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Young children expect pretend object identities to be known only by their partners in joint pretence

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Abstract

The present study examined whether three-year-old children (age = 42–48 months, n = 57; 31 boys) understand that object identities stipulated during pretend play could only be known by people witnessing the stipulation. Children participated in pretend scenarios that included some objects and two experimenters. Two pretend episodes corresponded to an object: one connected to its conventional function, the other to a pretend identity made-up on the spot. These episodes happened either in the presence or absence of the other person. In the test phase, this experimenter expressed an intention to do something with an object and asked for a 'missing' prop. The prediction was that in case she was present previously, children would be more likely to select the prop corresponding to a pretence stipulation, compared to when she was absent. The results confirmed this pattern: in the absent condition, 68.42% of the participants chose the prop connected to the conventional use of the object, while 31.58% chose the prop corresponding to its identity stipulated in pretend play. It seems that preschool aged children refrain from generalizing their knowledge about the pretend identity of an object, in case their interactive partner could not know of this identity.

KEYWORDS
conventions, pretence, shared knowledge, social cognition

INTRODUCTION

An important aspect of early childhood socialization is to learn about and participate in the cultural practices of a given society (Behne et al., 2008). This large body of cultural knowledge consists of, among other things, conventional practices, language and normative behaviours applicable in a community. Conventional forms of behaviour are difficult to acquire through individual exploration, thus infants and children often rely on knowledgeable people in their environment to learn about these. Upon learning novel information, however, differing inferences could be drawn that have implications for learning—for example, regarding when, how and to whom to generalize the novel information. Therefore, it is important to appropriately calibrate the scope within which cultural information is relevant. In this current study, the aim was to investigate whether preschoolers refrain from generalizing transiently stipulated pretend identities of objects to ignorant partners.

Challenges of generalizing conventional information

Evidence shows that children rely on different cues to discern whether something could represent generalizable and shared conventional knowledge (for an overview: Diesendruck & Markson, 2011). A number of studies highlight that both infants and preschoolers are biased to interpret information obtained from a communicative context as generalizable (Butler & Markman, 2012; Futó et al., 2010; for a review: Csibra & Shamsudheen, 2015). This also entails that children are biased to assume that pedagogically demonstrated information is available to and shared by others (Egyed et al., 2013; Gergely et al., 2007). Other cues include whether something was done intentionally (e.g., Carpenter et al., 1998), consistently (e.g., Wohlgelernter et al., 2010) or was described by knowledgeable adults with generic language (e.g., Cimpian & Scott, 2012). These findings suggest that, through relying on certain cues in their interactions with other people, children are able to identify which knowledge contents to generalize to other situations or expect to be known by other people.

However, in order to efficiently navigate in human cultures, young children also need to be able to constrain their generalizations. Cultural knowledge—as opposed to naturally available information—is shared among certain people, but not available to others (Diesendruck & Markson, 2011). Thus, it is important to correctly identify to whom a certain piece of information is or is not available. However, there could be a number of reasons why a piece of cultural information is not known by another person. For example, they might lack a piece of cultural knowledge due to not being familiar with a culture itself. Through identifying characteristics that mark the borders of cultural communities, children could make inferences about the knowledge state of their partner regarding cultural information (Diesendruck & Markson, 2011; Oláh et al., 2019).

Relatedly, findings show that children rely on linguistic information to guide their learning (e.g., Kinzler et al., 2011; Oláh et al., 2016). Toddlers selectively imitate the way native speaking adults use novel objects (as opposed to foreign speakers) (Buttelmann et al., 2013). Additionally, the learning processes of children are influenced by whether their partner demonstrates relevant knowledge about conventions (e.g., Koenig & Harris, 2005; Diesendruck et al., 2010). For example, three-year-olds are more likely to copy the behaviour of a person who uses familiar objects conventionally, compared to someone who deviates from social conventions (Oláh & Király, 2019).

It is also possible that while a person is a member of a cultural group, they lack the relevant personal experience about a specific content. In this case, abilities connected to theory of mind understanding may be crucial for forming appropriate expectations about other people's behaviour (Mascaro & Sperber, 2009). This shows that children need to rely on multiple social cognitive functions in order to appropriately reason about which knowledge contents could be available to others (Oláh et al., 2019).

Statement of contributions

What is already known on this subject?

A common attribute of conventional knowledge and pretend stipulations is that both are valid in a context-dependent manner.
- three-year old children are proficient in keeping pretend contexts separately.
- they can separate pretend contexts from each other based on location.
- they can correctly reason about the 'false' mental content of their game partner in pretend contexts.

What the present study adds?

The current study, involving interactive game scenarios with three-year old participants, expands our knowledge with showing that:
- they use information about the ignorance of their partner as a contextual boundary during pretence.
- they can differentiate shared knowledge that emerges based on shared experience from culturally shared information.

Pretend play and conventions

A number of theoretical approaches have highlighted the various ways in which conventional knowledge may be related to pretend play activities in childhood (e.g., Rakoczy, 2007, 2008b; Palacios & Rodríguez, 2015; Walton, 1990). Pretend play refers to solitary or social play activities that include either object substitution, attribution of pretend properties or the inclusion of imaginary objects (Leslie, 1987). Children start to engage in pretend play from around 18 months of age (Weisberg, 2015), although it is also found at earlier ages in free play or experimental situations (Fenson & Ramsay, 1981; Palacios & Rodríguez, 2015). At around the same age, infants recognize and understand simple pretend acts carried out by other people (e.g., Bosco et al., 2006; Onishi et al., 2007). Early pretend scenarios usually involve object-substitutions, and pretending evolves into complex role-play appearing around three and four years of age (Lillard et al., 2011; Weisberg, 2015). Although there are a number of attributes pretend play and conventions have in common, in the following paragraphs, we focus on those aspects which are closely related to the current study.

Earliest pretend acts and conventional knowledge

Although the conceptual foundations of the first pretend acts are debated, early forms of pretending often involve objects that have widely accepted conventional uses in everyday life. These conventional uses are mainly determined and regulated by cultural communities and constitute an important part of cultural knowledge (Costall, 2012; Palacios & Rodríguez, 2015). This may influence, on the one hand, how children use objects in their play and also how their partners interpret their pretend acts. For example, pretend feeding can be understood in reference to the conventional use of a spoon. In this case, the rule about using a spoon could be detached from the object and applied in other contexts—while pretending, one can feed another person even if the spoon is empty or with using a key as a spoon (Palacios & Rodríguez, 2015).

If the earliest pretend acts are indeed rooted in conventional knowledge, pretending with objects should initially be closely related to their conventional use. Later on, the rules of use could be transferred to other objects or even imaginary ones. Based on observational studies involving infants and their caregivers (Palacios & Rodríguez, 2015), the developmental course reflects this pattern: most of the earliest pretend acts performed by 12 month olds are closely connected to the conventional function of objects. Later during development, instances in which objects are used for a function distant from this conventional use also appear. The way in which caregivers communicate in these interactions also changes during development: adults demonstrate the pretend use of objects supported by gestures and other ostensive signals for 9 months old infants. Afterwards, around the age of 12 months, the frequency of these demonstrations decreases and communicative signals often appear in an isolated manner (Palacios et al., 2018).

Context-dependence

Pretend play's structural and operational similarity to conventional and institutional norms has also been highlighted (Rakoczy, 2007, 2008b; Rakoczy & Tomasello, 2007; Wyman, 2014). One common attribute of conventional norms and pretend games is that these are applicable in a context-dependent manner (Rakoczy & Schmidt, 2013). In the case of conventions, a cultural community may designate the context, while pretend stipulations are transiently applicable in a given game scenario. Connectedly, there have been a number of studies in recent years, which investigated how children reason about separating different pretend scenarios. Around the age of three, children appropriately modify their behaviour with the same object according to the current pretend scenario (signified by game location) (Wyman et al., 2009) and keep track of the identity of objects in different games and refrain from including them in another (Weisberg & Bloom, 2009). Additionally, they extend the applicability of pretend stipulations to third parties, and protest in case someone does not use an object corresponding to its current pretend identity (also signified by location) (Rakoczy et al., 2009). In other words, preschoolers can appropriately keep track of the pretend identity of objects tied to different contexts.

Implications of shared creation and acceptance

Another common attribute of conventional norms and pretend games is that they come to existence through shared assignment and acceptance (Rakoczy & Schmidt, 2013). When it comes to conventional norms, this knowledge may stem from shared cultural knowledge, while in pretend games, specific knowledge is required. This accentuates the importance of tracking the knowledge state of game partners, as ignorance about the current stipulation may also designate the boundary of a pretend scenario.

Related to this question, some empirical studies have explored the reasoning of children in pretend situations that are structurally similar to so-called *false belief* tasks—which aimed to measure theory of mind understanding. In this type of experiments, children usually participate in a situation together with another person, in whose absence, some changes occur—for example, in a pretend scenario, a new stipulation is introduced, and children are required to make judgements about the behaviour of the other person upon their return. Three-year-old children follow that in case the pretend content of a glass has been changed in the absence of another person, he then has a false belief about the current one, and they correctly report that he thinks it contains chocolate milk instead of orange juice (Hickling et al., 1997). In another related study, three and four year old children had to report the current state of affairs following a change in pretend stipulations, game rules (which marbles are the 'winners') and their belief about the content of a box (a crayon box containing candles) and were also asked to report the representations of an interactive partner who was ignorant of the changes (and was thus only familiar with an initial scenario) (Kalish et al., 2000). While children responded accurately in all scenarios from

their own point of view, both age groups were better at reporting the ignorant representations of their partner in pretence. Additionally, preschoolers selectively enforce game norms on people who were part of the norm creation process and are, therefore, knowledgeable regarding the current norm (Schmidt et al., 2016). These findings suggest that children follow their partner's knowledge about current pretend stipulations.

Interestingly, in another study (Rakoczy, 2008a), two and three year old children set up pretend scenarios together with an experimenter and were joined by a puppet who was ignorant of the pretend identities of the objects. In some cases, the puppet used the objects according to the stipulations, while in other cases, he mixed up how objects should be used during pretence. Three year olds—and to some extent, two year olds as well—protested the behaviour of the puppet in the latter condition, even though he could not know the pretend identities. This may suggest that they were not able to appropriately track that the puppet had no previous knowledge about the rule or may have overgeneralised its scope of applicability. Importantly, in this experiment, the puppet declared an intention to join the game, which could have led the children to disregard its lack of knowledge. Nonetheless, this result seems to contradict findings, which show that children can keep track if their game partner is ignorant of a novel pretend stipulation (e.g., Hickling et al., 1997).

Aims of the current study

Accordingly, the aim of the current study was to explore whether children can keep track of the pretend identity of objects tied to separate contexts in case the boundary of the context is designated by the knowledge of their game partner. In other words, the goal was to see if they refrain from generalizing the game context to an ignorant partner. This investigation expands evidence, which shows that children are able to constrain their generalizations in case the context is signified by location (Weisberg & Bloom, 2009; Wyman et al., 2009). Additionally, the study can be considered as a conceptual replication of the study of Hickling et al. (1997), while employing an interactive situation similar to the Rakoczy (2008a) experiment. The participants of this current study were aged between 42 and 48 months. This selection of age was based on Hickling et al. (1997), in which a similar age group, three and four year old children were tested. During the experiments, children participated in two consecutive play scenarios with two experimenters. Both of these scenarios involved two play episodes, each including the same object and a corresponding prop (in total, 1 object and 2 props per scenario). One of the experimenters was either present or absent during these scenarios and was thus ignorant or knowledgeable about the latest pretend stipulation. Whether children were sensitive to the knowledge state of their partner was measured by which prop they gave her upon request. This design was partly inspired by studies investigating how infants may disambiguate communicative acts based on previous shared experience with a communicator (e.g., Ganea & Saylor, 2007; Woolley & Phelps, 1994).

The prediction was that in case another person has knowledge of the most recent pretend game, three-year olds would expect her to play with this object according to its pretend identity. On the contrary, in case she was ignorant of this identity, we predicted that children would believe her goal to be manipulating the object according to its conventional use. All predictions, procedural details, statistical tests, sample size and exclusion criteria have been preregistered at asPredicted.org (#29218).

METHODS

The study was carried out with the approval of the Research Ethics Committee of the Faculty of Education and Psychology of Eötvös Loránd University.

Participants

Based on an a priori power analysis, the planned sample size was 60 participants (odds ratio: 2.0, power: 0.8, proportion of discordant pairs: 0.6). The final sample consisted of 57 Hungarian children between the ages of 42 and 48 months (31 boys, mean age = 45.3 months [1379 days], SD = 50.96 days). Children were recruited from the database of the University lab. All participants attended preschool in the urban area of Budapest, came from mixed socioeconomic backgrounds and were monolingual Hungarian speakers. Participants' caregivers gave written informed consent. An additional 13 children were tested but were excluded because of fussiness or shyness ($n = 5$), experimenter error ($n = 4$) or lack of clear object choice in one or both trials ($n = 4$). These criteria had been previously set in the preregistration of the study. Testing sessions were conducted at the ELTE Babylab.

Materials

Testing materials included a small red ball, a pencil, a key, a pencil sharpener, a matchbox, a lock and a small cup (see Figure 1 for all objects included in the experiments). The objects were all compatible in size and were chosen for being familiar objects to preschool aged Hungarian children. During the experiments, participants were seated at a small table. Test sessions were videotaped for coding purposes.

Procedure

The study had a within subject design. All children participated in both conditions and were tested individually with two female experimenters. The order of conditions, the target object type and the locations of the props at the test phase were counterbalanced between and within participants. The
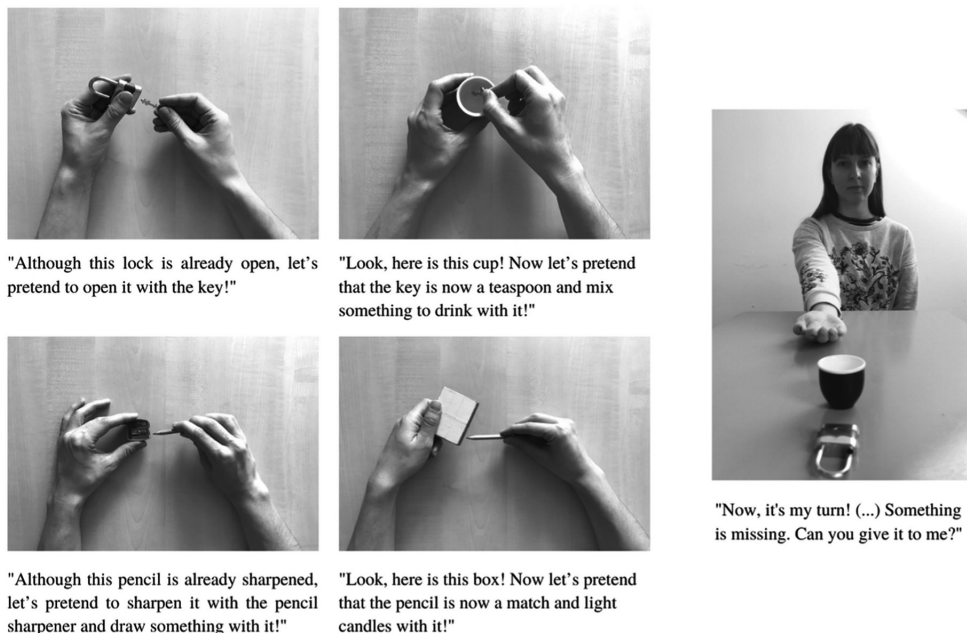

"Although this lock is already open, let's pretend to open it with the key!"

"Look, here is this cup! Now let's pretend that the key is now a teaspoon and mix something to drink with it!"

"Although this pencil is already sharpened, let's pretend to sharpen it with the pencil sharpener and draw something with it!"

"Look, here is this box! Now let's pretend that the pencil is now a match and light candles with it!"

"Now, it's my turn! (...) Something is missing. Can you give it to me?"

FIGURE 1 Experimental procedure: The images depict the target objects and the props used in the game scenarios. The image on the right illustrates the test phase, as E2 is making the request

independent measure was whether a second experimenter was present or absent during the pretend play episodes. The dependent measures were object choice type and decision latency.

Experimental sessions started with a warm-up phase during which the child and the two experimenters sat at the table and played with a plastic ball for approximately 30–60 seconds. Following this, the first experimenter (E1) presented a box and declared that they were going to play with the objects in the box. The box contained six objects: a pencil, a pencil sharpener, a matchbox, a key, a lock and a small cup. At this point, the second experimenter (E2) either left the room—after declaring that her phone has started to ring and she needed to leave the room for a while (*E2 Absent condition*)—or remained in the room, but moved the chair farther from the table ('*I will now sit and pay attention from here*') (*E2 Present condition*). After this, E1 opened the box and took out the first target object (either the pencil or the key) and a prop connected to its conventional use (in the case of the pencil, it was the pencil sharpener) (see Figure 1). The rationale for including a phase in which the object is used according to its conventional function in a pretend manner was to ensure that neither one of the props was more novel or produced a tangible outcome, which could contribute to its being more salient in the test phase. E1 initiated a pretence game ('*Although this pencil is already sharpened, let's pretend to sharpen it with the pencil sharpener and draw something with it!*') and started to play with the objects according to the proposed rule. She encouraged the child to play with the objects while taking turns. After approximately 30 to 40 seconds of playing, E1 put the prop away. At this point, she proposed a second game with another prop, which appeared to be made up on the spot ('*Look, here is this box! Now let's pretend that the pencil is now a match and light candles with it!*'). In both conditions, the second pretend game was designed to include object substitution, in which the object is used in a manner distant from its conventional use (for a classification, see: Palacios & Rodríguez, 2015). Similarly to the first episode, she started to play with the objects according to this new pretence stipulation and encouraged the child to play with the objects as well. Again, after approximately 30 to 40 seconds of playing, E1 put the target object at the opposite side of the table—close to where E2 was sitting previously—while placing the two props in front of the child in a row.

At this point, E2 returned to the table—either coming back from outside or moving the chair back to the table from farther away, and E1 turned away from it. E2 declared that now it was her turn and picked up the target object while observing it for approximately 1–2 seconds. However, she concluded that something was missing and made an ambiguous request to the child ('*Something is missing. Can you give it to me?*'). The trial ended either when the child put an object in or close to her palm or in case they did not make a choice upon repeated requests. In case the child hesitated to give an object or asked questions, E2 neutrally encouraged them to make a choice ('*Can you give it to me? Can you give me the one that is missing?*'). After a short play episode with the plastic ball from the warm-up phase, the same structure was repeated with the other condition and the other target object. Children usually completed the experiment in around 6.5 min.

Coding

All sessions were videotaped and coded by an experimenter. A second independent observer coded a random sample of 50% of all sessions for reliability. Reliability was very good (Cohen's weighted $\kappa = .92$). Therefore, the coding of the experimenter was used as the basis for the data analysis.

In both trials, the dependent measures were object type choice and decision latency. Latency was measured as it could reflect the complexity of a decision, thus we could explore whether children found either of the ambiguous requests more difficult to interpret. During the experimental procedure, children were asked to choose from two objects, in the two consecutive trials. The dependent variable in this case was the type of object they chose. This was coded as the type of prop—corresponding to either the conventional function or the pretend identity of the target object—they decided to give to E2 (either by placing it in her palm or moving it close to her hand). Their decision time was measured as

the number of seconds between the experimenter asking for an object and the child placing an object close to or in her palm.

RESULTS

Statistical analyses were performed with the SPSS 21 software. We used Generalized Linear Mixed Models (GLMM) with binary regression to test for the difference in object choice in the two conditions. We used this method for analyses since the study had a within subject design, the main dependent variable was binary, and we also planned to explore the potential effects of additional variables on the dependent variables. The following variables were included in the initial model, but were later removed as their effect was not significant: gender, age group (younger: 42–45 months, older: 45–48 months), condition order, object pair type, position of choice and mask. This later variable was included in the analysis as, due to safety regulations in our country connected to the Covid-19 pandemic, starting from the summer of 2020, the data collection was conducted with the two experimenters wearing masks in the experimental situation. 'Participant' was added as a factor and 'Condition' as the repeated measure. Only condition as a fixed effect was included in the final model.

Condition had a significant main effect on object choice with a higher proportion of participants choosing the prop connected to the made-up, pretend identity in the E2 Present condition (56.14%) compared to the E2 Absent condition (31.58%) (F [1, 112] = 6.706; p = .011) (see Figure 2). The same effect of condition was present with the comparison of proportions (occurrence of the two prop type choices in the two conditions) using McNemar's test (χ^2[1] = 6.036; p = .014). This further confirms that there is a significant difference in the proportion of object choices in the two conditions. For an overview of the frequency of the prop choices in the two conditions, see Table 1 below.

In addition to the analyses we preregistered we have also conducted binomial tests in the two conditions separately, to explore whether the object choices of children differ from chance level (0.5). This yielded a significant difference only in the E2 Absent condition (p = .008). In the E2 Present condition, the choices did not differ from chance (p = .427).
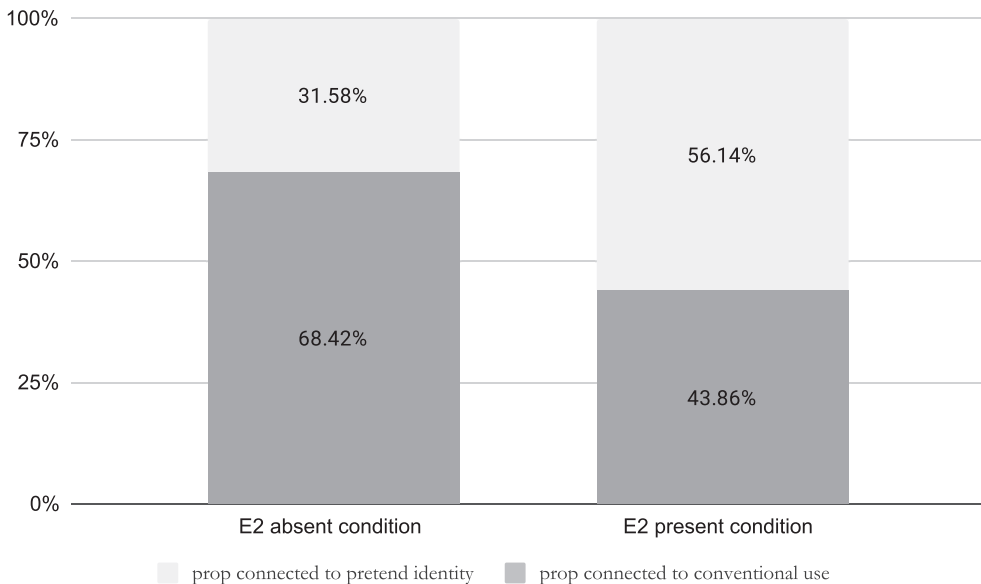

FIGURE 2 Proportions of prop type choices in the two conditions

TABLE 1 Frequency of prop type choices in the two conditions additionally grouped by target object type (key or pencil)

	E2 present		E2 absent	
	Object choice			
	Conventional use	Pretend identity	Conventional use	Pretend identity
Target object				
Key	19	8	14	16
Pencil	20	10	11	16

We have also conducted a GLMM analysis with decision latency as a dependent variable, with gender, age group, condition order, object pair type (pencil/key as target object), mask and condition as fixed effects. These effects were not significant. It appears, therefore, that none of these factors had an influence on the amount of time children spent selecting the prop upon request. In the preregistration, we also added the level of engagement in the pretence scenarios as a potential variable to explore in our analyses. However, after collecting our data, it was revealed that we were not able to code the behaviour of children in a meaningful way.

CONCLUSIONS

Through involving preschoolers in a number of pretend play episodes, we investigated if three year old children take into account whether someone has knowledge about the pretend identity of an object while reasoning about their behaviour. We found that the knowledge state of the person making an ambiguous request had an influence on the way children interpreted this request. In case she was not familiar with the recently played, novel game, the majority of children (68.42%) selected the prop connected to the conventional use of the object—which differed from the object's made-up pretend identity, but could be known by her regardless of being previously present or not. In contrast, the pattern of results was the opposite in the other condition. When she had observed the play episodes, a bigger proportion of participants (56.14%) handed over the prop connected to the game made-up on the spot. We found no difference in decision latency between the two conditions, which could suggest that children did not find either of the requests more difficult to interpret. This pattern of results suggests that at this age, children can separate pretend contexts based on the knowledge of their game partner.

As it has been previously emphasized, in order to successfully interact with their social partners, children need to be able to make appropriate judgements regarding their shared knowledge. This encompasses generalizing their own knowledge to others, but also constraining these generalizations when necessary. Stipulations in pretend games are created by shared assignment and acceptance and are transient as well as context-dependent. Thus, it is crucial to keep in mind, which people took part in a pretend episode, as this indicates who has knowledge regarding the current stipulations, and therefore, to whom it is applicable. Relatedly, our findings give further support that children can respond appropriately in a false belief-like pretend play situation at a younger age compared to passing typical false belief tasks (Gopnik & Slaughter, 1991; Hickling et al., 1997; Kalish et al., 2000) and can restrain their generalizations when another person lacks the relevant knowledge regarding a pretence stipulation.

While this experiment had a similar structure to the Rakoczy (2008a) study, the data do not shed light on the exact reason why children protested the behaviour of the puppet who was not familiar with the previously introduced pretend stipulations. However, both this current investigation and the study of Hickling et al. (1997)—in which children accurately reported that their partner would still believe a past pretend stipulation to be the state of affairs in case he had been absent during a change in the pretend scenario—suggest that this protest is not due to lack of appropriate

knowledge tracking regarding the pretend stipulations. It is possible that the puppet's declaration to join the game was the main reason for protesting. In our study, we intentionally worded the request ambiguously ('*Now, it's my turn*!') so that it can be interpreted as having a turn in the game. This did not lead children to choose the prop connected to the recent game, therefore, it can be assumed that a declaration to join may not automatically prompt children to disregard the other person's lack of knowledge. Additionally, protest behaviour may also be motivated by a desire to teach a rule to the other person—which children may be especially motivated to do in case it is not known by their partner.

The current study has a number of limitations. In the *E2 present* condition, while the pattern of choice shows the predicted tendency (with 57% of participants selecting the prop from the made-up game and 43% of them selecting the other one), this pattern does not differ from chance. There may be a number of reasons for this lack of difference: in this condition, both games—each of which involves a different prop—are observed by the requester. Therefore, in a sense, both of these props could be 'appropriate' to give upon request. This may be further strengthened by the strong connection between the object and the prop connected to its conventional function known by preschoolers. All in all, based on the pattern of choices, no firm conclusions could be drawn regarding the reasoning of children in this condition. Still, the direction of the results suggests that they are more likely to infer that the requester is referring to the prop connected to the pretend identity.

While conventions and pretend stipulations share a number of attributes, one important difference is that norms created in pretence are transient, and therefore, should not be generalized to people who were not part of a pretend episode. Conventions are also context-dependent—thus should not be generalized universally—, but are stable and could be known by members of a community, without specific experience. Connected to this, it would be interesting to explore how children would behave in case the second function connected to the object was not introduced as a pretend game, but as another convention. In this scenario, in case their interactive partner is a member of their cultural group, children might reason that she may have knowledge about this function and thus be requesting the prop presented in their absence. In a somewhat similar scenario, it has been demonstrated that three and five-year-old children could discern what is novel to their partner based on attributed cultural knowledge (Liebal et al., 2013). In other words, the children might believe that while this information is only new to them, it could be known by another adult—regardless of being involved in the specific episode they themselves have learnt this novel fact. Relatedly, a further question to examine is how children would behave in case their partner was not part of their cultural group.

A recent review has explored the way in which pretend play may contribute to the development of a number of abilities (Lillard et al., 2013). Relatedly, some of these abilities would be interesting to explore in connection with the current task. As children need to switch strategies in their object choices based on the knowledge of their partner, abilities that constitute executive functions could play an important part in how children behave in this task. Additionally, both this current study and other ones exploring children's reasoning about pretence may benefit from more flexible experimental designs in which children are actively involved in the setting up of the pretend scenario or are playing together with a peer. These episodes may reflect a more natural scenario, resembling the everyday context of pretending, and thus allowing a better understanding on how socio-cognitive skills, like theory of mind and language development may alter pretence skills.

This current finding substantiates previous findings that preschoolers are indeed proficient in navigating contextual boundaries. This is important, on the one hand, as children are members of multiple, wider or smaller communities and institutions—such as their family or their kindergarten. Customs and rules may vary in these communities, therefore, children often need to adjust their behaviour while changing between these contexts. On the other hand, as many societies are becoming more multicultural, children may more frequently encounter individuals whose cultural background differs from their own. In order to successfully interact with people with different cultural knowledge, children need to identify which knowledge contents to generalize to their partner and which may be novel to them. Engagement in pretend play may highlight the importance of contextual boundaries.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

AUTHOR CONTRIBUTIONS

Ildikó Király (Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Supervision; Writing – original draft; Writing – review & editing) **Réka Schvajda** (Data curation; Methodology; Project administration; Writing – review & editing) **Krisztina Andrási** (Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Writing – original draft).

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in OSF at http://doi.org/10.17605/OSF.IO/YAUNG.

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