence of universalism. The positive coefficient indicates that dictators with higher universalism scores are inclined to act more generously towards out-group members. This aligns with universalism's defining goal of understanding, appreciation, tolerance, and protection for the welfare of all people, regardless of their group affiliation.

Moreover, when analysing by individual treatments, none of the values significantly influence the transfer level in the AB treatment. Conversely, in the ABC treatment, where all participants belong to the same group, benevolence and universalism have significant positive impacts, while hedonism has a significant negative impact on the transfer level.

⁶For the related results in the subsequent paragraphs, please see the aggregated table 3.20.

Table 3.20 Tobit Regression: Impact Of Value Orientations On Dictator Transfers Across Specific Group Compositions

	Dependent variable: transfer		
	ab_same	ac_same	bc_same
V1. Conformity	3.093 (3.000)	3.330 (3.271)	2.031 (2.695)
V2. Tradition	-0.195 (2.294)	2.917 (2.313)	2.217 (2.276)
V3. Benevolence	14.416*** (5.384)	4.218 (6.574)	7.144 (5.075)
V4. Universalism	4.279 (2.746)	4.218* (2.544)	5.826** (2.730)
V5. Self-direction	-1.439 (4.007)	-5.325 (3.428)	-2.447 (4.229)
V6. Stimulation	-2.174 (3.333)	-9.087** (3.841)	-8.089** (3.756)
V7. Hedonism	-6.965* (3.756)	-7.656** (3.207)	-9.857*** (3.248)
V8. Achievement	0.051 (4.222)	1.895 (3.812)	2.057 (3.887)
V9. Power	-3.578 (2.821)	-3.344 (3.036)	-2.654 (2.823)
V10. Security	-1.301 (3.450)	4.483 (3.386)	0.468 (2.956)
Observations	30	31	32

Notes:

*p<0.1; **p<0.5; ***p<0.01

However, it's worth highlighting that when the data is filtered for "ab_same", which includes both the AB and ABC treatments, the benevolence value remains significant. This suggests that benevolence predominantly drives the dictators' transfer decisions when they are in the recipient's group, regardless of the third-party's group affiliation.

In the AC treatment, security emerges as a significantly negative factor. The security value is associated with preserving social order and avoiding threats, which might lead dictators to favour in-group members (the third-party in this case) over out-group members (the recipient).

In summary, the effect of value orientations on dictators' transfer decisions are clear in some areas and less definitive in others. Within the conservation values, only tradition showed a significant positive effect on transfer decisions, partially supporting our expectation for conservation. Both self-transcendence values exhibited positive effects on transfer decisions, but these effects were significant only in specific group compositions. This provides considerable support for their role in influencing dictators' decisions. As for the self-enhancement values, hedonism and power had negative effects on transfer decisions overall. This considerably aligns with our initial predictions. Thus, we can say that *H4a* is supported in multiple aspects.

3.3.2.2 Punishment & Values

In this subsection, we aim to understand how the third-party's value orientations influence their decisions to punish or not, and to what extent. Since the dependent variable "punishment" is categorical with a clear ordering, the ordered probit model emerges as the optimal statistical tool.

Table 3.21 Separate Ordered Probit Regressions Of Each Schwartz's Value On Punishment

	Dependent variable:									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	punishment_decision									
V1. Conformity	0.091 (0.183)									
V2. Tradition		0.152 (0.190)								
V3. Benevolence			-0.398 (0.270)							
V4. Universalism				0.188 (0.160)						
V5. Self-direction					-0.689* (0.269)					
V6. Stimulation						0.485*** (0.206)				
V7. Hedonism							0.226 (0.240)			
V8. Achievement								0.058 (0.190)		
V9. Power									0.217 (0.158)	
V10. Security										-0.390** (0.194)
Observations	836	836	836	836	836	836	836	836	836	836

Notes: *p<0.1; **p<0.05; ***p<0.01

Among the ten value orientations, three - self-direction, stimulation, and security - have significant coefficients. The coefficient for self-direction is negative, while the coefficients for stimulation and security are positive, as can be seen in Table 3.21.

The negative coefficient for self-direction implies that as individuals score higher in this value, they demonstrate a reduced tendency to impose severe punishments. Individuals who prioritize self-direction are less likely to impose high punishments possibly because they perceive such measures as a restriction of freedom and autonomy. On the other hand, the positive coefficients for both stimulation and security suggest that individuals who prioritize these values are inclined to choose higher levels of punishment.

Self-direction and stimulation values usually have the same sign coefficients, as they have similar motivations and together they form the openness to change higher order. Interestingly, they act as opposite explanatory factors in this model. The explanation can be that while both values emphasize some form of autonomy and change, self-direction focuses more on personal autonomy (negative impact on punishment), and stimulation focuses on the novelty and variety (positive impact on punishment).

As for security, its defining goal is seeking safety, harmony, and stability in society. Its positive correlation to punishment could be understood as a means to protect and uphold social order, by enforcing the norm.

Table 3.22 Ordered Probit Regression: Impact Of Value Orientations On Third-Party Punishments Across Specific Group Compositions

	Dependent variable: punishment_decision		
	ab_same	ac_same	bc_same
V1. Conformity	0.251 (0.303)	0.471 (0.291)	0.350 (0.312)
V2. Tradition	0.140 (0.345)	0.105 (0.289)	0.081 (0.296)
V3. Benevolence	-0.426 (0.364)	0.288 (0.485)	-0.268 (0.390)
V4. Universalism	-0.432 (0.271)	-0.588** (0.236)	-0.144 (0.245)
V5. Self-direction	-0.888* (0.471)	-0.757* (0.448)	-0.755** (0.357)
V6. Stimulation	0.322 (0.375)	0.425 (0.340)	0.638** (0.309)
V7. Hedonism	0.446 (0.380)	-0.330 (0.374)	0.727** (0.347)
V8. Achievement	0.188 (0.318)	-0.439 (0.324)	-0.521* (0.275)
V9. Power	0.948*** (0.294)	0.551** (0.271)	0.388 (0.262)
V10. Security	-0.736*** (0.284)	0.130 (0.311)	-0.599* (0.308)
Observations	330	341	352

Notes:

*p<0.1; **p<0.5; ***p<0.01

Further analysis on specific group compositions highlights the significance of different values.⁷ The "ab_same" filter reveals power to be a positive predictor of punishment, which aligns with its defining goal of seeking dominance and control over others.

The "ac_same" filter reveals universalism, self-direction and power to be significant predictors of higher punishments. Self-direction preserves its negative impact on punishment, while power preserves its positive impact. Third-parties who prioritize universalism might be reluctant to impose harsh punishments to the in-group dictators, as they may view excessive punitive measures as detrimental to the broader welfare and harmony of the group.

Lastly, filtering the data for "bc_same" yields significant coefficients for self-direction, stimulation, hedonism, achievement and security values. Among these, achievement and hedonism emerge as new significant predictors of punishment decisions.

In summary, our findings indicate varied levels of support in terms of the influence of value orientations on punishment decisions. For the conservation values, only security emerged with consistently positive significant coefficients. This is in line with our expectations. On the other hand, the self-enhancement values have situational impacts, positively influencing punishment decisions in certain group compositions. Thus, we can say that *H4b* is also supported in multiple aspects.

In conclusion, our investigation into the participants' decisions yielded some insightful patterns. Both *H4a* and *H4b* received substantial support, demonstrating that personal value orientations significantly influence transfer and punishment decisions. Overall, *H4* is validated in multiple contexts and group compositions.

⁷For the related results in the subsequent paragraphs, please refer to the aggregated table 3.22.

3.3.3 BELIEFS & VALUES

This sub-section expands the analysis to another important aspect of our experimental design: participants' beliefs. As mentioned in the design sub-section, every player, irrespective of their assigned role, was asked about their punishment expectations for potential transfer levels of 0P, 5P and 10P. Additionally, the recipients were asked about their expectations for the amount of transfer they would receive.

3.3.3.1 Beliefs About Punishment & Values

Similar to the approach used for punishment decisions, the ordered probit model is employed due to the ordinal nature of the dependent variable "belief_0A", which corresponds to the dictators' punishment expectations for zero transfers. When the dictators are assessed overall without considering the specific treatments, the values of conformity, self-direction, and stimulation appear significant. These results can be seen in the aggregated table 3.23.

The positive coefficient for conformity indicates that dictators scoring higher on conformity anticipate stricter punishments for a zero transfer. Given that conformity emphasizes adherence to social norms, rules, and laws, participants prioritizing this value might be more responsive to norm violations. Transferring zero points could be seen as a violation of the fairness or generosity norm, leading dictators with high conformity scores to expect higher punishments for zero transfers.

Table 3.23 Ordered Probit Regression: Impact Of Values On Dictators' Punishment Expectations For Zero Transfers

	Dependent variable: belief_0A
V1: Conformity	1.841* (0.989)
V2: Tradition	1.214 (0.799)
V3: Benevolence	-0.245 (1.762)
V4: Universalism	1.610 (1.057)
V5: Self-direction	-4.045*** (1.441)
V6: Stimulation	-3.395** (1.313)
V7: Hedonism	-1.054 (1.024)
V8: Achievement	-0.536 (1.293)
V9: Power	-0.454 (1.034)
V10: Security	1.171 (1.171)
Observations	76

Notes: *p<0.1; **p<0.5; ***p<0.01

On the other hand, the values of self-direction and stimulation have negative coefficients. These form the higher-order value of "openness to change", which emphasizes personal freedom, novelty, and independence. This inverse relationship could be explained by the divergence of these values from norm adherence.

Upon filtering the data for specific group compositions "ab_same", "ac_same" and "bc_same"⁸, self-direction consistently emerges as significantly negative across all three categories. Further examination reveals that self-direction is significant only in the AC and ABC treatments, indicating that the data from the ABC treatment (common across all filters) could be driving this consistent significance. This highlights that self-direction, a value emphasizing independent thought and action, plays a pivotal role in shaping dictators' beliefs about punishment across different group dynamics. Dictators who prioritize self-direction consistently anticipate lower punishments for a transfer of 0, regardless of the group composition. This could be attributed to their perception of social norms as more flexible, which in turn, could diminish the expected severity of punishment for norm violations.

Besides self-direction, conformity has a significant and positive impact in the AC treatment. Dictators who score higher on this value expect higher punishments for zero transfers within this specific group dynamic.

In summary, only one conservation value, conformity, consistently influenced dictators to anticipate stricter punishments for not transferring any points. This aligns with our expectation but covers very little of it. Thus, we can state that *H5a* finds only partial support in our data.

⁸For the related results in the subsequent paragraphs, please refer to the aggregated table 3.24.

Table 3.24 Ordered Probit Regression: Impact Of Values on Dictators' Punishment Expectations For Zero Transfers Across Specific Group Compositions

	Dependent variable: belief_0A		
	ab_same	ac_same	bc_same
V1: Conformity	1.979 (1.735)	4.494** (2.232)	1.418 (1.607)
V2: Tradition	1.083 (1.403)	1.857 (1.287)	1.507 (1.296)
V3: Benevolence	2.386 (3.571)	0.610 (3.465)	-0.969 (3.281)
V4: Universalism	2.247 (1.942)	0.603 (1.371)	1.269 (1.696)
V5: Self-direction	-5.136* (2.683)	-9.428*** (2.932)	-6.593** (3.100)
V6: Stimulation	-5.077* (2.650)	-6.202** (2.669)	-2.513 (2.169)
V7: Hedonism	-3.289 (2.339)	-1.785 (1.797)	-1.724 (1.917)
V8: Achievement	-0.046 (2.545)	-0.222 (1.912)	0.090 (2.180)
V9: Power	0.489 (1.727)	0.403 (1.623)	-0.204 (1.682)
V10: Security	0.945 (1.937)	2.708 (1.945)	0.436 (1.655)
Observations	30	31	32

Notes:

*p<0.1; **p<0.5; ***p<0.01

3.3.2.2 Beliefs About Transfer & Values

Examining recipients' overall beliefs about transfer levels reveals a significant relationship with two values: self-direction and stimulation. The results can be seen in Table 3.25. As previously discussed, these values emphasize personal independence and novelty. Their positive coefficients suggest recipients prioritizing these values tend to anticipate larger transfers. This may stem from their belief that dictators will act more generously or fairly in the game.

When data is filtered for treatment pairs, significant coefficients appear only in the "ab_same" condition.⁹ As observed previously, the self-direction value maintains its significance. Additionally, this specific filter reveals a significant coefficient for the power value. Power, defined by its emphasis on social status and control over resources and people, appears to shape recipients' expectations. Regardless of the third-party's group affiliation, recipients with higher power scores anticipate larger transfers, possibly due to their perception of stronger norm enforcement within their group.

Interestingly, the significance of power emerges in the individual assessment of the BC treatment. A rise in the power value score corresponds to an increase in the recipients' transfer expectation, indicated by its positive coefficient. This may stem from a sense of security or confidence that comes from being in the third-party's group, who has the power to punish the dictator. This situation could make recipients feel more empowered or protected, leading them to expect more generous transfers from the dictators.

⁹For the related results in the subsequent paragraphs, please refer to the aggregated table 3.26.

Table 3.25 Tobit Regression: Impact Of Values On Recipients' Transfer Expectations

	Dependent variable: belief_transfer_B
V1. Conformity	0.250 (1.306)
V2. Tradition	-0.923 (1.242)
V3. Universalism	-1.687 (1.836)
V4. Benevolence	-1.586 (1.276)
V5. Self-direction	4.119*** (1.559)
V6. Stimulation	2.235* (1.332)
V7. Hedonism	0.169 (1.531)
V8. Achievement	-0.203 (1.260)
V9. Power	-0.769 (1.246)
V10. Power	-0.764 (1.391)
Observations	76

Notes: *p<0.1; **p<0.05; ***p<0.01

In the control treatment, conformity significantly impacts recipients' transfer expectation. This suggests that even in the absence of a group context, recipients who value conformity - signifying adherence to social norms - expect dictators to comply to the norms of fairness or generosity.

In summary, of all the values considered, only the conformity value within the conservation category showed a significant coefficient in the control treatment. This suggests some partial confirmation, but this is evident only in the absence of a group context. Consequently, we fail to support *H5b*.

In conclusion, both *H5a* and *H5b* finds only partial support, which leads us to reject *H5*.

Table 3.26 Tobit Regression: Impact Of Values On Recipients' Transfer Expectations Across Specific Group Compositions

	Dependent variable: belief_transfer_B		
	ab_same	ac_same	bc_same
V1. Conformity	0.721 (1.574)	-0.783 (2.139)	1.224 (2.071)
V2. Tradition	1.648 (1.733)	-0.371 (2.260)	-0.322 (1.774)
V3. Benevolence	0.745 (2.371)	-3.966 (2.642)	1.792 (2.652)
V4. Universalism	-1.513 (1.700)	-1.239 (1.890)	-0.461 (2.026)
V5. Self-direction	4.554** (2.183)	2.407 (2.668)	2.905 (3.041)
V6. Stimulation	-0.227 (2.097)	2.970 (1.954)	-0.047 (2.174)
V7. Hedonism	-0.427 (1.915)	4.157 (2.861)	-0.676 (2.153)
V8. Achievement	0.747 (1.382)	-1.103 (2.220)	0.027 (2.623)
V9. Power	-2.766* (1.454)	-0.654 (2.027)	0.764 (1.727)
V10. Security	-1.171 (1.873)	-0.205 (2.328)	-2.843 (1.942)
Observations	30	31	32

Notes:

*p<0.1; **p<0.5; ***p<0.01

CONCLUSION

This thesis was designed to explore the potential for generating in-group favouritism within minimally designed groups, using a third-party altruistic punishment game as the experimental framework. To ensure comparability and assess the replicability of previous findings, we followed the experimental procedures outlined by Bernhard et al. (2006). Additionally, we sought to understand the role of individuals' value orientations and how these might shape their decisions and beliefs within this context.

Our experimental results revealed that, contrary to our hypothesis, there were no significant differences between the treatments in terms of the existence and enforcement of the sharing norm. Our experimental results revealed that, contrary to our hypothesis, there were no significant differences between the treatments in terms of the existence and enforcement of the sharing norm. The reason behind this might be the nature of minimally designed groups, which may have been not enough to elicit strong in-group biases or normative behaviours.

However, we discovered that the participants' value orientations significantly influenced their decisions as well as their beliefs. This suggests that although our group design did not significantly impact norm compliance and enforcement behaviour, individual values played a crucial role in shaping these behaviours.

The transfer decisions were significantly influenced by benevolence, tradition, self-direction, stimulation, and hedonism, with their effects dependent on the group dynamics. Tradition had a positive impact overall, while benevolence promoted generosity only towards in-group members. Dictators valuing self-direction, stimulation, hedonism, and power were less likely to share.

Similarly, the punishment decisions were significantly influenced by self-direction, stimulation, and security. Third-parties valuing self-direction, which emphasizes personal autonomy, were less likely to administer high punishments, possibly viewing them as constraints on individual freedom. Conversely, participants prioritizing stimulation and security were more likely to choose severe punishments. Beliefs regarding punishments and transfers were also shaped by several value orientations, with self-direction showing consistent influence across different group dynamics.

To conclude, although the treatment variations in the experiment did not lead to significant differences in transfer or punishment decisions, individual values emerged as significant factors influencing these decisions and the related expectations.

While our study did not replicate the findings of Bernhard et al. (2006), it's important to underline the minimalistic nature of our design in this context. The small, albeit insignificant, differences among treatments and the participants' expectations signal the existence of altruism, independent of a parochial aspect. The differences between our findings and theirs could be attributed to the vast contrast in experimental designs, considering there are a lot of steps from our minimal design to their field experiment in Papua New Guinea. Therefore, our inability to replicate their results does not necessarily negate the presence of pure altruism in their findings. We propose a middle-ground approach for future studies, such as including complementary real effort tasks that would trigger a sense of group membership, thereby softening the minimalistic aspect of our design. Such an approach could potentially reconcile the gap between our findings and those of Bernhard et al. (2006), reaffirming the role of altruism without the need to assign a parochialistic origin.

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APPENDIX A

This section includes the original instructions for the experiment and their English translations, followed by the survey questions in English and Turkish.

INSTRUCTIONS IN TURKISH

Instructions for the AB treatment in Turkish:

GENEL BILGILENDİRME

Bu bir karar alma deneyidir ve bilimsel bir projenin parçasıdır. Bu deneyin amacı, insanların farklı durumlarda nasıl karar verdiğini anlayabilmektir. Kararlarınız “doğru” ya da “yanlış” olarak değerlendirilmez.

Deneyde elde edeceğiniz kazanç, alacağınız kararlara bağlıdır ve kazancınızın ne şekilde belirleneceği bu yönergede detaylı bir şekilde açıklanmıştır. Bu nedenle, yönergeyi dikkatle okumanız ve anlamanız önemlidir. Elde edeceğiniz kazancın ödemesi, tarafınıza banka transferi ile yapılacaktır.

Kazancınız hakkında diğer katılımcılara bilgi verilmeyecektir. Aldığınız kararlar ve verdiğiniz cevaplar tamamen anonimdir, hiçbir kimlik bilgisi ile eşleştirilmemektedir.

Deney tamamlanana kadar diğer katılımcılarla iletişim kurmanız kesinlikle yasaktır. Deneye başlamadan, sizinle paylaşılmış olan link üzerinden Zoom uygulamasına bağlı olduğunuzdan emin olun. Deneyin herhangi bir aşamasında bir sorunuz ya da sorunuz

olduğunda, lütfen Zoom oturumundaki mesaj panosunu kullanarak deney yürütücüleri ile iletişime geçin. Deney süresince Zoom uygulamasını asla kapatmayın ve anonsları duyabilmek için bilgisayarınızın sesini açık tutun.

GRUPLAR VE ROLLER

Bu deneyde yer alan katılımcılar rastgele olarak **Mavi** veya **Yeşil** grup üyeliğine atanmışlardır. **Mavi** ya da **Yeşil** gruplarından hangisinin üyesi olduğunuz deney başladığında size bildirilecektir.

Deneyde, katılımcılar A, B ya da C kişisi rolünde olacaklardır. **Mavi** grup üyesi olan katılımcılar, **A** ya da **B** rollerinden birine rastgele olarak atanacaklardır. **Yeşil** grubun tüm üyeleri ise, **C** kişisi rolüne atanacaklardır. Yani, **A** ve **B** **Mavi** grup, **C** kişileri **Yeşil** grup üyeleri olacaklardır.



KARARLAR

Katılımcılara şu miktarlarda katılım puanı verilecektir:

A kişisi: 10 puan

B kişisi: 0 puan

C kişisi: 5 puan

Mavi grubun üyesi olan bir **A** kişisi, yine **Mavi** grubun üyesi olan bir **B** kişisi ile rastgele eşleştirilecek ve elindeki 10 puandan ne kadarını eşleştirildiği **B** kişisine aktarmak

istediğine karar verecektir. **A** kişisi **B** kişisine 0 ve 10 dahil herhangi bir tam sayı olarak puan aktarabilir. **A** kişinin aktardığı puanlar **B** kişinin hesabına geçecek, aktarmadığı puanlar **A** kişinin kendisinde kalacaktır.

Bu aktarım kararından sonra, **Yeşil** gruptan rastgele seçilen bir **C** kişisi, **A** kişinin kendine ayırdığı puanları düşürüp düşürmeme kararı alacaktır. **C** kişisi, **A** kişinin 3 puanını düşürmek için kendi 5 puanından 1 puan, **A** kişinin 6 puanını düşürmek için kendi 5 puanından 2 puan harcayabilir. Ya da, **A** kişinin kendine ayırdığı puanları düşürmek istemezse herhangi bir harcama yapmayabilir.

A kişinin **B** kişisine yaptığı aktarımdan sonra, **C** kişisine sunulacak karar seçenekleri şöyle olacaktır:

- **A** kişinin kendine ayırdığı puanları düşürmemek;
- Elindeki 5 puandan 1 puan harcayarak **A** kişinin kendine ayırdığı puanlardan 3 puan düşürmek;
- Elindeki 5 puandan 2 puan harcayarak **A** kişinin kendine ayırdığı puanlardan 6 puan düşürmek.

C kişinin aldığı karar, **A** kişinin **B** kişisine aktarmış olduğu puanları etkilemez, sadece **A** kişinin kendine ayırdığı puanları etkiler.

KAZANÇLAR

Deneyde, tek karar alma turu bulunmaktadır. Bu karar alma turunda, **A**, **B** ve **C** kişilerinin elde edecekleri puanlar şöyle hesaplanacaktır:

- **A** kişinin puanı = 10 – (**B** kişisine aktardığı puan) – (**C** kişinin düşürdüğü puan)
(**A** kişinin **B** kişisine aktardığı puan, 0 ile 10 arasında herhangi bir puan olabilir.
C kişisi **A** kişinin 0 puan, 3 puan veya 6 puanını düşürebilir.)
- **B** kişinin puanı = **A** kişinin aktardığı puan
(**A** kişinin **B** kişisine aktardığı puan, 0 ile 10 arasında herhangi bir puandır.)
- **C** kişinin puanı = 5 – (**A** kişinin puanlarını düşürmek için harcadığı puan)
(**C** kişinin **B** kişinin puanlarını düşürmek için 0 puan, 1 puan veya 2 puan harcayabilir.)

Karar alma turunda elde edilmiş puanlara ek olarak her katılımcıya deney katılım puanı olarak 3 puan daha verilecektir. Her puan 4 TL değerindedir. Yani, her katılımcının karar turunda elde ettiği puana 3 puan deney katılım puanı eklenerek 4 TL ile çarpılacaktır.

Deney az sonra başlayacaktır. Herhangi bir sorunuz varsa, lütfen mesaj panosunu kullanarak deney yürütücüleri ile iletişime geçin.

ENGLISH TRANSLATIONS OF THE INSTRUCTIONS

Instructions for the AB treatment in English:

GENERAL INSTRUCTIONS

This is a decision-making experiment and it's part of a scientific project. The purpose of this experiment is to understand how people make decisions in different situations. Your decisions are not considered "right" or "wrong".

The earnings you will get from the experiment depends on your decisions and the way your earnings are determined will be explained in detail in the instructions. Therefore, it is important that you read carefully and understand the instructions. The payment of your earnings will be made to you via bank transfer.

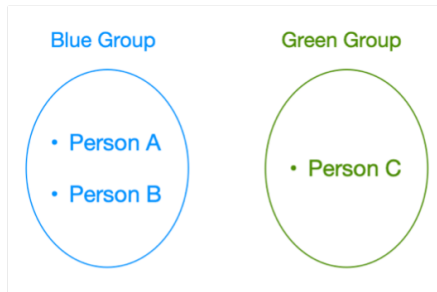
Other participants will not be informed about your earnings. The decisions you make and the answers you give are completely anonymous, they are not matched with any identity information.

Communicating with other participants is strictly forbidden until the experiment is complete. Before starting the experiment, make sure that you are connected to the Zoom application via the link shared with you. If you have a question or problem at any stage of the experiment, please contact the experimenters using the message board in the Zoom session. Never close the Zoom application during the experiment and keep your computer volume up to hear the announcements.

GROUPS AND ROLES

Participants in this experiment are randomly assigned to **Blue** or **Green** group membership. You will be notified when the experiment starts, which of the **Blue** or **Green** groups you belong to.

In the experiment, the participants will be in the role of person A, B or C. Participants who are members of the **Blue** group will be randomly assigned to either the **A** or **B** roles. All members of the **Green** group will be assigned the role of person **C**. That is, persons **A** and **B** will be members of the **Blue** group, and persons **C** will be members of the **Green** group.



DECISIONS

The starting points that will be given to the participants are as follows:

Person **A**: 10 points

Person **B**: 0 points

Person **C**: 5 points

A person **A** from the **Blue** group will be randomly matched with a person **B**, who is also from the **Blue** group and will decide how much of their 10 points they want to transfer to the person **B** they are matched with. Person **A** can transfer any integer points to person **B** including 0 and 10. Points transferred by person **A** will be credited to person **B**'s account, and points not transferred will remain in person **A**'s account.

After this transfer decision, a randomly selected person **C** from the **Green** group will decide whether or not to deduct points from person **A**. Person **C** can spend 1 point from his 5 points to reduce Person **A**'s 3 points, and 2 points from his 5 points to reduce person **A**'s 6 points. Or, if person **C** does not want to reduce any points from person **A**, they may not spend any points.

After person **A**'s transfer to person **B**, the decision options presented to person **C** will be as follows:

- Not deducting the points that person **A** kept to themselves;
- Spending 1 point out of their 5 points to deduct 3 points of Person **A**;
- Spending 2 point out of their 5 points to deduct 6 points of Person **A**.

Person **C**'s decision does not affect the points that Person **A** has transferred to Person **B**, it only affects the points that Person **A** kept to themselves.

EARNINGS

There is only one decision round in the experiment. In this decision-making round, the points for persons **A**, **B** and **C** will be calculated as follows:

- Person **A**'s points = $10 - (\text{Points transferred to Person B}) - (\text{Points deducted by Person C})$
(Person **A** can transfer any amount between 0 and 10 points to Person **A**. Person **C** can deduct 0 points, 3 points or 6 points from Person **A**.)
- Person **B**'s points = Points transferred by Person **A**
(The points transferred from Person **A** can be any amount between 0 and 10 points.)
- Person **C**'s points = $5 - (\text{Points spent to deduct points from Person A})$
(Person **C** can spend 0, 1 or 2 points to deduct from Person **A**'s points.)

In addition to the points obtained in the decision-making round, each participant will be given 3 more points as a participation fee. Each point is worth 4 TL. That is, 3 points of

participation fee will be added to the points obtained by each participant in the decision round and the total amount will be multiplied by 4 TL.

The experiment will begin shortly. If you have any questions, please contact the experimenters using the message board.

SURVEY QUESTIONS

1. S/he believes s/he should always show respect to his/her parents and to older people. It is important to him/her to be obedient.
2. Religious belief is important to him/her. S/he tries hard to do what his religion requires.
3. It's very important to him/her to help the people around him/her. S/he wants to care for their well-being.
4. S/he thinks it is important that every person in the world be treated equally. S/he believes everyone should have equal opportunities in life.
5. S/he thinks it's important to be interested in things. S/he likes to be curious and to try to understand all sorts of things.
6. S/he likes to take risks. S/he is always looking for adventures.
7. S/he seeks every chance he can to have fun. It is important to him/her to do things

that give him/her pleasure.

8. Getting ahead in life is important to him/her. S/he strives to do better than others.
9. S/he always wants to be the one who makes the decisions. S/he likes to be the leader.
10. It is important to him/her that things be organized and clean. S/he really does not like things to be a mess.
11. It is important to him/her to always behave properly. S/he wants to avoid doing anything people would say is wrong.
12. S/he thinks it is best to do things in traditional ways. It is important to him/her to keep up the customs s/he has learned.
13. It is important to him/her to respond to the needs of others. S/he tries to support those s/he knows.
14. S/he believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him/her.
15. Thinking up new ideas and being creative is important to him/her. S/he likes to do things in his/her own original way.
16. S/he thinks it is important to do lots of different things in life. S/he always looks for new things to try.

17. S/he really wants to enjoy life. Having a good time is very important to him/her.
18. Being very successful is important to him/her. S/he likes to impress other people.
19. It is important to him/her to be in charge and tell others what to do. S/he wants people to do what s/he says.
20. Having a stable government is important to him/her. S/he is concerned that the social order be protected.

TURKISH VERSION OF THE SURVEY QUESTIONS

1. Ana-babasına ve yaşlı insanlara her zaman saygı göstermesi gerektiğine inanır. Onun için itaatkar olmak önemlidir.
2. Dini inanç onun için önemlidir. Dininin gereklerini yerine getirmek için çok çaba harcar.
3. Çevresindeki insanlara yardım etmek onun için çok önemlidir. Onların iyiliği için uğraşmak ister.
4. Dünyada herkesin eşit muamele görmesinin önemli olduğunu düşünür. Hayatta herkesin eşit fırsatlara sahip olması gerektiğine inanır.
5. Her şeyle ilgili olmanın önemli olduğunu düşünür. Her şeyi merak etmekten ve anlamaya çalışmaktan hoşlanır.

6. Risk almaktan hoşlanır. Her zaman macera peşinde koşar.
7. Eğlenmek için her fırsatı kollar. Zevk veren şeyleri yapmak onun için önemlidir.
8. Hayatta başararak öne geçmek onun için önemlidir. Başkalarından daha iyi olmaya çalışır.
9. Her zaman kararları veren kişi olmak ister. Lider olmaktan hoşlanır.
10. Eşyaların düzenli ve temiz olması onun için önemlidir. Ortalığın dağınık ve kirli olmasından hiç hoşlanmaz.
11. Her zaman uygun şekilde davranmak onun için önemlidir. İnsanların yanlış diyeceği şeyleri yapmaktan kaçınmak ister.
12. İşleri geleneksel yollarla yapmanın en iyisi olduğunu düşünür. Öğrendiği gelenek ve göreneklerin devam ettirmek onun için önemlidir.
13. Başkalarının ihtiyaçlarına cevap vermek onun için önemlidir. Tanıdıklarına destek olmaya çalışır.
14. Dünyadaki bütün insanların uyum içinde yaşaması gerektiğine inanır. Dünyadaki bütün gruplar arasında barışın güçlenmesi onun için önemlidir.
15. Yeni fikirler bulmak ve yaratıcı olmak onun için önemlidir. İşleri kendine özgü, orjinal yollarla yapmaktan hoşlanır.

16. Hayatta pek çok farklı şey yapmanın önemli olduğunu düşünür. Her zaman deneyecek yeni şeyler arar.
17. Hayattan zevk almayı gerçekten ister. İyi zaman geçirmek onun için çok önemlidir.
18. Çok başarılı olmak onun için önemlidir. İnsanlar üzerinde iyi izlenim bırakmaktan hoşlanır.
19. İşin başında olmak ve başkalarına ne yapacaklarını söylemek onun için önemlidir. İnsanların onun söylediklerini yapmalarını ister.
20. İstikrarlı bir hükümetin olması onun için önemlidir. Sosyal düzenin korunması konusunda endişelenir.

APPENDIX B

Table B.1 Kruskal-Wallis Rank Sum Test By Treatment

Variable	chi-squared	df	p-value
Transfer	2.4247	4	0.6582
Punishment	5.1991	4	0.2675
Belief about transfer	4.8499	4	0.303
Belief about punishment	6.6777	4	0.1539

Kruskal-Wallis test results with all p-values higher than the conventional significance level of 0.05, indicating no significant differences across treatments for transfer and punishment decisions.

APPENDIX C

Screenshots of the webpages for general instructions

Lütfen bilgilendirmeyi dikkatlice okuyun.

Genel Bilgilendirme

Bu bir karar alma deneyidir ve bilimsel bir projenin parçasıdır.

Bu deneyin amacı, insanların farklı durumlarda nasıl karar verdiğini anlayabilmektir.

Kararlarınız "doğru" ya da "yanlış" olarak değerlendirilmez.

[İlerle](#)

Figure C.1 General Instructions About The Experiment

Genel Bilgilendirme

Deneyde elde edeceğiniz kazanç, alacağınız kararlara bağlıdır ve kazancınızın ne şekilde belirleneceği bu yönergede detaylı bir şekilde açıklanmıştır. Bu nedenle, yönergeyi dikkatle okumanız ve anlamanız önemlidir.

Elde edeceğiniz kazancın ödemesi, tarafınıza banka transferi ile yapılacaktır.

Kazancınız hakkında diğer katılımcılara bilgi verilmeyecektir. Aldığınız kararlar ve verdiğiniz cevaplar tamamen anonimdir, hiçbir kimlik bilgisi ile eşleştirilmemektedir.

[İlerle](#)

Figure C.2 General Instructions About The Experiment

Genel Bilgilendirme

Deney tamamlanana kadar diğer katılımcılarla iletişim kurmanız kesinlikle yasaktır.

Deneye başlamadan önce, sizinle paylaşılmış olan link üzerinden Zoom uygulamasına bağlı olduğunuzdan emin olun. Deneyin herhangi bir aşamasında bir sorunuz ya da sorunuz olduğunda, lütfen Zoom oturumundaki mesaj panosunu kullanarak deney yürütücüleri ile iletişime geçin.

Deney süresince Zoom uygulamasını asla kapatmayın ve anonsları duyabilmek için bilgisayarınızın sesini açık tutun.

İlerle

Figure C.3 General Instructions About The Experiment

Screenshots of the webpages for the AB treatment

GRUPLAR VE ROLLER

Bu deneyde yer alan katılımcılar rastgele olarak **Mavi** veya **Yeşil** grup üyeliğine atanmışlardır. **Mavi** ya da **Yeşil** gruplarından hangisinin üyesi olduğunuz deney başladığında size bildirilecektir.

Deneyde, katılımcılar A, B ya da C kişisi rolünde olacaktırlar. **Mavi** grup üyesi olan katılımcılar, **A** ya da **B** rollerinden birine rastgele olarak atanacaklardır. **Yeşil** grubun tüm üyeleri ise, **C** kişisi rolüne atanacaklardır. Yani, **A** ve **B** **Mavi** grup, **C** kişileri **Yeşil** grup üyeleri olacaktır.



İlerle

Figure C.4 Groups And Roles

KARARLAR

Katılımcılara şu miktarlarda başlangıç puanı verilecektir:

A kişisi: 10 puan

B kişisi: 0 puan

C kişisi: 5 puan

Mavi grubun üyesi olan bir **A** kişisi, yine **Mavi** grubun üyesi olan bir **B** kişisi ile rastgele eşleştirilecek ve elindeki 10 puandan ne kadarını eşleştirildiği **B** kişisine aktarmak istediğine karar verecektir. **A** kişisi **B** kişisine 0 ve 10 dahil herhangi bir tam sayı olarak puan aktarabilir. **A** kişinin aktardığı puanlar **B** kişinin hesabına geçecek, aktarmadığı puanlar **A** kişinin kendisinde kalacaktır.

Bu aktarım kararından sonra, **Yeşil** gruptan rastgele seçilen bir **C** kişisi, **A** kişinin kendine ayırdığı puanları düşürüp düşürmeme kararı alacaktır. **C** kişisi, **A** kişinin 3 puanını düşürmek için kendi 5 puanından 1 puan, **A** kişinin 6 puanını düşürmek için kendi 5 puanından 2 puan harcayabilir. Ya da, **A** kişinin kendine ayırdığı puanları düşürmek istemezse herhangi bir harcama yapmayabilir.



İlerle

Figure C.5 Decisions

A kişinin **B** kişisine yaptığı aktarımdan sonra, **C** kişisine sunulacak karar seçenekleri şöyle olacaktır:

- **A** kişinin kendine ayırdığı puanları düşürmemek;
- Elindeki 5 puandan 1 puan harcayarak **A** kişinin kendine ayırdığı puanlardan 3 puan düşürmek;
- Elindeki 5 puandan 2 puan harcayarak **A** kişinin kendine ayırdığı puanlardan 6 puan düşürmek.

C kişinin aldığı karar, **A** kişinin **B** kişisine aktarmış olduğu puanları etkilemez, sadece **A** kişinin kendine ayırdığı puanları etkiler.



ilerle

Figure C.6 Punishment Choices Of Player C

KAZANÇLAR

Deneyde, tek karar alma turu bulunmaktadır. Bu karar alma turunda, **A**, **B** ve **C** kişilerinin elde edecekleri puanlar şöyle hesaplanacaktır:

- **A** kişinin puanı = 10 – (**B** kişisine aktardığı puan) – (**C** kişinin düşürdüğü puan)

(**A** kişinin **B** kişisine aktardığı puan, 0 ile 10 puan arasında herhangi bir puan olabilir. **C** kişisi **A** kişinin 0 puan, 3 puan veya 6 puanını düşürebilir.)

- **B** kişinin puanı = **A** kişinin aktardığı puan

(**A** kişinin **B** kişisine aktardığı puan, 0 ile 10 puan arasında herhangi bir puandır.)

- **C** kişinin puanı = 5 – (**A** kişinin puanlarını düşürmek için harcadığı puan)

(**C** kişisi **A** kişinin puanlarını düşürmek için 0 puan, 1 puan veya 2 puan harcayabilir.)

ilerle

Figure C.7 Calculations Of The Earnings

Mavi grup üyesisiniz.

İlerle

Figure C.8 Group Information For The Blue Group

Yeşil grup üyesisiniz.

İlerle

Figure C.9 Group Information For The Green Group

Mavi grup üyesi olarak A rolüne atandınız.

Size verilen başlangıç puanı: 10

İlerle

Figure C.10 Role Information For Player A

Mavi grup üyesi olarak B rolüne atandınız.

Size verilen başlangıç puanı: 0

İlerle

Figure C.11 Role Information For Player B

Yeşil grup üyesi olarak C rolüne atandınız.

Size verilen başlangıç puanı: 5

İlerle

Figure C.12 Role Information For Player C

Kararınız

Mavi grup üyesi olarak **A** rolündesiniz.

Sizin gibi **Mavi** grup üyesi olan bir **B** kişisi ile eşleştirildiniz.

10 Puanınızdan ne kadarını grubunuzdaki **B** kişisine aktarmak istiyorsunuz?

(0 ile 10 dahil olmak üzere herhangi bir tam sayı seçebilirsiniz.)

İlerle

Figure C.13 Decision Page For Player A

Kararınız

Mavi grup üyesi olarak **B** rolündesiniz.

Mavi gruptan olan **A** kişilerinin çoğunun yine **Mavi** gruptan olan **B** kişilerine ellerindeki 10 puandan ne kadar aktaracaklarını düşünüyorsunuz?

İlerle

Figure C.14 Decision Page For Player B

Kararınız

Yeşil grup üyesi olarak **C** rolündesiniz.

A ve **B** kişileri **Mavi** grup üyesidir.

A kişisi, **B** kişisine elindeki 10 puandan 0 puan aktarmışsa, kararınız aşağıdakilerden hangisi olur?

- A kişisinin kendine ayırdığı puanları düşürmek istemiyorum.
- Kendi puanlarımdan 1 puan harcayarak A kişisinin kendine ayırdığı puanlardan 3 puan düşürmek istiyorum.
- Kendi puanlarımdan 2 puan harcayarak A kişisinin kendine ayırdığı puanlardan 6 puan düşürmek istiyorum.

A kişisi, **B** kişisine elindeki 10 puandan 1 puan aktarmışsa, kararınız aşağıdakilerden hangisi olur?

- A kişisinin kendine ayırdığı puanları düşürmek istemiyorum.
- Kendi puanlarımdan 1 puan harcayarak A kişisinin kendine ayırdığı puanlardan 3 puan düşürmek istiyorum.
- Kendi puanlarımdan 2 puan harcayarak A kişisinin kendine ayırdığı puanlardan 6 puan düşürmek istiyorum.

A kişisi, **B** kişisine elindeki 10 puandan 2 puan aktarmışsa, kararınız aşağıdakilerden hangisi olur?

- A kişisinin kendine ayırdığı puanları düşürmek istemiyorum.
- Kendi puanlarımdan 1 puan harcayarak A kişisinin kendine ayırdığı puanlardan 3 puan düşürmek istiyorum.
- Kendi puanlarımdan 2 puan harcayarak A kişisinin kendine ayırdığı puanlardan 6 puan düşürmek istiyorum.

Figure C.15 Decision Page For Player C (Only First Three Questions Are Included From The Strategy Method)

Diyelim ki, **A** kişisi kendisi ile aynı gruptan olan **B** kişisine elindeki 10 puandan hiç puan aktarmayıp 10 puanı kendine ayırdı. **Yeşil** gruptan olan **C** kişilerinin çoğunun kararı sizce aşağıdakilerden hangisi olur?

- A kişisinin kendine ayırdığı puanları düşürmez.
- Kendisinden 1 puan harcayarak A kişisinin 3 puanını düşürür.
- Kendisinden 2 puan harcayarak A kişisinin 6 puanını düşürür.

ilerle

Figure C.16 Belief Elicitation Question For Zero Transfer

Sonuçlar

10 Puan'ınızı kendinize saklayarak **B** kişisine **0 Puan** aktarmaya karar verdiniz.

C kişisi **0 Puan**ınızı düşürdü.

Böylece, deneyde alınan kararlar sonucu elde ettiğiniz puan **10 Puan** oldu.

Şimdi ekranınıza gelecek anket sorularını dikkatle okumanız ve yanıtlamanız için size yukarıda belirtilen kazançlarınıza ek olarak **4 Puan** daha verilecektir.

İlerle

Figure C.17 Results Page

Sayfa 1/3

Aşağıda bazı kişiler kısaca tanımlanmaktadır. Lütfen her tanımlı okuyun ve bu kişilerin size ne derece benzediğini ya da benzemediğini düşünün. Tanımda verilen kişinin size ne kadar benzediğini göstermek için aşağıdaki seçeneklerden birini seçin.

	Bana hiç benzemiyor	Bana pek benzemiyor	Bana benzemiyor	Bana az benziyor	Bana benziyor	Bana çok benziyor
Ana-babasına ve yaşlı insanlara her zaman saygı göstermesi gerektiğine inanır. Onun için itaatkar olmak önemlidir.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dini inanç onun için önemlidir. Dininin gereklerini yerine getirmek için çok çaba harcar.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Çevresindeki insanlara yardım etmek onun için çok önemlidir. Onların iyiliği için uğraşmak ister.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dünyada herkesin eşit muamele görmesinin önemli olduğunu düşünür. Hayatta herkesin eşit fırsatlara sahip olmasına gerektiğine inanır.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure C.18 Survey

APPENDIX D: ETHICS BOARD APPROVAL

Ethics Board Approval is available in the printed version of this dissertation.

