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It's How You Teach, Not What You Teach: Preschoolers Prefer Coordinative Instruction from Informants

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Abstract

When children make decisions about whom to trust or learn from, they consider not only the informant's reliability but also the social bond. Previous research often assigned a social label to informants without investigating how the interactive dynamics between informants and children influence learning and trust. This study investigates 3- to 6-year-old children's preference towards informants who deliver instructions with or without coordination. In two experiments, children evaluated coordinative and non-coordinative informants on game-playing capability, willingness to engage with or learn from the informants, and selective trust in unrelated tasks. Children consistently preferred coordinative informants, perceiving them as more capable and trustworthy, over informants who demonstrated the information without coordinative turn-taking. This preference persisted across age groups, challenging previous notions about children's preference for information completeness. The findings highlight the prosocial effects of coordination, extending its influence beyond peer relationships to significantly impact selective trust when learning from knowledgeable individuals.

Keywords: coordination, selective trust, social learning, selective learning

Introduction

Apart from observation and first-hand experience, young children acquire a vast amount of knowledge about the world through testimony from others (e.g., Harris et al., 2018). Rather than passively accepting information, they engage in active assessment of the reliability of the informants and the credibility of the given testimony. One way of achieving this is by relying on epistemic cues to evaluate the knowledge state of the informants. Previous studies have demonstrated that children prefer informants whose testimony has been proven accurate (e.g., Corriveau & Harris, 2009a; Koenig et al., 2004; Koenig & Harris, 2005) or those who provide noncircular explanations (Corriveau & Kurkul, 2014; Mercier et al., 2014). Furthermore, young children are capable of monitoring the ongoing accuracy of an informant and updating their epistemic trust accordingly (Ronfard & Lane, 2018).

Besides epistemic accuracy, social information also serves as a vital cue for young children in evaluating the credibility of informants (Harris et al., 2018). One major cue is the social relationship between children and the informant. Young children prefer seeking or endorsing information from familiar informants to unfamiliar ones (e.g., Corriveau & Harris, 2009b). Additionally, they are more inclined to choose in-group informants, distinguishable by factors such as language (Corriveau et al., 2013), minimal group division (Elashi & Mills, 2014), age, and gender (Shutts et al., 2010). The social characteristics of informants also affect children's social learning. Children tend to seek information from individuals described as nice, smart, or prosocial (Landrum et al., 2013; Mascaro & Sperber, 2009). Of particular interest is the study by Landrum et al. (2013), where preschoolers endorsed claims made by the "nice" informant who lacked expertise, highlighting the powerful influence of social information on how children evaluate informants and the credibility of their testimony.

However, previous studies primarily focused on the effect of direct social labels (e.g., trait labels, Lane et al., 2013; color labels for in-group and out-group, Elashi & Mills, 2014) or abstract descriptions (e.g., descriptions of traits, Lane et al., 2013) of the informants, which may not always be readily available in children's social learning process. Instead, social relationship is often shaped by interactive experiences. When participating in social learning, children encounter a wealth of social and interpersonal information (Harris, 2007; Hoppitt & Laland, 2013) conveyed through elements such as voice and tone, accents (e.g., Corriveau et al., 2013), speech contexts (Li & Koenig, 2020), body movements, and facial expressions (Duncan, 1969). Based on these social cues, even from brief interactions, children form evaluations of the informants, which influences their decisions regarding learning and trust (e.g., Clément et al., 2013).

One important form of social interaction is interpersonal coordination, which occurs widely in both adults and children (e.g., Ashley & Tomasello, 1998; Marsh et al., 2009). To accomplish joint actions, such as moving a table together or throwing a ball, individuals need to coordinate their actions

in both space and time (Vesper et al., 2016). Such coordination is known to yield significant positive social effects. For instance, rhythmic coordination enhances perceived similarity and feelings of closeness (Rabinowitch & Knafo-Noam, 2015), and facilitates prosocial behaviors in children and adults (Cirelli et al., 2014; Kirschner & Tomasello, 2010; Rabinowitch & Meltzoff, 2017; Wan & Zhu, 2021; Wiltermuth & Heath, 2009). Similarly, coordinative problem-solving improves cooperativeness and generosity in children (Wan et al., 2019). In particular, the degree of coordination plays a vital role in moderating the prosocial effects (Wan et al., 2019; Wan & Zhu, 2021). Compared to collaborative activities that focus on only the shared end goal, fine-grained coordination better promotes children's prosocial behaviors. These results indicate that a brief coordinative experience could profoundly affect children's subsequent social decisions, which motivated us to examine how coordination between the informant and the receiver during the learning process could affect social preferences.

On the one hand, given the prosocial effects of coordination, it is plausible that presenting information in a coordinative manner is preferable to children than demonstrating information without coordination. On the other hand, coordinative information delivery involves breaking the instruction into fragmented pieces and collaboratively walking through the process with the children, which may negatively affect the child's learning experience or lead the child to underestimate the informant's ability to independently complete the task. Research indicates that children expect a comprehensive presentation of information by the informant, and they form evaluations based on the completeness of the information provided (Gweon & Asaba, 2018). For example, when compared to the informant who had demonstrated all four functions of a toy, 6- to 7-year-olds regarded the informant who had not demonstrated all functions as less credible (Gweon et al., 2014). Considering this, children may distrust the coordinative informant because the informant does not present the task completely and independently. Given these considerations, it is important to examine how the delivery of information influences children's selective learning, particularly whether they prefer a coordinated, back-and-forth approach over a comprehensive demonstration.

Current Study

In this study, we investigated whether 3- to 6-year-old children would prefer trusting an informant who provides instructions in a coordinated manner or an informant who demonstrates the same instructions without coordination. As children enter kindergarten, they start socializing with their teachers and peers (e.g., Bruja, 2020), and through such interactions, they learn knowledge and build trust. Understanding how children this age evaluate the trustworthiness of individuals who interact with them in the context of social learning not only aids in comprehending

how coordination influences selective trust but also holds potential implications for kindergarten curriculum design.

Two informants taught the child how to successfully play a problem-solving game. One informant guided the child through the process, collaboratively taking turns to solve the problem until the goal was achieved, while the other demonstrated the process independently to the child. Subsequently, we assessed the children's evaluations of the informants' gaming ability, their willingness to play with and learn from the informants in the present game, and their selective trust in the informants' testimony for an unrelated task. We also examined children's perceptions of the informants' intelligence and friendliness. Our goal was to determine whether children would infer intelligence and amiability based on the informants' instructional style, similar to how they infer these traits based on accuracy, as shown by Ronfard and Lana (2018).

Experiment 1 compared 3- to 6-year-old children's preferences between an informant who demonstrated how to solve the problem independently and an informant who provided the same instruction while taking turns with the child to solve the problem coordinatively. Experiment 2 further controlled the child's hands-on experience during the learning process and compared their preferences between a coordinative informant as in Experiment 1 and an informant who first demonstrated how to solve the problem and then provided verbal instructions while the child independently walked through the process. We predicted that children would prefer the coordinative informant to the demonstrative one in both experiments based on past research that demonstrated the positive social effects of coordination. We also expected to see change with age, as research shows that compared to 3-year-olds, 4- to 6-year-olds were more likely to make selective learning decisions based on epistemic cues rather than social characteristics (Tong et al., 2019). We thus predicted that children's preference for a coordinative informant would decline with increasing age as children epistemically recognize that both informants essentially provided the same correct information but in different ways.

Experiment 1

Method

Participants We conducted an a priori power analysis using the linear multiple regression procedure in G*Power 3.1 (Faul et al., 2009) to determine the sample size. The results suggested that 76 participants were needed to achieve 85% power to detect a medium effect size ($f^2 = .15$) with an α of .05. Ninety-three children ($M_{\text{age}} = 61.38$ months, $SD = 10.11$ months, range = 42.02 – 77.13 months, 45 girls) were recruited from a kindergarten in Fujian province, China. Informed consent was obtained from the children's parents. The procedure was approved by the ethics committee of the authors' institution. Children received cartoon erasers as gifts for participation.

Materials We designed a task based on the “Parking Jam Escape” game, also known as the ‘Rush Hour’ game (Yoshigahara, 1970s), in which the player needs to move the cars in the parking lot to make the red car “escape” the jam and exit through the gate on the side (Figure 1). The cars could only be moved vertically to the direction they were heading but not horizontally.

Two hand puppets were presented as informants. They were identical in appearance except for the patterns on their chests. One puppet wore a square pattern on the chest and was introduced as “Fang Lao Shi (meaning Teacher Square)”, and the other wore a round pattern and was introduced as “Yuan Lao Shi (meaning Teacher Circle)”.

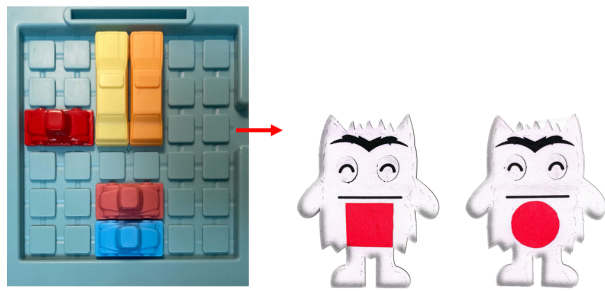


Figure 1: The “Parking Jam Escape” game and the two informants (Teacher Square and Teacher Circle).

Procedure The procedure comprised five phases: warm-up, instruction, game test, selective trust test, and trait test. In the *warm-up*, the experimenter introduced the “Parking Jam Escape” game and explained its rules and objectives without letting children touch the cars.

In the *instruction* phase, the experimenter presented two hand puppets that separately *instructed* the child how to play the game. The puppet in the *coordinative* condition provided step-by-step verbal instructions (e.g., “I move the blue car two steps to the left. Then you move the pink car two steps to the left.”), and the puppet and the child took turns moving the cars according to the instructions until the red car successfully exited the parking lot. The puppet in the *non-coordinative* condition also provided step-by-step instructions (e.g., “I move the blue car two steps to the left. Then I move the pink car two steps to the left.”), but all the actions of moving cars were executed by the puppet. Each puppet played three rounds, with each round featuring different placements of cars and requiring four steps of car movement. After both puppets finished, the experimenter asked the child which teacher moved the cars with them to make sure they understood and remembered the difference between the two informants. The order of two puppet informants was counterbalanced across participants.

In the *game test* phase, the experimenter asked three types of questions to gauge the child's evaluation of the two puppet informants. Firstly, the *capability* question was asked, where the experimenter presented a new parking jam problem and asked the child which teacher they think can make the red car exit the parking lot. Following this, the *playing* question

assessed children's preference to play the game with one of the informants. To further examine children’s preference for learning information (instead of simply playing the game for pleasure), we asked the *teaching* question to assess children's preference for which teacher they preferred to learn from. The participants could respond orally or by pointing to the puppet. Each question was asked three times, each with different car setups in the parking lot. Capacity question was always asked first to prevent children from mistakenly thinking that the question measures their ability to complete tasks with the teacher as opposed to the teacher’s capabilities. The order of the two informants and the order of the playing question and the teaching question were counterbalanced across trials.

To test whether children’s evaluation of the informants can be generalized to other tasks, we then utilized a *selective trust* test to assess how children would choose between two informants providing equally convincing testimonies (e.g., Corriveau & Harris, 2009b). For this test, children were presented with four pseudo-characters, each associated with two different pronunciations (Yang et al., 2020). In a pre-test with adults, no preference was observed for the two pronunciations of each pseudo-character ($N = 30, p_s > .1$). In the *asking* question, the child was asked which teacher would they choose to teach them the pronunciation of the characters. Afterward, the two informants each provided a different pronunciation for the character. The child was then asked in the *endorsement* question which teacher gave the correct pronunciation. Both tests contained four trials.

Lastly, to examine children’s evaluation of the informants’ traits based on their ways of testimonial transmission, we utilized a *trait* test. Children were asked to rate the smartness and niceness of the informants, responding on a scale from -2 to 2.

Results

Evaluations and Selective Trust To identify children’s evaluation and selective trust of two informants, we conducted non-parametric analyses to compare the differences between children’s choices of the coordinative informant and chance levels. Results showed that in all three questions in the game test, children’s choices of coordinative informants were significantly higher than chance levels (capability: $\chi^2 = 104.88, df = 3, p < .001$; playing: $\chi^2 = 136.36, df = 3, p < .001$; teaching: $\chi^2 = 98.17, df = 3, p < .001$). In the selective trust test, children’s choices of the coordinative informant were also significantly higher than chance levels (asking: $\chi^2 = 45.78, df = 4, p < .001$; endorsement: $\chi^2 = 56.46, df = 4, p < .001$). These results showed that children were more likely to choose the coordinative informant in all questions in the game test and the selective trust test.

To compare children’s evaluation and selective trust at different ages, we fit generalized logistic mixed models, using age as the predictor. In the *capability* question, the best fit model included age as a continuous variable, with the trial number (1, 2, or 3) and children’s ID as random effects ($\Delta AIC = -21.83, \chi^2 = 23.83, df = 1, p < .001$). The main effect of age was significant ($\beta = -0.095, OR = 0.38, Z = -4.389, p < .001$,

95%CI = -0.14 to -0.57). In the *teaching* question, the best fit model included the main effect of age, with trial number (1, 2, or 3) as the random effect ($\Delta AIC = -6.41$, $\chi^2 = 8.42$, $df = 1$, $p = .004$). The main effect of age was significant ($\beta = -0.430$, $OR = 0.65$, $Z = -2.837$, $p = .005$, 95%CI = -0.74 to -0.14). In the *asking* question, the best fit model included the main effect of age, with trial number (1, 2, or 3) as the random effect ($\Delta AIC = -2.68$, $\chi^2 = 4.68$, $df = 1$, $p = .031$). The main effect of age was significant ($\beta = -0.241$, $OR = 0.79$, $Z = -2.148$, $p = .032$, 95%CI = -0.46 to -0.022). There were no other model that provided a significantly better fit to the data compared to the null model. The proportions of children choosing the coordinative informant are shown in Figure 2. These results showed that compared to older children, younger children were more likely to choose the coordinative informant in capability, teaching and asking questions.

We divided children into three age groups based on the grade they are in (3- to 4-years, 42~54 months; 4- to 5-years, 54~66 months; 5- to 6-years, 66~78 months) to further examine children's preferences on choosing informants.

Among children aged 3 to 4 years, children's choices of the coordinative informant were significantly higher than chance levels in all tests (capability: $\chi^2 = 91.24$, $df = 3$, $p < .001$; playing: $\chi^2 = 56.76$, $df = 3$, $p < .001$; teaching: $\chi^2 = 58.18$, $df = 3$, $p < .001$; asking: $\chi^2 = 24.49$, $df = 4$, $p < .001$; endorsement: $\chi^2 = 22.22$, $df = 4$, $p < .001$). Among children aged 4 to 5 years, children's choices of the coordinative informant were significantly higher than chance levels in all tests (capability: $\chi^2 = 64.22$, $df = 3$, $p < .001$; playing: $\chi^2 = 26.89$, $df = 3$, $p < .001$; teaching: $\chi^2 = 42.36$, $df = 3$, $p < .001$; asking: $\chi^2 = 22.49$, $df = 4$, $p < .001$; endorsement: $\chi^2 = 20.22$, $df = 4$, $p < .001$). Among children aged 5 to 6 years, children's choices of the coordinative informant were significantly higher than chance levels in all tests except the capability question (capability: $\chi^2 = 0.859$, $df = 3$, $p = .835$; playing: $\chi^2 = 57.75$, $df = 3$, $p < .001$; teaching: $\chi^2 = 11.53$, $df = 3$, $p = .009$; asking: $\chi^2 = 14.96$, $df = 4$, $p = .005$; endorsement: $\chi^2 = 17.18$, $df = 4$, $p = .002$). These results indicated that older children were less likely than younger children to infer the informants' capabilities based on coordination.

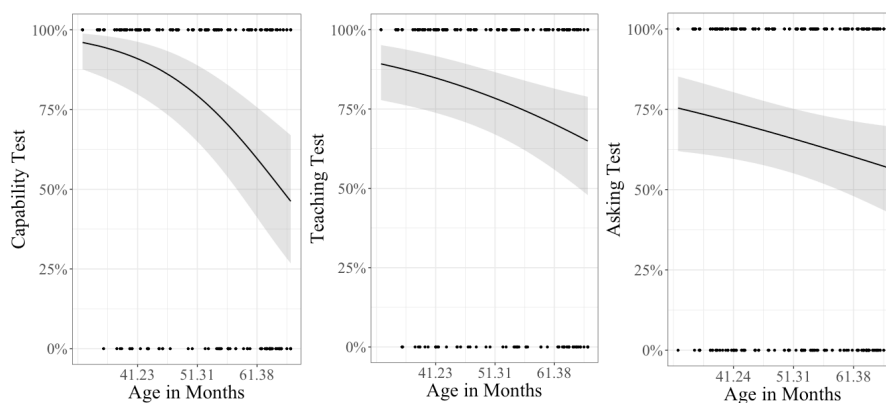


Figure 2: Proportions of choosing the coordinative informant in capability, teaching, and asking questions.

Trait Ratings We conducted liner regression models to compare children's smartness and niceness ratings of two informants with age and informant type as predictors. Results showed that in the smartness question ($\Delta RSS = -39.51$, $F = 13.94$, $df = 3$, $p < .001$), rating for the coordinative informant was significantly higher than that for the non-coordinative one, $\beta = -0.88$, $t(182) = -6.186$, $p < .001$, 95%CI = -1.16 to -0.60. The interaction of informant type and age was of marginal significance, $\beta = 0.25$, $t(182) = 1.746$, $p = .083$, 95%CI = -0.032 to 0.532. Further simple effects analysis showed that there were significant effects of age on the ratings of the coordinative informant ($p < .001$, 95%CI = 1.52 to 1.92) and the non-coordinative informant ($p < .001$, 95%CI = 0.64 to 1.04), with the rating for the coordinative informant decreasing with age, and the rating for the non-coordinative informant increasing with age. In the niceness question ($\Delta RSS = -30.53$, $F = 11.12$, $df = 3$, $p < .001$), children also rated the coordinative informant significantly higher than the non-coordinative one, $\beta = -0.78$, $t(182) = -5.595$, $p < .001$, 95%CI = -1.06 to -0.51. The interaction of informant type and

age was not significant. These results showed that children gave the coordinative informant higher ratings both in smartness and niceness.

Experiment 2

In Experiment 1, we found that children preferred the informant who provided the instruction with coordination over the informant who demonstrated the process independently. However, it was unclear whether the preference for coordinative informant arose from the coordinative experience or solely from having the opportunity to execute moves in the learning process. Children may prefer the coordinative informant, not because of the coordination itself, but because they got to play the game with the coordinative informant. It was thus important to control children's hands-on experience in the instruction phase with an additional experiment. In Experiment 2, we compared coordinative demonstration with *teach-and-repeat* instruction, a common form of information delivery in which

the informant demonstrates the procedure and guides the child to repeat the procedure. Similar to Experiment 1, we hypothesized that children would prefer the coordinative informant over the teach-and-repeat informant in the capability, playing, teaching, asking, and endorsement tests, and the preference would decline with age. We also predicted that children would rate the coordinative informant as smarter and nicer.

Method

Participants Nighty children ($M_{age} = 61.25$ months, $SD = 10.83$ months, range = 42.60–78.25 months, 45 girls) were recruited from the same kindergarten as Experiment 1.

Materials and Procedure The materials and procedures were similar to Experiment 1, except for the condition set-up. To clarify the division of labor between the informant and the child, the parking lot had cars in only two colors, besides the red car. In the *coordinative* condition, the participant and the puppet teacher were each responsible for moving cars of one color. As the puppet provided instruction, the puppet and the child took turns moving the corresponding cars until the red car exited. This process was repeated twice in one trial. In the *teach & repeat* condition, the puppet provided verbal instructions while moving the corresponding cars to let the red car out. Then, the puppet gave verbal instructions as the child moved the cars to let out the red car. The *instruction* phase contained two trials for each informant. The tests were the same as those in Experiment 1.

Results

Evaluations and Selective Trust To identify children's evaluation and selective trust of two informants, we conducted non-parametric analyses to compare the differences between children's choices of the coordinative informant and chance levels. Results showed that in all three questions in the game test, children's choices of the coordinative informant were significantly higher than chance levels (capability: $\chi^2 = 65.85$, $df = 3$, $p < .001$; playing: $\chi^2 = 107.93$, $df = 3$, $p < .001$; teaching: $\chi^2 = 70.95$, $df = 3$, $p < .001$). In the selective trust test, children's choices of the coordinative informant were also significantly higher than chance levels (asking: $\chi^2 = 38.04$, $df = 4$, $p < .001$; endorsement: $\chi^2 = 74.96$, $df = 4$, $p < .001$). These results showed that children were more likely to choose the coordinative informant in both the game test and the selective trust test.

To compare children's evaluation and selective trust at different ages, we fit generalized logistic mixed models for different questions, using age as a predictor. In the *playing* question, the best fit model included the main effect of age, with children's ID as the random effect ($\Delta AIC = -2.98$, $\chi^2 = 4.98$, $df = 1$, $p = .025$). There was a significant main effect of age ($\beta = -0.479$, $OR = 0.62$, $Z = -2.168$, $p = .030$, $95\%CI = -0.958$ to -0.059). There was no other model that provided a significantly better fit to the data compared to the null model.

The proportions of children choosing the coordinative informant are shown in Figure 3.

We then divided children into three age groups (3- to 4-years, 42~54 months; 4- to 5-years, 54~66 months; 5- to 6-years, 66~78 months). Among children aged 3 to 4 years, children's choices of coordinative informants were significantly higher than chance levels in all tests (capability: $\chi^2 = 32.04$, $df = 3$, $p < .001$; playing: $\chi^2 = 53.91$, $df = 3$, $p < .001$; teaching: $\chi^2 = 28.31$, $df = 3$, $p < .001$; asking: $\chi^2 = 13.16$, $df = 4$, $p = .011$; endorsement: $\chi^2 = 41.47$, $df = 4$, $p < .001$). Among children aged 4 to 5 years, children's choices of the coordinative informant were significantly higher than chance levels (capability: $\chi^2 = 12.31$, $df = 3$, $p = .006$; playing: $\chi^2 = 41.82$, $df = 3$, $p < .001$; teaching: $\chi^2 = 26.18$, $df = 3$, $p < .001$; asking: $\chi^2 = 9.87$, $df = 4$, $p = .043$; endorsement: $\chi^2 = 35.47$, $df = 4$, $p < .001$). Among children aged 5 to 6 years, children's choices of the coordinative informant were significantly higher than chance levels in all tests except the endorsement question (capability: $\chi^2 = 28.84$, $df = 3$, $p < .001$; playing: $\chi^2 = 22.98$, $df = 3$, $p < .001$; teaching: $\chi^2 = 18.89$, $df = 3$, $p < .001$; asking: $\chi^2 = 17.69$, $df = 4$, $p = .001$; endorsement: $\chi^2 = 8.22$, $df = 4$, $p = .084$). These results indicated that older children were less likely to be biased by the coordinative experience when evaluating which informant provided the correct answer in unrelated tasks than younger children.

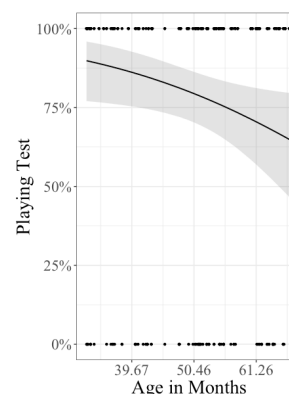


Figure 3: Proportions of choosing coordinative informants in the playing question.

Trait Ratings We conducted liner regression models to compare children's smartness and niceness ratings of two informants, with age and informant type as predictors. Results showed that in the smartness question ($\Delta RSS = -12.33$, $F = 4.72$, $df = 3$, $p = .003$), children rated the coordinative informant significantly higher than the teach-and-repeat one, $\beta = -0.50$, $t(176) = -3.594$, $p < .001$, $95\%CI = -0.77$ to -0.23 . In the niceness question ($\Delta RSS = -18.12$, $F = 9.14$, $df = 3$, $p < .001$), children also rated the coordinative informant significantly higher than the teach-and-repeat one, $\beta = -0.63$, $t(176) = -5.228$, $p < .001$, $95\%CI = -0.87$ to -0.39 . No interactions of informant type and age were found in both ratings. These results show that children gave the

coordinative informant higher ratings both in smartness and niceness ratings.

General Discussion

The present study demonstrates that 3- to 6-year-old children prefer informants who deliver information in a coordinative manner over informants who provide instruction without coordination. In Experiment 1, children preferred the informant who provided instruction while walking through the process coordinatively with the child to the informant who demonstrated the process of problem-solving without coordination. Experiment 2 controlled children's degree of hands-on experience, and the results showed that children still preferred the coordinative informant over the informant who demonstrated the process and then guided the child to repeat it on their own. In both experiments, children were more likely to select the coordinative informant as more capable of playing the game, and they were more willing to play this game and learn how to play similar games with the coordinative informant. Children also were more likely to choose to learn from the coordinative informant in the subsequent word pronunciation task, and they were more likely to believe that the pronunciations provided by the coordinative informant were correct. In addition, children's ratings of two informants on smartness and niceness were also affected by the way information was delivered. Children in general considered the coordinative informant as smarter and nicer than the non-coordinative one. This suggests that selective learning is not only affected by assigned social labels and traits, but also the brief interactive experience during the learning process, and the effect can be generalized to unrelated other tasks.

The result of the current study is surprising, given that previous studies have shown that young children value the comprehensiveness of information presentation and tend to trust informants whose demonstration is more complete (see Gweon et al., 2014; Gweon & Asaba, 2018). Our study revealed that when instructions are divided into parts and walked through in a coordinative manner, it is more appealing to children. The results may be attributed to the prosocial effects of coordination. Extensive prior research has demonstrated that coordinating with peers facilitates cooperation and helpfulness (Wan et al., 2019; Wan & Zhu, 2021). Our results extend beyond existing peer-to-peer coordination studies, unveiling that engaging in coordination with knowledgeable individuals significantly influences selective learning and trust, highlighting the profound impact of coordination on children's social choices.

Additionally, we found that children's preference towards the coordinative informant appears to decline with increasing age in some of the tests. Notably, 5- to 6-year-olds show no differences to chance levels in the capacity test of Experiment 1 and endorsement test of Experiment 2. These findings suggest that although 3- to 6-year-old children generally prefer the coordinative instruction, as age increases, they gradually realize that the two informants essentially provided the same correct information but only in different ways, thus

leading to a declining bias towards the coordinative informant. This result is analogous to a previous study by Tong et al. (2019), which utilized meta-analysis to examine children's selective learning preference between epistemic cues and social characteristics. The results show that older children are more likely to rely on epistemic cues to make decisions than the younger ones. Future work could further expand the age range of participants to investigate if and when children's preference for coordinative instruction would eventually completely give way to epistemic preferences as age increases.

One limitation of this study is that, given the current experimental setup, children may have positively evaluated the coordinative informant due to the "halo effect". The halo effect refers to the influence of a global evaluation on evaluations of individual attributes of a person (Nisbett & Wilson, 1977). In the current study, it is possible that due to the strong positive social effects of coordination, children develop a strong preference towards the coordinative informant and thus select them for every question without reflecting on the differences among these questions. While we did not specifically control for the halo effect in the present study, it is worth noting that children did not select the same informant for every question: In fact, only 27 out of 93 children consistently chose the coordinative informant in all trials of the game test in Experiment 1 (and 30 out of 90 in Experiment 2). This suggests that most 3- to 6-year-olds made selective judgments of informants based on different questions. Future studies could control for the effect by incorporating neutral questions about informants to examine whether children can make unbiased choices on issues unrelated to social preference.

In conclusion, this study is the first to show that young children at the age of 3 to 6 prefer to trust, engage in, and learn from coordinative instruction over the non-coordinative one, even though this coordinative instruction was presented in segmented, less complete segments, and this preference can be generalized to unrelated tasks. In future studies, we also plan to investigate whether children's preference for coordination can potentially offset their preferences for other social cues such as in-group cues. It is documented that children prefer to trust in-group informant rather than out-group informants (Elashi & Mills, 2014), even when the in-group informant had previously demonstrated inaccuracy or behaved anti-socially. It will be important to examine whether coordination can reduce in-group bias in social learning, as this could help us determine whether the way of teaching can guide children to learn from a broader range of informants, which is essential given the value of cross-cultural learning in today's world.

Acknowledgments

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