

THE ROLE OF SHARED KNOWLEDGE IN
CHILDREN'S IDENTIFICATION OF NORM VIOLATORS'
GROUP AFFILIATION

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DECLARATION OF ORIGINALITY

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ABSTRACT

The Role of Shared Knowledge in Children's Identification of Norm Violators' Group Affiliation

Each cultural group has different social norms that their members are expected to follow. Past research suggests that children expect members of other groups (e.g., linguistic outgroup members) to be social norm violators. However, the underlying mechanisms of their expectations are not entirely clear. The goal of this research is to explore the role of children's understanding of conventionality in selecting outgroup members as social norm violators. Three experiments were conducted with 5- and 6-year-olds to explore whether children expect rule violation behaviors from linguistic outgroup members because they perceive them as ignorant as opposed to knowledgeable rule violators. Results of Experiment 1 revealed that children expected outgroup members to violate conventional norms and novel norms to similar degrees. Results of Experiment 2 showed that when children were explicitly asked about ignorant rule violators, they tended to choose outgroup members. However, when they were asked about knowledgeable rule violators, they were equally likely to choose ingroup and outgroup members. Results of Experiment 3 further revealed that children infer that outgroup members are ignorant of social rules, and this tendency was apparent among boys and not among girls. Taken together, these results suggest that young children tend to attribute ignorance to outgroup members and this tendency might underlie their perception of outgroup members as rule violators.

ÖZET

Ortak Bilginin Çocukların Norm İhlalcilerinin Grup Üyeliğini Belirlemesindeki Rolü

Her kültürel grubun, üyelerinden uymalarını beklediği kendine özgü sosyal normları vardır. Yapılan araştırmalar, çocukların farklı sosyal grup üyelerinin (örn., yabancı dil konuşan kişiler) norm ihlalcisi olmalarını beklediklerini göstermiştir. Ancak, bu beklentilerine neden olan inançlarına dair bulgular kısıtlıdır. Bu çalışmanın amacı, çocukların diğer grup üyelerini norm ihlalcisi olarak görmelerinde kültürel kalıpların bir etkisinin olup olmadığını incelemektir. Bu kapsamda yapılan 3 çalışma da 5-6 yaş çocuklarla gerçekleştirilmiş olup; çocukların diğer grup üyelerinden kasıtlı bir norm ihlali yerine, bilgisizlikten kaynaklanan bir ihlal beklentileri olup olmadığını araştırmıştır. İlk çalışmanın bulguları, çocukların diğer grup üyelerinin hem bildikleri hem de bilmedikleri normları benzer şekilde ihlal etmelerini beklediklerini göstermiştir. İkinci çalışmanın sonuçlarında, çocuklara bilgisizlik nedeniyle norm ihlalleri yapanların kim olabileceği açıkça sorulduğunda diğer grup üyelerini seçtikleri; kasıtlı ihlalleri yapanlar sorulduğunda ise kendi grup üyeleri ve diğer grup üyelerini eşit derecede seçtikleri gözlenmiştir. Son çalışmanın sonuçları da çocukların diğer grup üyelerinin normlar hakkında bilgisiz olmalarını beklediklerini göstermiştir ve bu eğilim özellikle erkek çocuklarda ortaya çıkmıştır. Bütün sonuçlar bir arada değerlendirildiğinde, erken yaş çocuklarının diğer grup üyelerinden bilgisiz olmalarına dair genel bir beklentileri olabileceğini ve bu inançlarının da diğer grup üyelerini norm ihlalcisi seçmelerinde rol oynayabileceğine işaret etmektedir.

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CHAPTER 1

INTRODUCTION

Children are born into societies, and from early in development, they are exposed to values, norms, beliefs, behaviors, and ideas created by their culture. Children need to learn these conventions to adapt to the society they live in. Moreover, they should also realize that social norms are specific to their own cultural group so that individuals from different cultures might not be familiar with their own cultures' norms, and might be instead familiar with other norms. Past research on children's understanding of social norms suggests that, from early in development, children have some notion of conventionality of norms (Nucci & Nucci, 1982; Smetana, 1981, 2006; Smetana & Braeges, 1990; Turiel, 1983): they assume that social norms are tied to presence of rules, and are not generalizable across contexts (Kalish, 2012; Mulvey 2016; Smetana, 1981). Past research has also shown that children expect members of other groups to be social norm transgressors (Lieberman, Howard, Vasquez, & Woodward, 2018; Schmidt, Rakoczy, & Tomasello, 2012). This tendency might arise due to children's inference that outgroup members are not familiar with conventional norms, as well as their bias to associate positive behaviors (e.g., conforming to rules) with ingroup members. Indeed, there is wealth of evidence suggesting that children exhibit a more positive attitude towards individuals from their own social group based on cues such as gender, race, and language (Albert & Porter, 1983; Kinzler, Shutts, DeJesus, & Spelke, 2009; La Freniere, Strayer, & Gauthier, 1984; Martin, Fabes, Evans, & Wyman, 1999). The current research aims to examine whether children explicitly reason about group members' knowledge states of social norms when making transgression inferences.

1.1 Children's understanding of conventionality of cultural knowledge

Culture constitutes a comprehensive set of symbolic concepts such as institutions, social structures, values, and norms. All of its components shape people's behaviors, and all are continually created, accumulated, and altered over time (Markus & Kitayama, 2010). As also characterized by Laland and Hoppit (2003), culture is "group-typical behavior patterns shared by members of a community that rely on socially learned and transmitted information" (p. 151). These shared patterns can be found in all aspects of culture, such as in customs or rituals (Mead, 1955), in symbols and meanings (Geertz, 1973), or in values (Schwartz & Bardi, 1997). Such common knowledge is also referred as "shared construction of reality" created by groups of people living together (Brewer & Caporel, 2006, p. 151). Shared reality gives meaning to signs, symbols, and behaviors otherwise meaningless (Berry et al., 1992). Once the meaning has been constructed, its components do not disappear after the inventors of the norms have gone, and remain valid across generations (e.g., Jacobs & Campbell, 1961). People who belong to the same group are inclined to behave similarly and perceive the world in a more similar way compared to people from different groups, which results in the creation of boundaries dividing different social groups (Henrich & Boyd, 1998), and the persistent differences among cultural groups (Diesendruck & Markson, 2011; Henrich & Boyd, 1998; Rakoczy & Schmidt, 2013). For instance, whereas in some cultures a handshake is an appropriate way to salute someone, in other cultures the same behavior might be considered as inappropriate and instead giving three kisses on alternating cheeks might be the proper behavior (Wyman, Rakoczy, & Tomasello, 2009). The usage of an object might also vary across different cultures (Callanan, Siegel, & Luce, 2007). Artifacts and tools are some of the conceptual domains in which their functions are determined by their

conventionality rather than their physical properties (Kalish & Sabbagh, 2007). Appropriateness of categorization judgments about object functions, in other words, the “right” way of using objects or tools is determined by the mutual agreement of the people from the same culture (German, Truwax, & Defeyter, 2007; Kalish & Sabbagh, 2007). When someone calls a cup a ‘cup’, it reflects a general fact and a standardized usage agreed upon by others rather than one’s personal opinion (Kalish & Sabbagh, 2007).

Tomasello, Kruger, and Ratner (1993) argued that one of the distinguishing characteristics of human cultural products and practices is that even though some alterations exist over time, generations do things more or less in the same manner. In order to nourish culture, population-level traditions should be transmitted from one generation to another (Whiten & Flynn, 2010). Some parts of cultural knowledge are not transparent all the time and include opaque conventional activities (Rakoczy, Hamann, Warneken, & Tomasello, 2010). Members of a group help transmitting such knowledge that had been formed through communal agreement (Searle, 1995).

From early in life, children show an understanding that some forms of knowledge are shared by specific people (Danovitch & Keil, 2004; Lutz & Keil, 2002; VanderBorghet & Jaswal, 2009). In one study, 2-year-olds were presented with an agent who either used an object (i.e., fork) in a conventional (i.e., for eating) or in a novel manner (i.e., combing his hair). Then, children listened to native and foreign language excerpts. During the test phase, children looked first at the agent who behaved in a novel way upon hearing foreign language (Oláh, Elekes, Bródy, & Király, 2014). This finding implies that children by the age of two years might associate group membership with conventional behaviors. Preschool-aged children have an understanding of conventionality of words and expect their linguistic group

members to share knowledge of labels (Diesendruck, 2005; Diesendruck & Markson, 2001). For instance, Diesendruck (2005) showed that when 4-year-old children were taught common nouns for novel objects (e.g., “This one is called a teega. Teegas are like this”), children expected linguistic group members to know these nouns, even if children learned these names in the absence of group members. However, when proper nouns for novel objects (e.g., “Here is Teega. His name is Teega) were taught to children, children did not have such expectations. Even infants are able to infer that a new word-referent link is generalizable across individuals from the same linguistic community (Buresh & Woodward, 2007; Graham, Stock, & Henderson, 2006; Henderson & Graham, 2005; Henderson & Woodward, 2012), whereas object preferences are not (Henderson & Woodward, 2012). Children’s expectation regarding one’s cultural knowledge is not limited to word learning studies. Children as young as 5-year-olds are shown to have an understanding of culturally shared knowledge of novel and familiar objects (Liebal, Carpenter, & Tomasello, 2013). In their study, Liebal and colleagues presented both 3- and 5-year-old children with a culturally familiar object (e.g., a doll of Santa Claus) and a novel object. Then, an experimenter came into the testing room and ambiguously asked for one of the objects by saying “What is that?”, denoting either ignorance or recognition with his intonation. Both 3- and 5-year-old children chose novel object significantly more when the experimenter asked about the object by denoting ignorance; however, only 5-year-old children chose novel object significantly below chance when the experimenter asked about the object by denoting recognition. In another study, Soley and Spelke (2016) showed that preschool children prefer those who are similar to themselves in terms of their state of cultural knowledge. In particular, 4- and 5-year-old children preferred others as friends who knew songs that they themselves knew,

as well as others who did not know songs that they themselves did not know. Further, 4-year-old children expect that individuals from the same social category to share norms (Kalish, 2012); 5- and 6-year-olds expect social category members (i.e., people from the same ethnic background) rather than other types of groups, such as a task group (i.e., people who are working together), to know the same things (Plötner, Over, Carpenter, & Tomasello, 2016); and 5- and 6-year-olds expect linguistic ingroup members to share cultural knowledge but not necessarily preferences (Soley & Aldan, 2018). These findings suggest that children expect people who belong to a particular cultural group to share cultural knowledge.

1.2 Children's understanding of social norms as culturally shared knowledge

Humans' behavioral adaptations vary across different communities (Guglielmino, Vifanotti, Hewlett, & Cavalli-Sforza, 1995; Haun, 2015; Pagel & Mace, 2004).

These adaptations are transmitted through social learning over generations (Henrich & McElreath, 2003), which differentiates us from other species (Legare, 2017). One aspect of behavioral adaptations comprises mutually agreed behaviors: social norms (Göckeritz, Schmidt, & Tomasello, 2014). Social norms denote the proper ways of behaving, that are allowed, obligatory, or forbidden (Bettenhausen & Murnighan, 1985; Crawford & Ostrom, 1995), and these behavioral regularities are established over time by collective expectations of group members (Arrow & Burns, 2004). All group members who partake in a social practice engage in social norms (Rakoczy & Schmidt, 2013). Though being the least visible form, social norms are the most influential type of social control over human behavior (Bettenhausen & Murnighan, 1985). Social norms vary across cultures (Ostrom, 2014) and individuals are inclined

to learn these social norms just like they learn grammatical rules of their native language (Pinker, 1994).

Children acquire and internalize social norms mainly through social interactions (Caporael & Baron, 1997), whereby learning how group members behave in proper ways (Göckeritz et al., 2014; Over & Carpenter, 2012; Wyman et al., 2009). One of the mechanisms children use to acquire normative behaviors is overimitation (i.e., children's faithful copying behaviors of others, including excessive and unnecessary actions) (Lyons, Young, & Keil, 2007; Whiten, McGuigan, Marshall-Pescini, & Hopper, 2009). Studies on normative learning showed that even young children do not solely imitate the actions that are shown to them, but make normative inferences about these actions (Casler & Kelemen, 2005; Clegg & Legare, 2016; Rakoczy, 2008; Rakoczy et al., 2010). For instance, in one study, when children were given instrumental (e.g., "I am going to make a necklace") versus conventional (e.g., "Everyone always does it this way") cues during a necklace-making activity, they imitated the behaviors with higher fidelity and transmitted more of the exemplary behaviors in the conventional condition compared to the instrumental condition (Clegg & Legare, 2016). Children's normative understanding can also be seen in the realm of games in which they acquire game-related actions as strict rules to follow (Casler, Terziyan, & Greene, 2009). From age two, children not only quickly learn the game rules and protest when others violate them, but also show the 'right' way to third parties by enforcing the rules on them (Rakoczy, 2008; Rakoczy, Brosche, Warneken, & Tomasello, 2009; Rakoczy & Schmidt, 2013; Rakoczy, Warneken, & Tomasello, 2008; Wyman et al., 2009). In some of these studies, a novel game is taught to children and a puppet is introduced. When the puppet announces participation in the game and subsequently makes a

mistake, children show explicit normative responses (e.g., protest, critique, teaching). But if the puppet changes the context before the game (e.g., by indicating that he/she would not participate in the game), children do not consider the same deviation of action as a mistake. Marsh (2012) termed children as “knowledge brokers” after observing how children transmit their own cultural knowledge in the playground. For instance, in a study, Göckeritz et al. (2014) showed that, without adult influence, 5-year-old children were able to autonomously create their own social norms when playing a novel game, and also transmitted these norms by using normative language when novice children participated in the game. They suggested that children use normative language, by emphasizing “the way it must be done”, to create a pressure for novice children’s conformity to the established rules.

Imitating conventional behaviors requires attention to others’ behaviors and actions (Herrmann, Legare, Harris, & Whitehouse, 2013). Children are quite selective about whom to copy (Bekkering, Wohlschläger, & Gattis, 2000; Koenig & Sabbagh, 2013; Rakoczy et al., 2010; Tomasello et al., 1993). For instance, Rakoczy et al. (2010) showed that when 3- and 4-year-olds saw different actions demonstrated by an adult and a child, participating children not only preferred acting the same way as the adult, but they also thought that the adult’s way was the right way. Children also use group membership as a cue to reproduce the actions of others (Howard, Henderson, Carrazza, & Woodward, 2015; Kinzler, Corriveau, & Harris, 2011). For instance, Kinzler et al. (2011) showed that when 4- and 5-year-olds were presented with one native-accented and one foreign-accented speaker demonstrating different uses of a novel object, children chose to endorse the function illustrated by the native-accented speaker. Even infants prefer to copy their linguistic ingroup members’ actions over outgroup members’ actions (Buttelmann, Zmyj, Daum, &

Carpenter, 2013). Moreover, group membership guides children's decisions about how to act in a novel situation (Oostenbroek & Over, 2015). In this study, 4- and 5-year-old children were assigned to minimal groups that were distinguished by the colors of t-shirts children wore, and they were shown a novel toy (i.e., a light box). The experimenter demonstrated two different ways of turning on the light. Then, children watched video clips showing only how outgroup members turn on the light on the box. When children were asked to turn on the light, 5-year-old children chose not to act the way outgroup members did, and preferred to turn on the light the other way.

In summary, at an early age, children not only associate group membership with different socially constructed conventional behaviors, but also selectively learn from their ingroup members how these behaviors ought to be performed.

1.3 Children's expectations about rule violations

Children's understanding of conventionality also manifests itself in the way they differentiate social norms from moral norms, and their reactions to transgression behaviors. According to Piaget (1932), children younger than 10 years-old view conventional and moral norms similarly: universal and unalterable. However, a considerable amount of research showed that children are actually able to differentiate the nature of conventional rules from moral ones both in their judgments and their justifications (Mulvey, 2016; Nucci & Nucci, 1982; Smetana, 1981; Smetana & Braeges, 1990; Turiel, 1983). Children give more emotional reactions toward transgression of moral norms compared to social norms (Hardecker, Schmidt, Roden, & Tomasello, 2016), and consider conventional violations as less serious and less deserving punishment than moral rule violations (Mulvey, 2016; Smetana,

1981). Further, children consider transgression of moral norms as wrong because of the welfare of others, while they judge conventional norm violations based on the rules (Josephs & Rakoczy, 2016; Nucci & Turiel, 1978; Smetana & Braeges, 1990). Although children consider moral norms to be applicable to everyone, they think social norms to be idiosyncratic (Kalish, 2012). For instance, children believe that stealing from others is not acceptable in any culture; however, people from different cultures might dress differently based on their own conventions (Nucci & Nucci, 1982; Turiel, 1983).

Social norms have tremendous power on their group members and deviations might result in punishments and ostracism (Göckeritz et al., 2014). Children are sensitive to behavioral regularities of group members, readily generalize descriptive regularities (i.e., what is) to prescriptive judgments (i.e., what should be) (Kenward, 2012; Rakoczy & Schmidt, 2013), and disapprove nonconforming members even if they do not belong to any particular group (Roberts, Gelman, & Ho, 2016; Roberts, Ho, & Gelman, 2017). In one study, Roberts et al. (2016) presented two novel groups (e.g., Glerks and Hibbles) with different properties (e.g., listening to different kinds of music) to 4- to 13-year-old children and adults. When participants were presented with nonconforming members, children from all age groups were more disapproving of nonconformity than adults. Moreover, young children (i.e., 4- to 6-year-olds) gave more normative responses in their justifications (e.g., ‘They are not supposed to do’).

Children also believe that conformity to conventional rules depends on one’s knowledge about that rule (Kalish, 1998), and their responses to rule violations change depending on one’s mental state (Kachel, Svetlova, & Tomasello, 2017; Proft & Rakoczy, 2018). For instance, Kachel et al. (2017) showed that 3.5-year-old children give differential responses when their playmates broke norms of a game

intentionally or because of their lack of knowledge. The researchers showed that when their peer intentionally broke the rules, preschool children reacted normatively (e.g., “You should not do that!”); however, when their peer did the same mistake as a result of their ignorance, they responded in the context of teaching (e.g., “This is how we should play”). Children also use normative language in an attempt to transmit social norms to ignorant peers (Göckeritz et al., 2014). In this study, triads of 5-year-old children were introduced to a novel game and were allowed to figure out how to play the game by themselves during the first two days of the study. On day three, the knowledgeable children from each triad was paired with two novices. Once become knowledgeable, children gave significantly more normative responses to their ignorant peers compared to the other days when they tried to figure out the novel game by themselves.

Children’s inclusion decisions regarding ingroup and outgroup members to their social groups are also affected by group members’ conformity to social norms (Killen, Rutland, Abrams, Mulvey, & Hitti, 2013; Mulvey, Hitti, Rutland, Abrams, & Killen, 2014; Rizzo, Cooley, Elenbaas, & Killen, 2018). For instance, in one study, children were assigned to minimal groups based on t-shirt colors, and were introduced to conventional norm of their group (e.g., wearing the classroom sticker on Fridays). When they were asked to make inclusion decisions regarding different group members, who either followed or broke their group’s norms, children tended to choose outgroup members over ingroup members when outgroup members followed and ingroup members violated their group’s norms (Rizzo et al., 2018). Other studies showed that children have different expectations regarding moral and conventional behaviors of ingroup and outgroup members (Lieberman et al., 2018; Schmidt et al., 2012). In one such study, 3-year-old children protested moral norm

violations by ingroup and outgroup members equally; however, they enforced conventional game norms only on ingroup members (Schmidt et al., 2012). In another study, Liberman et al. (2018) asked children from 3- to 11-year-olds to guess whether their linguistic ingroup or outgroup members conformed to or broke conventional and moral norms. Although children younger than 7-year-olds expected both their ingroup and outgroup members to perform moral (e.g., “helped someone on the playground”) and immoral (e.g., “pushed someone over the playground”) actions similarly, children from all age ranges expected their ingroup members to follow and outgroup members to break conventional norms (e.g, the rules of a game”).

To this date, no study has directly explored the role of children’s explicit inferences of others’ knowledge states in guiding their expectations regarding conventional rule violators’ group membership. Children’s selections’ of outgroup members as norm breakers particularly for conventional norms seems to be relevant to the nature of normativity rather than a general negativity attribution. Given that conventional norms are not universal as moral ones and reflect socially constructed knowledge as part of being a member of a social group, children might also explicitly reason that different social groups have different conventional rules, and others’ knowledge states of the social rules might be the underlying mechanism guiding children’s behavioral expectations.

1.4 The present research

Most of the studies to this date explored children’s behavioral expectations of different group members’ transgressions by using social rules that children are familiar with. Examining children’s inferences regarding behaviors of group

members for pre-existing social norms might not fully capture children's understanding of social norms as being part of a specific culture, nor the foundation on which they base their behavioral expectations.

Given that social norms are socially constructed knowledge (Diesendruck & Markson, 2011; Oláh et al., 2014) and show persistent differences across cultures (Diesendruck & Markson, 2011; Rakoczy & Schmidt, 2013), the 'right' behavior might also change depending on cultural background of a society, and the violation of the normative behavior might also stem from one's lack of knowledge about it. It is important to be able to tolerate deviations from social norms, because of ignorance, to an extent for a functioning society, and it is crucial to understand children's beliefs or assumptions for such situations.

The present research asks whether children expect individuals from different cultures to be knowledgeable about different social norms. It further asks whether inferences about others' cultural knowledge might modulate children's expectations regarding group members' social norm transgressions. With this aim, three experiments were conducted, where children were introduced to conventional and novel games and were asked to guess knowledge states and/or transgression behaviors of novel individuals who belonged to different groups. Experiment 1 explored whether children spontaneously reason about knowledge states of ingroup and outgroup members in cases when they display rule violation behaviors, and infer ignorance as an underlying reason for such violations. Experiment 2 examined whether children's expectations regarding knowledge-based rule violations of ingroup and outgroup members differ. Finally, Experiment 3 explored whether children attribute knowledge of social norms differently to ingroup and outgroup members.

In all studies, language was used to mark group membership. Not only adults use language to mark cultural groups (Gluszek & Dovidio, 2010; Porter, Rheinschmidt-Same, & Richeson, 2016), but also children make rich inferences about others based on their language and accent (Day, 1980; Hirschfeld & Gelman, 1997; Kinzler & DeJesus, 2013). Children are also able to use language to denote group membership when they need to make decisions regarding conventional and moral behaviors of others (Lieberman et al., 2018). Moreover, 5- to 6-year-old children generalize cultural knowledge on the basis of languages individuals speak (Soley & Aldan, 2018).

Five and six year-old children were tested in these experiments. Past research showed that outgroup negativity is not observed until children's seventh birthday (Buttelmann & Böhm, 2014). So, children older than 6-year-old might give biased answers when making rule violation decisions. Children younger than 5-year-olds were not included in this study as well, since understanding others' knowledge requires a fully fleshed theory of mind ability (Koenig & Harris, 2005; Sabbagh & Baldwin, 2001; Wellman, Cross, & Watson, 2001), they may not have necessary skills to comprehend the task.

Conventional games were selected in an attempt to emphasize cultural knowledge. Games that were not played as teams were preferred because past research showed that competitiveness in games might create intergroup biases (e.g., Sherif, 1966).

Together, the current studies examine whether shared knowledge is an important factor for children to form expectations regarding social norm violation behaviors, and if so, whether it moderates children's evaluations of norm transgressors' group affiliations.

CHAPTER 2

SHARED KNOWLEDGE ON SOCIAL NORM VIOLATIONS STUDIES

2.1 Overview of studies

Three experiments were carried out. In all of the experiments, participants were presented with two targets whose group memberships were marked by the languages they spoke. Targets spoke either in Turkish or in Spanish.

Experiment 1 tested whether children infer group members' knowledge state about social norms as a cue to make decisions regarding rule violation behaviors. Participants were presented with two targets, speaking different languages. They were asked to identify the target who would violate the rules of a game. The rules were either from a conventional game that participating children were knowledgeable about, or from a novel game that children were ignorant of.

Experiment 2 explored whether children have different expectations from group members regarding who is likely to violate social rules knowingly or unknowingly. Participants were presented with two targets and were asked to identify which of the targets would break the rules despite their knowledge or because of ignorance when playing a conventional or novel game.

Finally, Experiment 3 tested whether children associate knowledge of different social norms with different group members. Participants were presented with two targets and were directly asked to identify which of the targets would be knowledgeable about the rules of conventional or novel games.

2.2 Hypotheses

Regarding Experiment 1, two outcomes would be consistent with the previous literature. First, because children at this age tend to show ingroup favoritism (Dunham, Baron, & Carey, 2011; Kinzler, Dupoux, & Spelke, 2007; Yu, Zhu, & Leslie, 2016), they might be more likely to associate positive behaviors with ingroup members. Accordingly, they might be more likely to choose outgroup members as norm transgressors for both conventional and novel social norms. This might suggest that children perceive outgroup members as social norm violators in all cases. On the other hand, past research suggests that children are sensitive to their peers' knowledge states, and they react differently to norm transgressions when ignorant and knowledgeable peers violate rules (Kachel et al., 2017). Thus, children might infer that because outgroup members are more likely to be ignorant about conventional games, they are more likely to break the rules of those games, compared to novel ones. For novel games, the opposite inference is expected to take place: children might infer that own group members might be ignorant about the novel games and are therefore more likely to violate the rules of those games. Accordingly, conventionality of the social norms might have an effect on children's decisions.

In Experiment 2, three possible outcomes are as follows: First, previous research suggests that children expect ingroup members to follow social norms (Schmidt et al., 2012), and ingroup members' transgression behaviors have an effect on children's exclusion decisions (Rizzo et al., 2018). Moreover, children are sensitive to intent when evaluating norm violations (Cushman, Sheketoff, Wharton, & Carey, 2013; Harris & Núñez, 1996), and this sensitivity guides their exclusion decisions (Mulvey, Hitti, & Killen, 2013). Thus, when children are explicitly asked

to identify the knowledge states of individuals who violate social norms, they might expect unintentional violation that are caused by ignorance to be performed by ingroup members. So, children might expect ingroup members to violate all kinds of norms unknowingly, and they might be more likely to choose outgroup members as intentional violators of both conventional and novel norms. On the other hand, children might also attribute knowledge to ingroup members more than they attribute it to outgroup members. In such a scenario, they might expect ingroup members to be knowledgeable about all kinds of rules and violate the rules intentionally. In the final possible outcome, children's expectation regarding norm violations might be modulated by the conventionality of the norms. Children might expect outgroup members to break conventional norms unknowingly and novel norms knowingly, while expecting ingroup members to break conventional norms knowingly and novel norms unknowingly.

Regarding Experiment 3, children might consider that ingroup members would be knowledgeable about any kind of social norms, and they might expect outgroup members to be ignorant regardless of norm types. Alternatively, given previous research suggesting that children expect same-group members to share social norms (e.g., Kalish, 2012), when asked about who would know the rules of the games, conventionality of the norms might modulate children's inferences: Children might select ingroup members more for conventional games and outgroup members more for novel games.

2.3 Participants

For all experiments, participating children were recruited from private preschools and kindergartens in Istanbul. Between June 2018 and January 2019, parents of 5-6

year-old children in these schools received an envelope containing two consent forms, a form on parental information, and a form on child related information (for details, see the section on materials below). Children participated in the experiments if their parents provided written consent. All children also provided oral consent at the beginning of the experimental session. All of the experiments were conducted in an isolated private space provided by the school authorities. The experiments were conducted in the order they are presented here. Ethics approval was obtained from the The Ethics Committee for Master and PhD Theses in Social Sciences and Humanities (SOBETİK) at Boğaziçi University (see Appendix A).

2.4 Materials

2.4.1 Questionnaires

Parents were requested to fill out two questionnaires including questions about demographic information about themselves and their child, as well as questions about their child's foreign language exposure and knowledge about a variety of games (for the details of these forms, see Appendix B and C for Turkish and English versions, respectively).

2.4.2 Experimental stimuli

Visual stimuli consisted of eight female and eight male children's portrait photographs, having the same plain white background. These photographs portrayed the head and shoulders of the children and were trimmed to 260 x 209 pixels. Forty nine adults (twenty five females: mean age: 20 y 1 m; range 19 y – 25 y) rated these photographs on perceived age, friendliness, attractiveness, intelligence, and

positivity. Eight, same-gender pairs of photographs were created based on these ratings.

Auditory stimuli consisted of 16 voice recordings of children. Eight native speakers of Turkish and eight native speakers of Spanish were requested to read short and neutral sentences (e.g., “Children altogether play at the park”; for a complete list of all sentences see Appendix D). These recordings were then edited: The volume of the speaker’s voices were equalized in terms of their decibel levels by using Audacity audio recording program.

The auditory and visual stimuli were arranged into slides using Microsoft Office Power-Point (2013) and presented on a laptop screen with 1366 x 768 screen resolution. The same slides were used in all of the experiments.

Conventional games were selected by means of an informal survey with preschool teachers asking popular games their students play with their peers. Four games, which do not require teams and are frequently reported as popular, were included. Four novel games were created by using combination of different syllables. The names of the games are easy to pronounce, have no meaning, and are similar to conventional games in terms of the word lengths (e.g., Saklambaç [Hide and seek] and Rakapo; for full list of games see Appendix E).

2.5 Method and results of Experiment 1

2.5.1 Method of Experiment 1

2.5.1.1 Participants

Participants were 39 Turkish speaking 5-6 year-olds monolingual children (20 girls, mean age: 5 y 1 m; range 5 y – 6 y 11 m). An additional 15 children were tested but excluded due to the following reasons: (8) no familiarity with at least one of the conventional games, (3) no clear response on at least one of the trials, (2) experimenter error, (1) distraction, and (1) being bilingual. In addition to these children who were excluded based on criteria that were decided upon a priori, one participant who claimed to know novel games very well was also excluded from the analyses. For all of the experiments, Turkish was the native language spoken at home for all of the participants in the sample. Some parents reported that their children were exposed to English on a daily basis in their schools through a native Turkish speaker (40% of the children), and/or at home through TV or Internet (32.5%). None of the participating children were reported to be exposed to Spanish.

2.5.1.2 Design and procedure

Participants were tested individually in a quiet room during their school time. Testing lasted for 10-15 minutes for each participant. Participants' answers consisted of choosing one of the target individuals and providing open ended reasoning for their choices. These answers were recorded manually during the experiment, and the sessions were recorded with a portable camera. The videos were later watched by an independent coder, who checked whether the data were entered correctly by the first

experimenter. Across three experiments, reliability between the experimenter and the independent coder for children's choices ($\kappa = .99, p < .001$) and for children's reasoning ($\kappa = .99, p < .001$) was very high. There was only one disagreement across the 768 trials for children's choices of group members. The related video recording was re-watched, the coding was corrected. In addition, there was disagreement on six of the 576 trials in which children's reasoning was asked. These are solved by reaching an agreement between the two coders on appropriate categories.

Each experimental session included two phases: A testing phase and a familiarity check phase. Each phase consisted of eight trials.

Testing phase. In the beginning of the session, participants were told that they were going to play a game in which they would see some children who would briefly speak, and then, they would be asked some questions regarding those children. Children were also ensured that there were no right or wrong answers.

Following the introduction, participants were presented with the first slide, featuring the first target (see Figure 1). When the experimenter clicked on the photograph, the target on the left side of the screen said one of the eight neutral sentences mentioned above in either Spanish or Turkish. With the experimenter's next click, the first target on the left disappeared and the second target appeared at the right side of the screen. For all of the eight experimental trials, one target spoke in Turkish and the other spoke in Spanish. The contents of the speech segments on each trial were identical. The final slide of an experimental trial consisted of two photographs of same-gender peers appearing side by side (see Figure 2). After the two targets had appeared side by side, the child was asked "If these kids were to play hide-and-seek and one of them would break the rules, who would break?"(for the

Turkish versions of the test questions, see Appendix F), and was expected to choose one of the two targets.

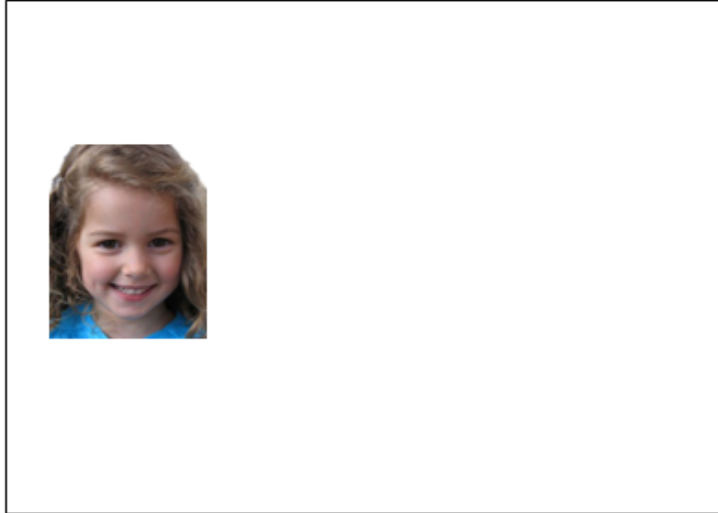


Fig. 1 An example for the first slide that was presented in the experiments, featuring one of the targets

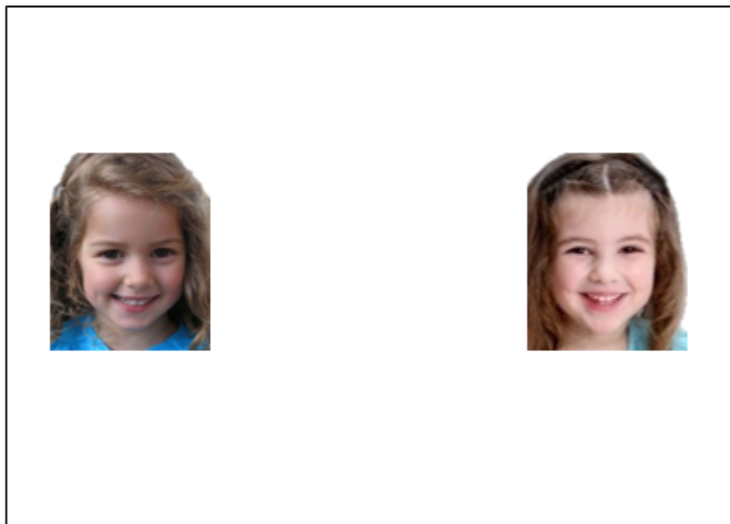


Fig. 2 An example for the last slide of an experimental trial, featuring both targets

Four of the eight experimental trials featured conventional games, and remaining four featured novel games. If the parental report indicated that the child was not familiar with one of the conventional games used in the experiment, that

specific game was replaced with another one that the parent declared the child was familiar with. For all of the trials, experimenter first pointed at the target that appeared first, and then, at the other target. Participants were asked to choose one of the two targets by pointing at one of the photos displayed. After the participants had made their choice, they were asked why they made that choice, and their open ended answers were recorded. In an attempt to assess the potential effects of the wording of the questions, half of the participants were asked “Who would not break the rules?”.

Familiarity-check phase. After the testing phase, participants were presented with a blank white screen and they were told that they were going to be asked a couple of other questions. With these check questions, participants’ own knowledge of the games was assessed. In this phase, children were introduced to each game again, and were asked whether they knew how to play it. If the participant answered the question as “No”, then the experimenter proceeded to the next game. But if the participant answered “yes”, then the experimenter clicked on the screen and three different sized circles appeared (see Figure 3).

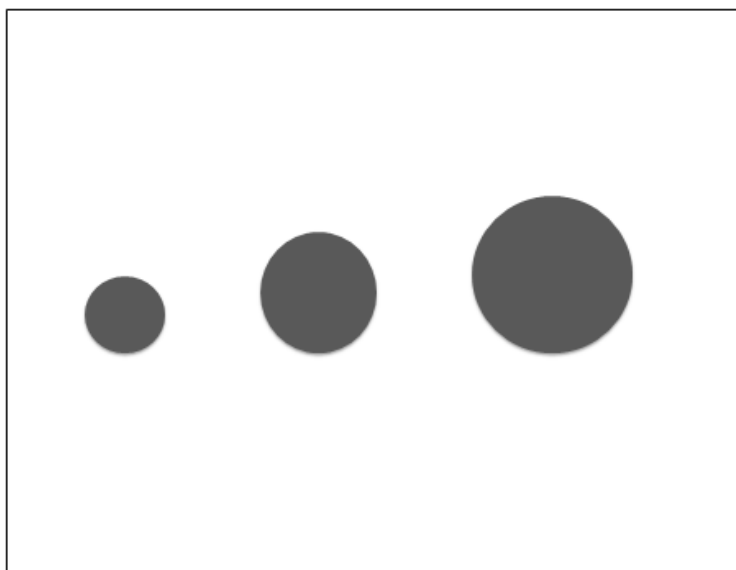


Fig. 3 An example slide from the familiarity check phase

Pointing to these circles, the experimenter asked “How well do you know it? Do you know very little (by pointing the smallest circle), a little (by pointing the middle sized circle), or very well (by pointing the biggest circle)?” Participants were expected to point at one of the circles or answer the question verbally. The same procedure was repeated eight times with different games. The games were introduced in the same order as in the testing phase.

Eight experimental conditions were created for counterbalancing purposes in all experiments. Lateral positions of the targets (i.e., which target appeared on the right or left side of the screen), the language they were paired with, and the order in which gender and the trial type were matched (e.g., conventional and girl-girl or conventional and boy-boy) were counterbalanced across participants. The order of whether the Turkish or the Spanish speaking target appeared first (e.g., ABBAABBA), and the order of conventional and novel trials (e.g., ABABBABA) were counterbalanced within participants across trials. Participants were presented with same-gender pairs and these pairs were presented in alternating order (e.g., ABABA...) across trials (a table containing counterbalanced variables can be found in Appendix G).

After the experimental session, children were thanked for providing their thoughts, and were given stickers as thank you gifts.

2.5.2 Data analysis and results of Experiment 1

Overall, participants reported to be familiar with conventional games, and unfamiliar with novel games: For conventional games, the participants reported to know these games very well in 92.95% of the trials, to know a little in 5.13% of the trials, and to know very little in 1.92% of the trials. For novel games, participants reported not to

know novel games in 98.07% of the trials, and they claimed to know these games very little in 1.92% of the trials. Due to participants' highly similar answers, their familiarity level on games was not used as a variable in data analysis.

As mentioned earlier, negative connotation of the question was used for half of the participants to analyze any possible wording effects. Before analyzing the data, the answers of participants who were asked "who would not break the rules" were reverse coded. In other words, if the child chose the ingroup target when asked to choose the person who would not break the rules, the child's answer was coded as selecting the outgroup target as the rule violator. So, the final data consisted of children's choices of rule violators.

Participants' choices of outgroup members were calculated as percentages. In order to analyze whether participants' choices differed depending on the conventionality of the trials, a repeated measures ANOVA (with trial type [trials with novel games vs. trials with conventional games] as the within subject factor, gender, and wording of the questions [trials asked with "who would break the rules" vs. trials asked with "who would not break the rules"] as between subject factors) was conducted. Results showed that participants' selection of outgroup members as rule violators was not affected by trial type, $F(1, 35) = .03, p = .85, \eta^2 = .001$. Gender ($F(1, 35) = 2.49, p = .12, \eta^2 = .07$) and the wording of the questions ($F(1, 35) = 1.91, p = .18, \eta^2 = .05$) also did not have any significant main effects on children's choices of outgroup members. There were no significant interactions between trial type and gender ($F(1, 35) = 0.72, p = .40, \eta^2 = .02$), trial type and the wording of the question ($F(1, 35) = 0.66, p = .42, \eta^2 = .02$), and gender and wording of the question ($F(1, 35) = 1.35, p = .25, \eta^2 = .04$). The three-way interaction between trial type, gender, and

the wording of the question was also not significant ($F(1, 35) = 1.00, p = .32, \eta^2 = .03$).

In order to see whether participants showed a tendency of choosing outgroup members as rule violators, their choices were compared to the chance level of 50% using two tailed one sample t-tests. Overall, participants selected outgroup members as rule violators ($M = 61.86\%, SD = 22.57\%$, chance = 50%, $t(38) = 3.28, p = .002, d = 0.53$). Participants selected outgroup members as rule violators both in conventional trials ($M = 62.18\%, SD = 28.02\%$, chance = 50%, $t(38) = 2.71, p = .01, d = 0.43$) and in novel trials ($M = 61.54\%, SD = 29.72\%$, chance = 50%, $t(38) = 2.43, p = .02, d = 0.39$) (see Figure 4).

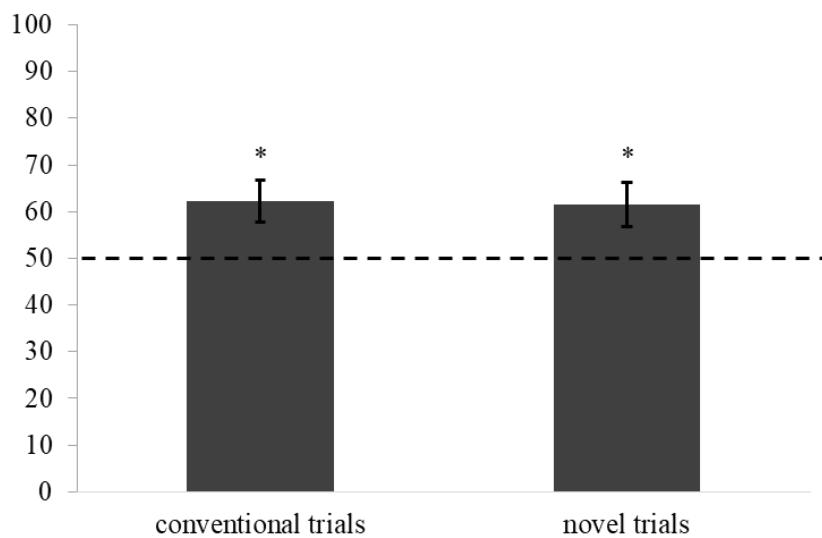


Fig. 4 Mean percentage of trials in which children selected outgroup members as rule violators in Experiment 1

Note. Error bars represent standard errors. $N = 39$ (* = $p < .05$)

At last, participants' reasoning about their choices was examined. Children's responses were classified into five groups: group-related, knowledge-related, appearance-related, do not know, and other. Overall, participants gave appearance-

related reasoning, such as “because he looks like a rule-breaker”, or “because her hair is better-looking”, in 26.92% of the trials; and group-related reasoning, such as “because she speaks another language” or “because he is a foreigner”, in 17.31% of the trials. A few participants provided knowledge-related reasoning, such as “because I do not know what kind of game it is” or “because she does not know the game” in 7.37% of the trials. In 25.32% of the trials participants gave other reasoning, such as confabulating stories about targets, and, in 20.83% of the trials, they indicated that they do not know the reason. Following this, for each participant, the dominant reasoning category was calculated (i.e., giving the same type of reasoning category on at least five out of eight of the trials). A chi square test was conducted to understand the distribution of these reasoning categories. There were no significant differences among these frequencies, $\chi^2(4, N = 39) = 6.39, p = .27$. Overall, nine participants gave more appearance-related, and six more group-related reasoning. One participant provided knowledge-related reasoning and seven participants told that they did not know the reason in most of the trials. Eight participants did not have any dominant reasoning response, and eight participants mostly gave reasoning other than these categories.

Overall, children’s selection of ingroup and outgroup members did not differ depending on whether the games were conventional or novel. Instead, children chose outgroup members as rule violators for both kinds of games. Children’s choices in Experiment 1 could have been driven by their inferences that ingroup members do not break rules, outgroup members break rules or both. The results also leave open the possibility that children might expect ingroup members to be more knowledgeable and/or outgroup members to be more ignorant in general. The next experiment attempted to explore the role of knowledge more directly by giving

children explicit information about the distinction between violating rules knowingly and due to ignorance.

2.6 Method and results of Experiment 2

2.6.1 Method of Experiment 2

2.6.1.1 Participants

Participants were 22 Turkish speaking 5-6 year-olds monolingual children (12 girls, mean age: 6 y 1 m; range 5 y 1 m – 6 y 11 m). An additional eight children were tested but excluded due to the following reasons: (3) no familiarity with at least one of the conventional games, (1) being bilingual, (1) no language information provided by the parent, (1) no clear responses at least one of the trials. In addition to these children who were excluded based on criteria that were decided upon a priory, two participants who claimed to know all novel games very well were also excluded from the analyses. Some parents reported that their children were exposed to English on a daily basis in their school through a native Turkish speaker (50% of the children), and/or at home through TV or Internet (33.3%). None of the participating children were reported to be exposed to Spanish.

2.6.1.2 Design and procedure

The procedure was identical to Experiment 1, except that after being introduced to two targets as in Experiment 1, children were asked “If these kids were to play hide-and-seek and both of them were to break the rules; but one of them would break despite of their knowledge about the rules, and the other because of ignorance, who

would break the rules because of ignorance?”. As in Experiment 1, half of the participants were asked the same test questions as “Who would break the rules despite of their knowledge?” to observe any possible wording effects. Following the testing phase, in the familiarity check phase, children’s familiarity with the games was assessed as in Experiment 1.

2.6.2 Data analysis and results of Experiment 2

As in Experiment 1, participants reported to be familiar with conventional games, and mostly unfamiliar with novel games: For conventional games, the participants reported to know these games very well in 90.91% of the trials, to know a little in 5.68% of the trials, and to know very little in 3.41% of the trials. For novel games, participants reported not to know novel games in 95.46% of the trials, and they claimed to know these games a little in 2.41% trials, and very little in 2.14% of the trials. Due to participants’ highly similar answers, their familiarity level on games was not used as a variable during data analysis.

Before analyzing participants’ choices, the answers of participants who were asked “who would break the rules despite of their knowledge” were reverse coded. In other words, if the child chose the ingroup target as knowingly violating the rule, the child’s answer was coded as selecting the outgroup target as unknowingly violating the rule. So, the final data consisted of children’s choices for ignorant rule violators.

Participants’ choices of outgroup members were calculated as percentages. In order to analyze whether participants’ choices differed depending on the conventionality of the trials, a repeated measures ANOVA (with trial type [trials with novel games vs. trials with conventional games] as the within subject factor, gender, and wording of the questions [trials asked with “who would break the rules despite of

their knowledge” vs. trials asked with “who would break the rules because of ignorance”] as between subject factors) was conducted. Results showed that participants’ choices of outgroup members as ignorant rule violators was not affected by the trial type, $F(1, 18) = 0.001, p = .98, \eta^2 = .001$. Gender had no significant main effect on children’s choices, $F(1, 18) = 0.001, p = .98, \eta^2 = .001$. The effect of the wording of the questions was significant, $F(1, 18) = 3.90, p = .047, \eta^2 = .17$. Children selected outgroup members more when they were asked to choose the ignorant rule violators ($M = 69.32\%, SD = 23.29\%$) compared to when they were asked the knowledgeable rule violators ($M = 48.86, SD = 21.98\%$) (see Figure 5).

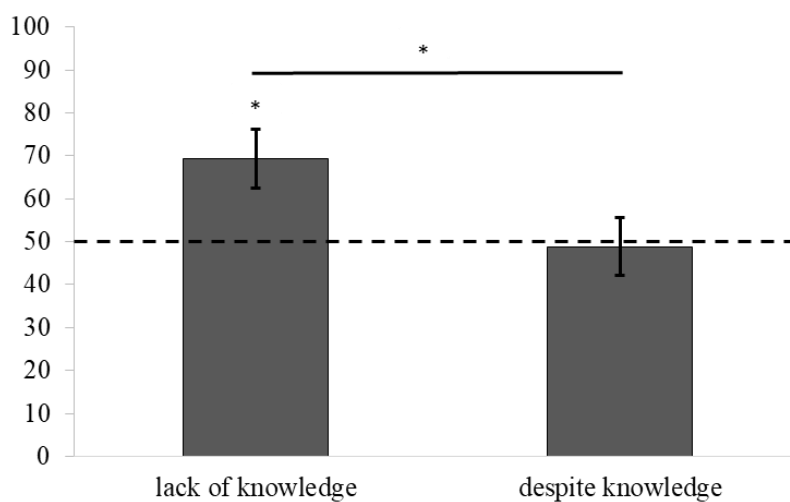


Fig. 5 Mean percentage of trials in which children selected outgroup members depending on the wording of the question in Experiment 2

Note. Bar graph shows mean percentage of trials in which children chose outgroup members as ignorant rule violators. In the case of “despite knowledge” part, children’s selections of ingroup members were reverse coded. $N = 22$ (* = $p < .05$)

There were no significant interactions between trial type and gender ($F(1, 18) = 0.28, p = .60, \eta^2 = .02$), trial type and the wording of the question ($F(1, 18) = 0.66, p = .42,$

$\eta^2 = .02$), and gender and wording of the question ($F(1, 18) = 0.02, p = .89, \eta^2 = .001$). The three-way interaction between trial type, gender, and the wording of the questions was not significant ($F(1, 18) = 0.18, p = .68, \eta^2 = .01$).

In order to test whether participants showed a tendency to choose outgroup members as ignorant rule violators, children's choices were compared to the chance level of 50% using two tailed one sample t-tests. Overall, participants choices of outgroup members as ignorant rule violators did not differ from chance level ($M = 59.09\%$, $SD = 22.57\%$, chance = 50%, $t(21) = 1.74, p = .10, d = 0.37$). Children's choices did not differ from chance level in conventional trials ($M = 59.09\%$, $SD = 31.38\%$, chance = 50%, $t(21) = 1.36, p = .19, d = 0.29$) or in novel trials ($M = 59.09\%$, $SD = 24.45\%$, chance = 50%, $t(21) = 1.40, p = .18, d = 0.30$) (see Figure 6).

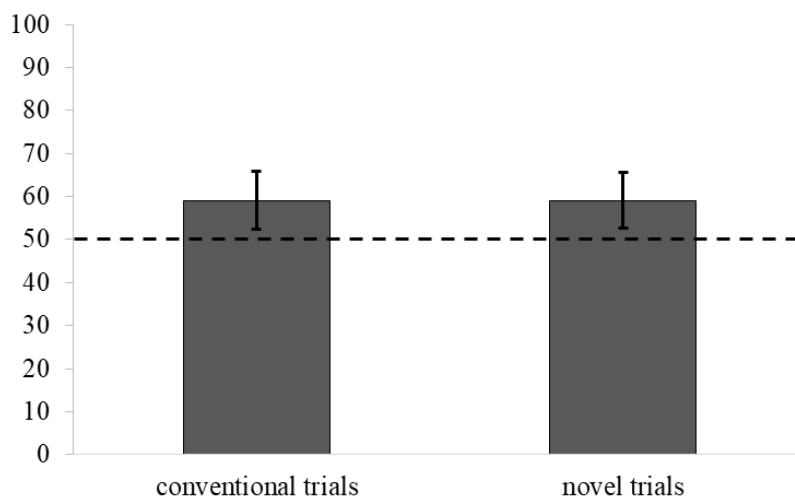


Fig. 6 Mean percentage of trials in which children selected outgroup members as ignorant rule violators in Experiment 2

Note. Error bars represent standard errors. $N = 22$

Finally, participants' reasoning was explored. Participants gave group-related reasoning in 44.32% of the trials, and appearance-related reasoning in 28.41% of the

trials. A few participants provided knowledge-related reasoning in 4.55% of the trials. In 12.50% of the trials, participants gave other reasoning, and in 10.23% of the trials, they indicated that they do not know the reason. The number of participants who gave the same categorical reasoning in the most of the trials (i.e., at least in 5 of the trials) was calculated. These frequencies differed significantly from one another, $\chi^2(4, N = 22) = 13.00, p = .01$. Ten participants gave more group-related, and six gave more appearance-related reasoning. Four participants did not have any dominant reasoning response. One participant, in most of the trials, said that she does not know the reason, and one participant gave reasoning other than these categories.

To sum up, the results of Experiment 2 revealed once more that conventionality of games did not have an effect on children's decisions regarding group members' knowledge states in rule violation. Overall, children's choices of outgroup members as ignorant rule violators did not differ from chance level for conventional and novel games. The overall lack of choosing outgroup members as ignorant rule violators in Experiment 2 might be driven by the rather small sample size in Experiment 2 compared to Experiment 1. However, how the question was formed affected children's choices in Experiment 2. When children were asked who would violate the rules despite their knowledge of the games, children were equally likely to choose ingroup and outgroup members. In contrast, when children were asked who would break the rules due to their ignorance, children selected outgroup members significantly more. This tendency did not differ depending on whether the games were novel or familiar. In Experiment 2, children's reasoning categories for their selections significantly differed from each other, and children tended to provide group-related reasoning more when information regarding knowledge states of group members are explicitly stated.

A final experiment was conducted in order to explore whether children have different expectations regarding knowledge states of different group members for conventional and novel norms.

2.7 Method and results of Experiment 3

2.7.1 Method of Experiment 3

2.7.1.1 Participants

Participants were 23 Turkish speaking 5-6 year-old monolingual children (11 girls, mean age: 5 y 11 m; range 5 y – 6 y 11 m). An additional five children were tested but excluded due to the following reasons: (2) no familiarity with at least one of the conventional games, (1) experience of living abroad for a few years, (2) no clear responses at least one of the trials. In addition to these children who were excluded based on criteria that were decided upon a priori, one participant who claimed to know all novel games very well was also excluded from the analyses. Some parents reported that their children were exposed to English on a daily basis in their school through a native Turkish speaker (66.7% of the children), and/or at home through TV or Internet (29.2%). None of the participating children were reported to be exposed to Spanish.

2.7.1.2 Design and procedure

The procedure was identical to Experiment 1 and Experiment 2, except that after being introduced to two targets, children were asked “Which of these kids knows the rules of playing hide-and-seek?” As in other experiments, half of the participants

were asked the same test questions as “Who would not know the rules of playing hide-and-seek?” to observe any possible wording effects. Following the testing phase, in the familiarity check phase, children’s familiarity with the games was assessed as in the other experiments.

2.7.2 Data analysis and results of Experiment 3

As in Experiments 1 and 2, participants reported to be familiar with conventional games, and mostly unfamiliar with novel games: For conventional games, the participants reported to know these games very well in 90.22% of the trials, to know a little in 6.52% of the trials, and to know very little in 3.26% of the trials. For novel games, participants reported not to know novel games in 97.83% of the trials, and they claimed to know these games a little in 1.09% trials, and very little in 1.09% of the trials. Due to participants’ highly similar answers, their familiarity level on games was not used as a variable during data analysis.

Before analyzing participants’ choices, the answers of participants who were asked “who would not know the rules of playing hide-and-seek?” were reverse coded. In other words, if the child chose the outgroup target as ignorant, the child’s answer was coded as selecting the ingroup target as knowledgeable. So, the final data consisted of children’s choices for knowledgeable targets.

Participants’ choices of ingroup members were calculated as percentages. In order to analyze whether participants’ choices differed depending on the conventionality of the trials, a repeated measures ANOVA (with trial type [trials with novel games vs. trials with conventional games] as the within subject factor, gender, and wording of the questions [trials asked with “who would know the rules” vs. trials

asked with “who would not know the rules”] as between subject factors) was conducted.

Results showed that participants’ choices of ingroup members as knowledgeable was not affected by the trial type, $F(1, 19) = 0.01, p = .92, \eta^2 = .001$. Both gender ($F(1, 19) = 5.37, p = .03, \eta^2 = .22$) and wording of the question ($F(1, 19) = 5.37, p = .03, \eta^2 = .22$) had significant effects on children’s choices of ingroup members as knowledgeable. Participants selected ingroup members as knowledgeable significantly more when they were asked to choose the one who would not know the rules ($M = 73.96\%, SD = 16.39\%$) compared to when they were asked who would know the rules ($M = 56.82\%, SD = 24.60\%$) (see Figure 7).

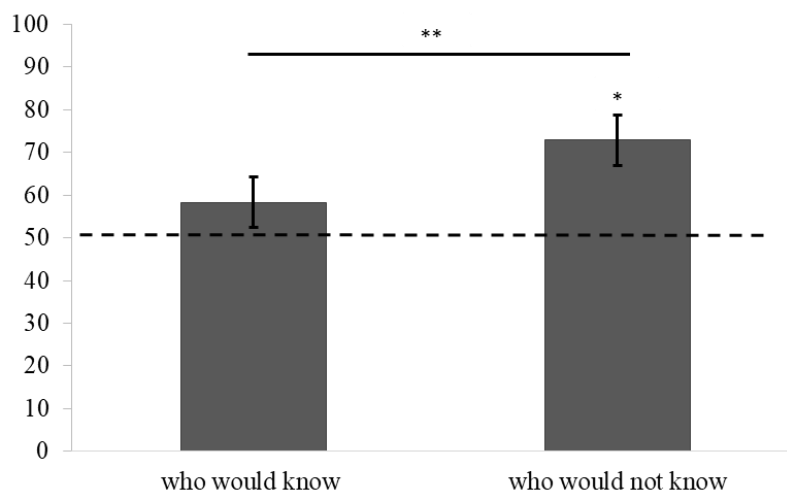


Fig. 7 Mean percentage of trials in which children selected ingroup members as knowledgeable depending on the wording of the question in Experiment 3

Notes. Bar graph shows mean percentage of trials in which children chose ingroup members as knowledgeable. In the case of “would not know” part, children’s selections of outgroup members as ignorant were reverse coded. Error bars represent standard errors. $N = 23$ (** = $p < .05$, * = $p < .001$)

Boys ($M = 73.96\%$, $SD = 17.23\%$) selected ingroup members as knowledgeable significantly more than girls ($M = 56.82\%$, $SD = 23.95\%$) (see Figure 8). There were no significant interactions between trial type and gender ($F(1, 19) = 0.47$, $p = .50$, $\eta^2 = .02$), trial type and the wording of the question ($F(1, 19) = 0.13$, $p = .78$, $\eta^2 = .01$), and gender and wording of the question ($F(1, 19) = 1.00$, $p = .33$, $\eta^2 = .05$). The three-way interaction between trial type, gender, and the wording of the question was not significant ($F(1, 19) = 0.01$, $p = .92$, $\eta^2 = .001$).

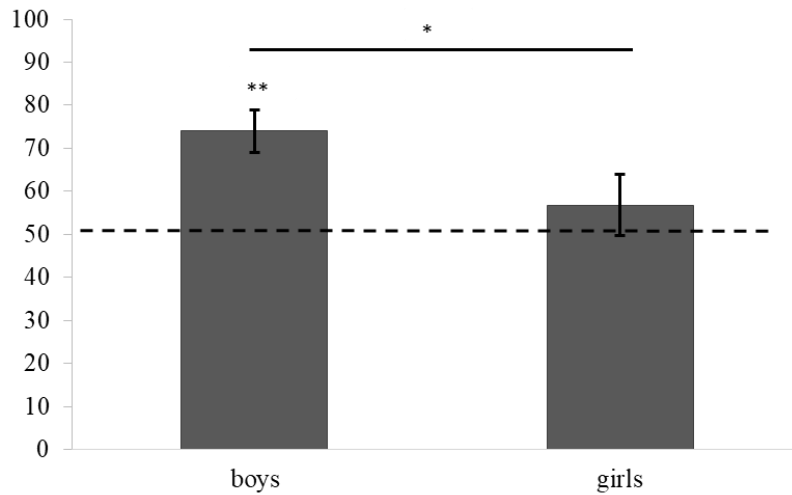


Fig. 8 Mean percentage of trials in which boys and girls selected ingroup members as knowledgeable in Experiment 3

Notes. Error bars represent standard errors. $N = 23$ (* = $p < .05$, ** = $p < .001$)

In order to test whether participants showed a tendency to choose ingroup members as knowledgeable, their choices were compared to the chance level of 50% using two tailed one sample t-tests. Overall, participants' choices of ingroup members as knowledgeable were significantly above chance ($M = 65.76\%$, $SD = 22.05\%$, chance = 50%, $t(22) = 3.43$, $p = .002$, $d = 0.71$), and their selection was

above chance level both in conventional trials ($M = 65.22\%$, $SD = 27.94\%$, chance = 50%, $t(22) = 2.61$, $p = .02$, $d = 0.54$) and in novel trials ($M = 66.30\%$, $SD = 28.81\%$, chance = 50%, $t(22) = 2.71$, $p = .01$, $d = 0.57$) (see Figure 9).

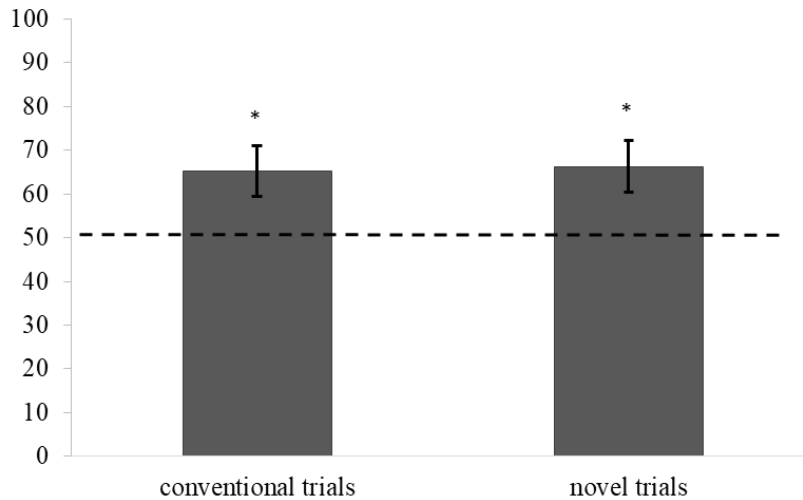


Fig. 9 Mean percentage of trials in which children selected ingroup members as knowledgeable in Experiment 3

Notes. Error bars represent standard errors. $N = 23$ (* = $p < .05$)

To sum up, the results revealed that, overall, conventionality of games did not have an effect on children's ingroup choices. Children chose ingroup members as knowledgeable for both conventional and novel trials. Boys selected ingroup members as knowledgeable significantly more than girls. In addition, how the question was formed had a significant effect on children's choices. When children were asked to choose the knowledgeable target, their choices of ingroup or outgroup targets did not differ from chance level. However, when children were asked to choose the ignorant target, children selected outgroup members significantly more. Together with the results of the previous experiment, these findings suggest that children tend to attribute ignorance to outgroup members more than they attribute it

to ingroup members. In both experiments, children's choices changed when they were explicitly asked about ignorant targets rather than knowledgeable targets. Thus, the emphasis on the test question regarding knowledge states of targets has a potential to affect children's inferences.

CHAPTER 3

DISCUSSION

The aim of this thesis is to explore the effect of shared cultural knowledge on children's inferences regarding rule violations of different group members. To this end, three experiments were conducted with 5 and 6 years old children. Experiment 1 aimed to test whether children take conventionality of the games into account when deciding who would violate game rules. Children were presented with one ingroup and one outgroup target and were asked who would violate the rules of games that were either conventional or novel. Children chose outgroup members as rule violators for both conventional and novel games and there was no significant effect of conventionality on children's choices.

Results of Experiment 1 might imply that children expect social norm violations to come from outgroup members and/or they do not expect ingroup members to break norms in general. Children's tendency to make similar choices regardless of norm types suggests that children might not spontaneously use group members' knowledge states in their inferences. Alternatively, children might expect ingroup members to be more knowledgeable and/or outgroup members to be more ignorant regarding games while making their inferences for rule violation. As another possibility, even though children expect social norms to be idiosyncratic for different social groups (Kalish, 2012), they might not consider knowledge of game rules as something that varies across groups. In order to further explore children's inferences of rule violators' group membership, Experiment 2 was conducted. Children were presented with rule violators who were linguistic ingroup and outgroup members; however, the underlying motive of their violation was stated

differently. Some of the targets violated the rules because of their lack of knowledge, and others violated the rules despite of their knowledge, and children were asked to predict knowledgeable and ignorant rule breakers.

Results of Experiment 2 revealed that there was no significant effect of conventionality on children's choices and overall, children's choices of outgroup members as ignorant rule violators did not differ from chance level for either conventional or novel trials. One might argue that when the consequence of an action is given (i.e., the rule is broken), children might not give importance on intentionality. However, past research showed that children are able to differentiate the valence of intentions even when the outcomes of these actions are the same (Nobes, Panagiotaki, & Pawson, 2009; Núñez & Harris, 1998; Zelazo, Helwig, & Lau, 1996). Research also showed that knowledge states and intent might not always play similar roles for all kinds of violations (Barrett et al., 2016; Chakroff et al., 2015; Hawley-Dolan & Young, 2013; Young & Saxe, 2011). A recent study, conducted with adults, demonstrated that even though knowingly violating rules caused more reactions in participants compared to unintentional rule violations, the effect of one's intent was greater when moral rules were violated compared to when conventional rules were violated (Giffin & Lombrozo, 2018). Researchers suggested that knowingly violating moral norms includes another dimension that violation of conventional norms is lack of: intention to cause harm. Another recent study, conducted with both adults and children produced similar results, and children, like adults, attributed more importance to knowledge states and intent in violation of moral norms compared to conventional norms (Proft & Rakoczy, 2018). In the light of these recent findings, one might argue that knowledge states might be less relevant for conventional rule violations compared to moral norm violations.

Interestingly, how the question was formed had an effect on children's choices. When children were asked to identify knowledgeable rule violators, their selection of outgroup members did not differ from chance level. On the other hand, when children were asked to identify ignorant rule violators, they selected outgroup members significantly more. When children are asked about the target who would break the rules knowingly, they might be less willing to choose outgroups, as this choice would indicate negative intent attribution. In line with this possibility, past research suggests that children at this age tend to make positive attributions about novel individuals (Aldan & Soley, 2019; Boseovski, Shallwani, & Lee, 2009; Mezulis, Abramson, Hyde, & Hankin, 2004), and children start having more negative attitudes toward outgroup members after the age of six years (Baron & Banaji, 2006; Baron & Dunham, 2015). When children are asked to choose the target who would break the rules unknowingly, they might attribute ignorance to outgroup members more than they attribute it to ingroup members. On the other hand, the effect of wording might have resulted from the structure of the test question. Preschool children might have difficulty understanding negative questions (e.g., Gaer, 1969; Hopmann & Maratsos, 1977). Using a cognitive factive mental verb (i.e., to know) with a negative connotation increases the syntactic complexity (e.g., Perry et al., 1995) and might have an effect on children's processing of the sentence.

In Experiment 2, children also provided significantly more group-related reasoning than other kinds of reasoning for their choices. This effect is not specific to how the questions were formed, and it suggests that explicitly stating knowledge and ignorance in rule violation might produce more salient effect for group membership. In order to directly explore whether children have different expectations regarding the knowledge states of ingroup and outgroup members, Experiment 3 was

conducted. Children were presented with linguistic ingroup and outgroup members, and were asked to identify targets who are knowledgeable or ignorant of conventional and novel games. Results of Experiment 3 revealed that overall children selected ingroup members as knowledgeable for both conventional and novel games. Children's tendencies differed depending on their gender: Boys selected ingroup members as knowledgeable significantly more than girls, and girls' choices of ingroup members as knowledgeable did not differ from chance level. Past research showed that children perceive their same age peers as more knowledgeable compared to adults, when they are asked about child-specific activities (Fitneva, 2010; VanderBorghet & Jaswal, 2009). However, there was no evidence regarding gender differences in these studies. Given the limited sample size in the current experiment, further research is needed to establish whether the observed effects are robust.

Similar to Experiment 2, wording of the questions created a significant difference in children's tendency to select ingroup members as knowledgeable. When children were asked to choose knowledgeable targets, they did not show any expectations regarding the group membership of the targets. However, when children were asked to choose ignorant targets, they tended to choose outgroup members. The effect of the wording, found both in Experiment 2 and Experiment 3, suggests that when ignorance is explicitly stated, group membership becomes more salient for children's decisions and their inferences are driven by the knowledge state of outgroup members. It is also important to note, however, that the syntactic complexity of the statements used in positive and negative questions might also play a role in children's decisions (e.g., Perry et al., 1995). For some of the children, especially the younger ones, it might be harder to process the negative sentence as its

complexity increases. While no effect of wording was found in Experiment 1, this might be due to the lack of mental factive words in the first experiment. These findings have practical implications regarding forming child-directed questions in experimental settings, and should be further explored.

Overall, the results of all studies reveal a complex picture about children's inferences of different group members' knowledge of conventional and novel games and the role of such inferences in children's expectations of rule violation behaviors.

3.1 Limitations and future directions

One methodological factor that might raise questions for all experiments might be the presentation of novel games. In all of these studies, the adult experimenter, who is a linguistic ingroup member, asked the questions. In the beginning of the studies, the experimenter intentionally did not mention anything regarding novel games, including her knowledge state, not to heighten children's awareness about group members' knowledge states. Even though children consider that their peers as more knowledgeable than adults about child-specific activities (Fitneva, 2010; VanderBorghth & Jaswal, 2009), by the age of 4, preschoolers acknowledge that adults know more than themselves in general (Taylor, Cartwright, & Bowden, 1991; Jaswal & Neely, 2006). Thus, when an adult ingroup member asks questions about novel games, it might affect the children's inferences for other group members' knowledge states. If children thought that the experimenter is knowledgeable about these games, they might have assumed that ingroup targets in the studies might be knowledgeable about them as well, either because they perceive ingroup members as more knowledgeable, or because they assume that the experimenter and other ingroup members share knowledge about these games.

It is also important to note that, across three experiments, conventionality of the knowledge was manipulated by introducing familiar and novel games to children. Majority of children (i.e., 92.86% of the participants) reported that they did not know the novel games at all. On the other hand, games, in particular, can be considered as a domain in which children are experts. Without adult influence, children readily invent rules when playing with their peers (Göckeritz, et al. 2014), and playground is an area where children constantly create and transmit knowledge (Marsh, 2012). Given that children are used to inventing and learning novel games all the time, they might not perceive them as knowledge that varies across cultural groups. Future research could try varying familiarity of social norms in different ways that could potentially be more effective than game rules.

Another methodological factor that might raise concern is the sample size. The required sample sizes were determined as 24 participants per study by power analyses. With 24 participants, Experiment 1 revealed marginal gender and age effects. In order to explore these effects, sample size was increased to 40 participants, and these effects did not turn out to be robust. During data collection for the experiments, children who did not meet the criteria that were decided upon a priori were excluded from the analyses, and additional children were tested. After the data collection, a few children were decided to be excluded from the analyses as well; and the number of these children were mentioned in the Participants section of all the experiments. Data analyses were conducted with and without these children, and there were no significant differences on the results. Thus, results were reported with the exclusion of these children.

Another concern regarding the sample size might be the number of children who were excluded from data analysis. In particular, Experiment 1 has a relatively

higher number of these children due to their unfamiliarity with at least one of the conventional games. At the beginning of the study, the part in the parental forms asking their children's knowledge about games included a small number of games. Some of the parents reported that their children were not familiar with any of the games in the default list of the experiment. In those sessions, a random game, in line with the game selection criteria, was used; however, it turned out that in most of the cases the child also did not know the replaced game. Thus, the number of games included in the parental form was increased in order to find sufficient number of familiar games.

In line with the current literature, there were no expectations regarding gender differences and the effect of the questions' structure on children's choices. Nevertheless, the results of Experiment 2 and 3 revealed both effects. These effects might be driven by the smaller sample sizes of these experiments compared to Experiment 1. On the other hand, particularly the effect of the question's structure remained robust across Experiments 2 and 3, arguably due to the explicit information provided on the knowledge states, which was not given in Experiment 1. Future studies should replicate these findings with larger sample sizes to explore these effects further.

A larger sample size would also be useful to explore whether children's choices change depending on the match between their gender and targets' gender. Children are sensitive to gender, use it to make inferences about others' attributes, (e.g., Gelman, Collman, & Maccoby, 1986), and to make predictions regarding other individuals' behaviors (e.g., Albert & Porter, 1983; Martin 1989). In the current experiments, targets' group membership was marked by the language they spoke, however, across trials, targets' gender was also varied. Accordingly, on half of the

trials children saw same-gender targets, and on the other half of the trials, they saw targets from a different gender. Thus, the targets shown were indeed members of multiple social groups. Multiple categorization has been shown to have an effect on individuals' perception of ingroups and outgroups as the overlap between the categories change (for review, see Crisp & Hewstone, 1999). Thus, children might make different inferences based on individuals' gender as well as their languages. Future studies could control for such effects by presenting children only with own-gender targets.

In order to better understand the role of shared knowledge in children's attributions of norm violations, future studies might be carried out with children from different age ranges to examine how their inferences regarding rule violations change as children develop. As children grow up, they might realize that outgroup members are not ignorant and ingroup members are not knowledgeable at all times, and instead different group members are knowledgeable about different things. Accordingly, they might start making more nuanced rule violation attributions based on what others might and might not be knowledgeable about.

3.2 Conclusion

The goal of the present studies was to explore the role of shared cultural knowledge on children's expectations of ingroup and outgroup members' social norm violation behaviors. Results suggested that although children spontaneously expect outgroup members to break social norms, the emphasis on different knowledge states has a potential to change children's expectations.

Social norms create the necessary basis for a functioning society. Having expectations regarding outgroup members' conformity to these norms, by ignoring

their possible unfamiliarity with these social rules, might create negative consequences for outgroup members such as being blamed for nonconformity or being ostracized. Thus, it is important to understand children's underlying assumptions concerning outgroup members in order to prevent these potential negative consequences.

APPENDIX A

BOĞAZIÇI UNIVERSITY SBB ETHICS SUB-COMMITTEE APPROVAL FORM

T.C.
BOĞAZIÇI ÜNİVERSİTESİ
İnsan Araştırmaları Kurumsal Değerlendirme Alt Kurulu


Sayı: 2018-19

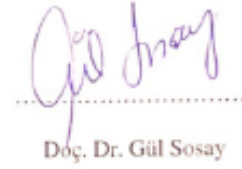
25 Nisan 2018

Gizem Ünlü
Psikoloji

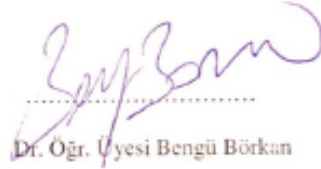
Sayın Araştırmacı,

"Ortak Kültürel Bilginin Çocukların Farklı Sosyal Gruplardaki Norm İhlali Beklentileri Üzerine Etkisi" başlıklı projeniz ile ilgili olarak yaptığımız SBB-EAK 2018/22 sayılı başvuru İNAREK/SBB Etik Alt Kurulu tarafından 25 Nisan 2018 tarihli toplantıda incelenmiş ve uygun bulunmuştur.


Doç. Dr. Mehmet Yiğit Gürdal


Doç. Dr. Gül Sosay


Dr. Öğr. Üyesi İnci Ayhan


Dr. Öğr. Üyesi Bengü Börkan


Dr. Öğr. Üyesi Nur Yeniçeri

APPENDIX B

QUESTIONNAIRES IN THE STUDIES (TURKISH)

	Anne	Baba
Doğum Tarihi	____ / ____ / ____ (Gün) (Ay) (Yıl)	____ / ____ / ____ (Gün) (Ay) (Yıl)
Meslek		
Eğitim Düzeyi	<input type="checkbox"/> İlkokul terk <input type="checkbox"/> İlkokul mezunu <input type="checkbox"/> Ortaokul terk <input type="checkbox"/> Ortaokul mezunu <input type="checkbox"/> Lise terk <input type="checkbox"/> Lise mezunu <input type="checkbox"/> Yüksekokul mezunu <input type="checkbox"/> Üniversite terk <input type="checkbox"/> Üniversite mezunu <input type="checkbox"/> Uzmanlık derecesi (master ya da doktora)	<input type="checkbox"/> İlkokul terk <input type="checkbox"/> İlkokul mezunu <input type="checkbox"/> Ortaokul terk <input type="checkbox"/> Ortaokul mezunu <input type="checkbox"/> Lise terk <input type="checkbox"/> Lise mezunu <input type="checkbox"/> Yüksekokul mezunu <input type="checkbox"/> Üniversite terk <input type="checkbox"/> Üniversite mezunu <input type="checkbox"/> Uzmanlık derecesi (master ya da doktora)
Evin aylık brüt geliri (TL)	<input type="checkbox"/> 2.000'den az <input type="checkbox"/> 2.100 - 5.000 <input type="checkbox"/> 5.100 – 7.000 <input type="checkbox"/> 10.000'den fazla <input type="checkbox"/> Bu soruya cevap vermemeyi tercih ediyorum.	

Lisan ve Oyun Bilgileri Formu

Anne adı: _____ Baba adı: _____

Çocuğun adı: _____ Çocuğun Doğum Tarihi: _____

Çocuğun Doğum Yeri: _____ Cinsiyeti: K / E

Çocuğunuzun başka kardeşleri var mı? E / H

Evet ise, başka kaç tane kardeşi var?__

Lisan Bilgileri

Anne

Baba

Doğum yeri: _____

Ana dil: _____

Çocuğunuz hangi lisanları konuşuyor? _____

Çocuğunuzun ana dili Türkçe mi? E / H

Çocuğunuzun Türkçe dışında bir ana dili var mı? E / H

Evet ise hangi dil? _____

Çocuğunuzla Türkçe'den başka bir lisanda konuşuluyor mu? E / H

Evet ise,

Hangi lisanlarda? _____

Kim tarafından? _____ Ne sıklıkla? _____

Oyun Bilgileri

Çocuğunuz aşağıdaki oyunlardan hangilerini biliyor ya da seviyor?

___ Saklambaç

___ İstop

___ Körebe

___ Heykel oyunu

___ Ebelemece

___ Sandalye Kapmaca

___ Yerden Yüksek

___ Deve Cüce

___ Mendil Kapmaca

Çocuğunuzun oynamayı sevdiğini bildiğiniz başka oyunlar var mı?

Çocuğunuz başkalarının bilmediği yeni oyunlar kurup kendi kendine veya

arkadaşlarıyla birlikte oynar mı? E / H

APPENDIX C

QUESTIONNAIRES IN THE STUDIES

	Mother	Father
Date of Birth	____ / ____ / ____ (Day) (Month) (Year)	____ / ____ / ____ (Day) (Month) (Year)
Occupation		
Education	<input type="checkbox"/> Left primary school <input type="checkbox"/> Primary school graduate <input type="checkbox"/> Left middle school <input type="checkbox"/> Middle school graduate <input type="checkbox"/> Left high school <input type="checkbox"/> High school graduate <input type="checkbox"/> College graduate <input type="checkbox"/> Left university <input type="checkbox"/> University graduate <input type="checkbox"/> Graduate Degree (M.A, M.S., or PhD)	<input type="checkbox"/> Left primary school <input type="checkbox"/> Primary school graduate <input type="checkbox"/> Left middle school <input type="checkbox"/> Middle school graduate <input type="checkbox"/> Left high school <input type="checkbox"/> High school graduate <input type="checkbox"/> College graduate <input type="checkbox"/> Left university <input type="checkbox"/> University graduate <input type="checkbox"/> Graduate Degree (M.A, M.S., or PhD)
House Income (TL)	<input type="checkbox"/> Less than 2.000 <input type="checkbox"/> 2.100 - 5.000 <input type="checkbox"/> 5.100 – 7.000 <input type="checkbox"/> More than 10.000 <input type="checkbox"/> Prefer not to answer	

Language and Game Information Form

Mother's name: _____ Father's name: _____

Child's name: _____ Date of birth: _____

Place of birth: _____ Gender: F / M

Does your child have other siblings? Yes / No

If yes, how many siblings does she/he have? _____

Language Information

Mother

Father

Place of birth: _____

Native language: _____

Which languages does your child know? _____

Is your child's native language Turkish? Yes / No

Does your child have an additional native language? Y / N

Is your child spoken any languages other than Turkish? Y/N

If yes,

In which languages? _____

By whom? _____ How often? _____

Game Information

Which of the games below does your child know?

___ Hide and seek ___ Above the ground ___ Musical chairs
___ Playtag ___ *İstop* ___ Tissue puss
___ Statue game ___ Giant dwarf ___ Blind man's buff

Are there other games that your child likes to play?

Does your child create novel games and play by himself / herself or with others?

Y / N

APPENDIX D

UTTERANCES BY TARGETS IN EXPERIMENTS 1-3

1. Many families have cats and dogs in their homes.
2. Butterflies have colorful wings.
3. The sky and the sea are blue.
4. Children altogether play at the park.
5. At school, we both play and learn many things.
6. Rabbits are born with their eyes closed.
7. Birds have wings to fly.
8. Zebras have black and white stripes.

APPENDIX E

GAMES USED IN EXPERIMENTS 1-3

Experiment	Condition	Game
Experiment 1 &	Conventional	Hide and seek
Experiment 2 &	Conventional	Above the ground
Experiment 3	Conventional	Play tag
	Conventional	İstop
	Novel	Rakapo
	Novel	Pakvan
	Novel	Zipli reksa
	Novel	Atilis

Note. Conventional games were replaced with other ones (e.g., Statue Game, Giant Dwarf, Musical Chairs, Tissue Puss, Blind Man’s Buff) only if it was declared in the parental report that the child was not knowledgeable about the games in the above list.

APPENDIX F

TEST QUESTIONS IN TURKISH

Experiment 1:

“Bu çocuklar birlikte saklambaç oynasaydı ve bir tanesi kuralları bozsaydı; sence hangisi bozardı/bozmazdı? Neden?”

Experiment 2:

“Bu çocuklar birlikte saklambaç oynasaydı ve ikisi de kuralları bozsaydı... Ama birisi kuralları bilmediği için, diğeri ise kuralları bildiği halde bozsaydı. Sence bu çocuklardan hangisi kuralları bilmediği için bozardı/kuralları bildiği halde bozardı? Neden?”

Experiment 3:

“Sence bu çocuklardan hangisi saklambaç oynamanın kurallarını bilir/bilmez?”

Familiarity-Check Question:

“Sen saklambaç oynamanın kurallarını biliyor musun? Peki ne kadar iyi biliyorsun?

Çok az mı biliyorsun, biraz mı biliyorsun, yoksa çok iyi mi biliyorsun?”

APPENDIX G

DEPENDENT VARIABLES AND FACTORS MANIPULATED IN SOCIAL
NORM STUDIES

Experiment 1

	within SS	between SS
IV	norm types (conventional vs. novel)	
	order of Turkish and Spanish speaking targets	lateral positions of targets
Counterbalancing	order of trial types (conventional and novel)	photo-language pairings for targets
	order of same- gender pairs	gender and the trial type of the first pair of the photos
	The percentages of selections of outgroup members as rule violators	
DV's	The percentages of selections of outgroup members as rule violators for conventional trials	
	The percentages of selections of outgroup members as rule violators for novel trials	

Experiment 2

	within SS	between SS
IV	norm types (conventional vs. novel)	
	order of Turkish and Spanish speaking targets	lateral positions of targets
Counterbalancing	order of trial types (conventional and novel)	photo-language pairings for targets
	order of same- gender pairs	gender and the trial type of the first pair of the photos
	The percentages of selections of outgroup members as ignorant rule violators	
DV's	The percentages of selections of outgroup members as ignorant rule violators for conventional trials	
	The percentages of selections of outgroup members as ignorant rule violators for novel trials	

Experiment 3

	within SS	between SS
IV	norm types (conventional vs. novel)	
	order of Turkish and Spanish speaking targets	lateral positions of targets
Counterbalancing	order of trial types (conventional and novel)	photo-language pairings for targets
	order of same- gender pairs	gender and the trial type of the first pair of the photos
DV's		The percentages of selections of ingroup members as knowledgeable
		The percentages of selections of ingroup members as knowledgeable for conventional trials
		The percentages of selections of ingroup members as knowledgeable for novel trials

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