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## The Development of Essentialist Beliefs about Social Status Categories in China

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### Declaration of conflicting interest

The authors declare no conflicts of interest.

### Abstract

China has undergone rapid economic changes in recent years, yet little is known about how children in China understand the social status hierarchies around them. The present study addressed this gap by examining whether Chinese children held essentialist beliefs about two social status categories: residency, an important but understudied status-related category in China, and socioeconomic status (SES). We also examined whether children's beliefs about these categories varied with their age or their own social status background (residency, subjective SES). Chinese 5- to 9-year-old children (47 female) who held residency in a prestigious megacity ( $N = 50$ ) or less prestigious non-megacities ( $N = 50$ ) completed two tasks that measured whether they viewed residency and SES as biologically based or causally informative, two dimensions of essentialism. Results suggested that children viewed residency but not SES as biologically based, though this decreased with age. Children from megacities with higher subjective SES were more likely to view residency as causally informative with age, suggesting children with higher social status are more likely to essentialize this status-related category. Children's beliefs about SES did not vary with their social-status background. These findings suggest that the developmental trajectory of Chinese children's essentialist beliefs about social status vary across status-related categories, dimensions of essentialism, and their own social-status background.

**Keywords:** *essentialism, residency, socioeconomic status, China*

Over the last two decades, China has experienced dramatic economic changes (Xie, 2016; Xie & Zhou, 2014): between 2000 and 2023, China's gross domestic product (GDP) per capita increased by over 1000% (The World Bank, 2023). At the same time, economic inequality has also increased and is driven by regional disparities (Xie & Zhou, 2014). For instance, the average annual income per capita in Shanghai, a metropolitan city, is over 80,000 RMB, almost twice the national average annual income per capita (39,000 RMB; National Bureau of Statistics of China, 2024; Shanghai Bureau of Statistics, 2023). These sweeping changes raise many questions about how individuals in China reason about social status and social hierarchies. In particular, little is known about how children in China understand such categories. The present study sought to address this gap by examining Chinese children's beliefs about status-related categories, whether these beliefs changed with age, and how these beliefs might vary with children's own social-status background.

Specifically, we focused on children's beliefs about residency, an important status-related category in China. Residency in China has its roots in ancient household registration practices, which were used to record population numbers. Residency in its current form was established in the 1950s, building on earlier traditions of registration (Song, 2014). Under this system, each individual is assigned a residency at birth based on either parent's residency, rather than where the individual was born. Thus, a child's residency is usually the same as their parents' residency. Physically living in a city is not the same as holding its residency: families can live in a city without holding residency in that city. If parents do not hold local residency, usually their child cannot obtain local residency and is treated as a "nonlocal child" institutionally. It is therefore possible for a child to be born and raised in a city without holding the residency of that city. Access to most public services, such as education and medical care, is tied to residency rather

than the physical location where one lives (Li et al., 2010; Song, 2014). Thus, holding nonlocal residency can cause difficulties for children and families such as lower admission priority to public schools (Wang, 2023; Xu, D. & Wu, 2022; Shanghai Government, 2023), and more difficulty reimbursing medical care (Chinese Government, 2023).

Although it is possible to change one's residency, the ease of doing so varies across cities. Wealthier, more prosperous cities typically having more strict residency criteria (Zhang & Tao, 2012), including longer timelines for obtaining residency status. Shanghai and Beijing are considered highly desirable cities that offer better opportunities and resources for their residents. For instance, Shanghai and Beijing have top educational resources: over 60% of high school seniors in Shanghai and Beijing are admitted into a college, compared to 35% admission rates in some less developed provinces (Tencent News, 2024). Residency in Shanghai and Beijing is considered highly prestigious and sought after (Gu et al., 2020), but also difficult to obtain. For instance, application criteria for Shanghai residency include having advanced degrees from select universities, or paying taxes in Shanghai or being married to a Shanghai resident for a minimum number of years, which could be up to seven years depending on the applicant's background (Shanghai Local Guide, 2024). As a result, many individuals move to and live in these cities without holding local residency, and typically children cannot gain local residency unless their parents acquire local residency. Residency is thus intertwined with socioeconomic status (SES): individuals who hold residency in more prestigious cities are likely to have higher incomes (National Bureau of Statistics of China, 2024), and those with higher education and income are more likely to qualify for residency in such cities (Shanghai Local Guide, 2024). Meanwhile, individuals who live in Shanghai and

Beijing without residency and residents of less developed regions often face reduced access to education and healthcare, which may reinforce broader economic inequalities.

Despite the importance of residency in China, little is known about how children learn and reason about this social category. However, Zhu et al. (2025) recently investigated how Chinese adults reasoned about residency and SES. Specifically, this study examined whether Chinese adults *essentialize* these social status categories. Essentialism refers to the belief that members of a category have an underlying “essence” that determines their group membership, preferences, and behavior (Gelman, 2003). This assumption can lead to several interrelated beliefs about a category, often referred to as dimensions of essentialism (Haslam et al., 2000; Rhodes & Mandalaywala, 2017). These dimensions include the belief that a category is biologically based and stable over time, category boundaries are discrete and objective, and that category membership can be used to make inferences about novel individuals (Haslam et al., 2000; Rhodes & Mandalaywala, 2017). Considerable research suggests that both children and adults can engage in essentialist reasoning about social categories such as race and gender, though there is variability in which social categories individuals essentialize and dimensions along which they do so (e.g., Davoodi et al., 2020; Diesendruck et al., 2013; Haslam et al., 2000; Pauker et al., 2020; Rhodes & Mandalaywala et al., 2017).

Zhu et al. (2025) examined a large sample of adults living in Shanghai and found that they did hold several essentialist beliefs about residency and SES: they viewed them as discrete, objective, and causally informative categories that could be used to draw inferences about category members. However, they did not perceive either category to be biologically based, suggesting they essentialized these categories along some dimensions but not others. Moreover, beliefs about residency and SES varied with Chinese adults’ own social status: individuals who

perceived themselves as higher SES (i.e. subjective SES) or holding residency in a more prestigious city (i.e. Shanghai) more strongly endorsed essentialist beliefs about these status-related categories. These findings provide the first evidence that adults in China hold essentialist beliefs about residency, and that their beliefs about status-related categories vary with their perception of their own social standing. The latter finding is consistent with work outside of China suggesting that individuals who are higher status are more likely to hold essentialist beliefs about status-related categories such as SES (Kraus & Keltner, 2013) and caste (Mahalingam, 2003, 2007; Srivastava et al., 2025).

These findings raise questions about when and how essentialist beliefs about residency and SES develop in China. There is considerable evidence that the tendency to essentialize social categories emerges by age 5 across cultures (Deeb et al., 2011; Diesendruck et al., 2013; Rhodes & Mandalaywala et al., 2017). For instance, 5-year-old children in the US view gender categories as discrete and objective (Diesendruck et al., 2013; Rhodes & Gelman, 2009), and 5-year-old children in Israel view ethnicity (Jewish vs Arab) as a causally informative category (Birnbaum et al., 2010). Although no study has examined children's essentialist beliefs about residency, a few recent studies have examined beliefs about nationality, which has some similarities to residency in that it is an institutionally-managed social category that can affect individuals' privileges and access to resources. By age 5, children in the US and Canada essentialize nationality along several dimensions: they view it as a stable category that is biologically-based and causally informative (Hussak & Cimpian, 2019; Siddiqui et al., 2020). Similarly, 5-year-old children in Turkey (Davoodi et al., 2020) and Iran (Shahbazi et al., 2024) also view nationality as biologically based, albeit to a lesser extent than gender.

With regards to SES, previous research conducted outside China suggests that by age 5, children are aware of a variety of status-related hierarchies, including wealth (e.g., Enright et al., 2020; Yang & Dunham, 2022). Although few studies have examined children's essentialist beliefs about social status, there is some evidence that such beliefs emerge by age 5 in some contexts (del Río & Strasser, 2011; Xu, Y. et al., 2022). For instance, del Río and Strasser (2011) found that 5-year-old children in Chile viewed SES as a causally powerful category that can be used to draw inferences about a new individual. Children's beliefs about SES also varied with their own SES background: children from higher SES homes believed that SES is constant across the lifespan, inherited across generations, and caused by non-observable characteristics such as laziness, whereas children from lower SES backgrounds did not (del Río & Strasser, 2011). These findings suggest that the tendency for higher status individuals to more strongly essentialize status-related categories can emerge early in childhood.

There is also considerable evidence that social essentialism changes across childhood, with developmental trajectories varying across categories, dimensions of essentialism, and cultural contexts (for reviews see Pauker et al., 2020; Rhodes & Mandalaywala, 2017). For instance, Hussak and Cimpian (2019) found that between 5 and 10 years of age, American children's tendency to view nationality as biologically-based decreased, but they continued to view it as a stable, informative category (see also Siddiqui et al., 2020). In contrast, Shahbazi et al. (2024) found that Iranian children's tendency to view nationality as biologically-based did not decrease significantly between 5 and 10 years of age. Iranian adults were less likely to view nationality as biologically-based than children, suggesting that a shift in this essentialist belief occurs more gradually, or at a later age, in Iran than it does in the US. Moreover, some research suggests that with age, children's own personal background plays a larger role in their

essentialist beliefs (Kinzler & Dautel, 2012; Mahalingam, 2003, 2007; Rhodes & Gelman, 2009; Roberts & Gelman, 2016). For instance, studies conducted in India suggest that at age 7, children from higher castes (Brahman) and lower castes (Dalit) essentialize caste to a similar degree (Mahalingam, 2007): they both believe that a child who was adopted by a different caste family would have the same properties as their biological parents rather than their adoptive parents. However, amongst older Indian children (12-16 years) and adults, those from higher castes are more likely to endorse the belief that caste is fixed rather than acquired than those from lower castes (Mahalingam 2003, 2007).

To date, only two studies by Xu and colleagues have examined essentialist beliefs amongst children in China (e.g., Xu, Y. et al., 2022; Xu, Y. et al., 2025). These studies suggest that the tendency to engage in essentialist reasoning emerges by age 5 in China, as has been observed in other cultures. Although neither study examined essentialist beliefs about residency, Xu et al. (2022) did report supplementary analyses examining two dimensions of essentialist beliefs about SES (rich vs poor): whether SES categories are discrete and objective, and whether SES is causally informative. They found that Chinese adults were more likely than Chinese children to endorse these essentialist beliefs about SES and that children's tendency to essentialize SES marginally increased with age. These findings could suggest that essentialist beliefs about status-related categories gradually emerge across childhood in China. Xu et al. (2022) further found that both Chinese children and adults were more likely to endorse these two essentialist beliefs about a socially-constructed category (occupation) than categories with biological features (gender, age) and this tendency strengthened with age. Xu and colleagues suggested that the emphasis on external social contexts (e.g., relations with others) in Chinese culture could lead to stronger beliefs that socially-determined categories are discrete and causally

informative, which could increase with age as children internalize cultural values. If this is the case, then Chinese children might exhibit essentialist beliefs about residency, a category that is socially rather than biologically determined, and these beliefs might strengthen with age.

The present study thus investigated whether children in China endorsed essentialist beliefs about residency and SES, and whether their tendency to do so varied with age, children's own social status background, and dimensions of essentialism. Although our primary focus was residency, we included SES because it is closely intertwined with residency in China, and Zhu et al. (2025) found that adults in Shanghai held essentialist beliefs about both of these status-related categories. Xu et al. (2022) provided preliminary evidence regarding Chinese children's essentialist beliefs about SES, but these results were only reported briefly in supplementary material. Including SES here thus allowed us to replicate and extend their findings, while also examining whether essentialist beliefs about residency and SES show similar developmental trajectories in China. Because the studies conducted by Xu and colleagues were primarily focused on comparisons across cultures (China vs US), they did not examine potential sources of within-culture variation in children's beliefs other than age. Thus, to our knowledge no study has investigated whether Chinese children's beliefs vary with their own social status, as has been seen amongst adults in China (Zhu et al., 2025) and child populations elsewhere (e.g., del Río & Strasser, 2011). The present study sought to address this gap by examining whether children's beliefs about residency and SES varied with their own background and at what age such relationships might emerge.

We addressed these questions by testing 5- to 9-year-old children because prior work outside China has documented changes during this age range in the categories that children essentialize, the specific beliefs that they endorse, and relationships between essentialist beliefs

and children's personal background (e.g., Hussak & Cimpian, 2019; Kinzler & Dautel, 2012; Rhodes & Gelman, 2009). We tested two groups of children: children from Shanghai and Beijing (megacities), and children from various smaller cities (non-megacities) around China. In China, there is consensus that there are only four megacities: Beijing, Shanghai, Guangzhou and Shenzhen (Zhao, 2023). Beijing and Shanghai have the strictest residency application criteria, and their residency is considered to be more prestigious than residency of non-megacities. These two groups thus allowed us to examine whether children who differed in residency (i.e., more vs less prestigious residency) held different essentialist beliefs about status-related categories. We also measured children's subjective SES, which is associated with essentialist beliefs about social status in adults (e.g., Kraus & Keltner, 2013; Zhu et al., 2025). Based on previous findings, we would expect that individuals who are higher status would hold stronger essentialist beliefs about status-related categories. However, it was an open question whether this relationship would be evident as early as age 5 (e.g., del Río & Strasser, 2011), or whether it would instead gradually emerge with age (e.g., Mahalingam, 2007).

Children completed two tasks that assessed different dimensions of essentialism. The Biological Essentialism Task (e.g., Davoodi et al., 2020) measured whether children believe that residency and SES have a biological basis. Zhu et al. (2025) found that Chinese adults did not exhibit essentialist beliefs about either category on this task. It was therefore possible that Chinese children would also reject the idea that these socially-constructed categories have a biological basis. An alternative possibility, however, is that children initially view one or both categories as biologically-based, as has been found for nationality elsewhere (e.g., Davoodi et al., 2020; Hussak & Cimpian, 2019; Shahbazi et al., 2024). Children also completed a version of the Switched-at-Birth task, which can be adapted to measure different dimensions of essentialism

(e.g., Mandalaywala et al., 2019; Shahbazi et al., 2024). Here we used this task to measure whether children view residency and SES as inductively powerful and thus use category membership to draw inferences about an individual's behaviors. Zhu et al. (2025) found that Chinese adults viewed both residency and SES as causally informative, raising the possibility that Chinese children also endorse this belief. However, based on Xu et al. (2022)'s findings, it is also possible that belief in the inductive potential of these socially-constructed categories increases across early childhood. Inclusion of both tasks thus enabled us to examine whether children's essentialist beliefs about residency and SES, and the developmental trajectories of these beliefs, differed across dimensions of essentialism.

## Method

### Participants

One hundred 5- to 9-year-old children (47 females;  $M_{age} = 7.20$ ,  $SD = 1.50$ , range: 5.01 - 9.77) were tested between November 2021 and June 2024. This final sample size was determined a priori based on previous studies that examined effects of individual background on essentialist beliefs among children similar in age to our sample (Davoodi et al., 2020; Hussak & Cimpian, 2019; Rhodes & Gelman, 2009). A power analysis (*pwr*; Champley, 2020) indicated this sample size was adequate to detect medium effects ( $f = .15$ ) in our generalized linear models with at least .85 power at an alpha level of .05. Eight additional children were tested but excluded because they failed to turn on their camera during online testing and we could not verify whether parents intervened ( $N = 4$ ), because they lived in a non-targeted megacity ( $N = 3$ ), and because they failed memory check questions for both SES and residency ( $N = 1$ ; see Procedure section). Parents provided informed consent electronically and children gave their verbal assent to play a game with the experimenter. After the study, parents received 50 RMB for participation in the

study. All procedures were approved by the Institutional Review Board at East China Normal University.

Out of 100 children tested, 50 children lived in megacities (Shanghai and Beijing), and 50 children lived in various non-megacities all over China. The population of the non-megacities ranged from 2 million to 10 million, with the exception of 2 children who lived in Chongqing, which has 30 million residents. Despite its size, Chongqing has half the average income of Shanghai and Beijing and relaxed residency requirements; it was therefore coded as a non-megacity. Children from megacities ( $M = 6.96$  years) were in similar age to children from elsewhere ( $M = 7.44$ ),  $t(98) = 1.60$ ,  $p = .11$ .

### **Measures**

All measures were first adapted from prior measures in the literature, then translated to Chinese by the first author and second author, and verified by the third author, who were all native Chinese speakers. The English and Chinese versions of all the essentialism measures are available in the Supplementary Materials.

#### ***Biological Essentialism Task***

This task was adapted from a widely used measure that examines whether children view a social category as biologically based and hard to change (Davoodi et al., 2020; Gelman et al., 2007; Hussak & Cimpian, 2019; Shahbazi et al., 2024). We selected this task because it was previously used with adults in China (Zhu et al., 2025) and it has previously been used to examine potential effects of individual background in our target age range (Davoodi et al., 2020; Shahbazi et al., 2024). We adapted this task to examine beliefs about both residency and SES. We also included one category that was expected to elicit essentialist beliefs (gender) and one

category that was expected not to elicit essentialist beliefs (pet-ownership) to provide comparison points for children's beliefs about residency and SES.

The stimuli consisted of illustrations of 10 characters: 1 character for each practice trial, and 4 pairs of characters for the test trials, each for one social category. The characters were gender-matched to the participant, except for the gender social category, where participants saw one male character and one female character. Each character was referred to by a letter name (e.g., A or B) to avoid biasing children's responses based on experience with actual names. Each character's group membership was labelled verbally (residency: local with local residency/nonlocal with nonlocal residency; SES: rich/poor; gender: male/female; pet-ownership: hamster owner/goldfish owner). There were no visual cues to category membership other than gender.

Children first saw two practice trials that were intended to make them comfortable answering Yes/No questions (see Davoodi et al., 2020). The experimenter showed a character and asked children whether they thought the character "goes to school" and "likes ice-cream." No feedback was given on children's responses.

Children next received 4 test trials. In each trial, children saw two characters. The experimenter introduced each character and labeled their social-group membership (e.g., "A is rich, B is poor"). Children were then asked 5 Yes-No questions<sup>1</sup> about the characters ("Do you think A's brain is different from B's brain?"; Figure 1). For the residency category, this procedure was preceded by a brief familiarization with local and nonlocal residency. The experimenter first showed children a map of their current city and read, "Look, this is the city we

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<sup>1</sup> Prior studies with this task have varied in whether children were restricted to yes/no responses (e.g., Hussak & Cimpian, 2019; Siddiqui et al., 2020) or provided with a third 'maybe' option (e.g., Davoodi et al., 2020; Shahbazi et al., 2024). In pilot data collection with a separate sample, we found that the youngest children tended to default to intermediate options when provided, suggesting a response bias. We therefore restricted responses to yes/no.

live in. Let's take a closer look. We live here" (for visual stimuli, see Supplementary Material). A character was then shown on the screen and the experimenter said, "This is the local C. He was born here and has always been living in this city. He has local residency." The local character and map were then replaced by a second character and a larger map that included the target city; the experimenter introduced this second character, "This is nonlocal D. He has always been living in a faraway place. He moved to this city from the faraway place. He has nonlocal residency." As the experimenter delivered these lines, the nonlocal character moved across the map from a distant location to the local city. Finally, the experimenter presented two characters side by side and labeled them, "So C is local with local residency. D is nonlocal with nonlocal residency," and then asked the Yes-No questions. This familiarization was included to ensure that children correctly viewed this trial as contrasting two individuals living their city: one who held local residency and one who did not. Without this introduction, children might have assumed that "nonlocal" meant someone living in a different city, which could conflate geographic differences with residency differences.

The order of social categories and the order of the questions were counterbalanced across children. For each question, an essentialist answer (e.g., "Yes" to "Do you think A's brain is different from B's brain?") was scored as 1, whereas a nonessentialist answer was scored as 0. If children failed to provide yes/no responses for at least one question, their responses for that social category were excluded from analysis. For detailed information on missing data and exclusion criteria, see the Supplementary Materials.

### ***Switched-at-Birth Task***

The Switched-at-Birth task can be used to assess different dimensions of essentialist belief, depending on how the task is designed. Here it was used to assess whether children view

categories as causally powerful and use them to draw inferences about an individual's properties (e.g., Mandalaywala et al., 2019). This task has been widely used with children in this age range (Chalik et al., 2017; Mandalaywala et al., 2019; Taylor et al., 2009) and shows effects of background as early as age 5 (Mandalaywala et al., 2019). We adapted this task to examine the target social categories, residency and SES.

For each social category, children were told a story about a child who was born to one family but adopted and raised by another family that differed in either residency or SES. All people (parents, children) were depicted as silhouettes to make the child gender neutral. The silhouettes were accompanied by images that conveyed the family's social-category membership.

For the SES category, children were shown the first family and the experimenter labeled their group membership (e.g., "This family is rich."). The children then saw two additional images that depicted a room with toys and the exterior of a house (Figure 2). The experimenter noted the number and quality of toys, and the quality of the house, which differed based on the family's SES (e.g., "This family has lots of good toys like these. They lived in a fancy house like this"). The experimenter then introduced the second family in the same fashion (e.g., "This family is poor. This family had not so good toys like these. They live in a not so fancy house like this."). Then, the experimenter showed a child character underneath the first family and said "One day, this [rich family] had a baby. It means this baby came out from the [rich mom's] tummy. But, right after the baby was born, the baby went to live with this [poor family]." The child character moved from underneath the rich family to the poor family on the screen. Then the experimenter said, "This [poor family] took care of the baby, played with the baby, fed the baby, loved the baby. The baby grew up with the [poor family] and never saw the [rich family]."

After explaining the adoption process, the experimenter asked the child to point to the birth parents and the adoptive parents as a comprehension check. Incorrect responses were corrected by the experimenter. Consistent with prior literature, children were then asked four questions about whether the child's psychological traits (smart, kind, good at music, good at sports) should be attributed to the birth parents or adoptive parents ("Now the child is six years old. He is kind<sup>2</sup>. Is it because of the birth parents or the adoptive parents?") (Mandalaywala et al., 2019). We also included one question about whether the child's physical traits (shape of nose) were due to the birth or adoptive parents as a check whether children understood the nature of the task (i.e. if so, they should indicate that physical traits are inherited).

For the residency category, children first received a familiarization to explain local and nonlocal residency, similar to the familiarization in Biological Essentialism Task. Children first saw a map of their local city, along with the silhouette of a family; the experimenter explained that the family had always been living in their city with local residency. They then saw a larger map that included the local city, along with a second family. The experimenter explained that the second family came to their city recently from a faraway place and lived there without local residency. Children then saw the two families and their maps side by side and the experimenter proceeded to explain the adoption and ask the test questions, using the same procedure as the SES category.

Children saw one SES scenario and one residency scenario. The direction of adoption (rich to poor or poor to rich; local to nonlocal or nonlocal to local) and the order of the social categories was counterbalanced across children. For all questions, attribution of the property to the birth parents was an essentialist response and scored as 1, whereas attribution to the adoptive

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<sup>2</sup> In Chinese, "he" and "she" has the same pronunciation. So "he" and "she" is a gender-neutral reference verbally.

parents was a non-essentialist response and scored as 0. After asking all test questions for a given category, the experimenter asked the child to point to the birth parents and the adoptive parents. No feedback was given. If children failed this check question, their responses on this social category were excluded for this task.

### ***MacArthur Social Ladder***

Children's subjective SES was measured with the MacArthur Social Ladder (Adler et al., 2000). The MacArthur Social Ladder demonstrates good internal consistency and reliability among children in diverse populations who are similar in age to our sample (Amir et al., 2019). The experimenter showed the child a ladder with ten rungs marked with a number, with 1 at the bottom and 10 on the top. The experimenter told the child that the top (10) of the ladder represents people who have the most money, the highest education and the most respected jobs, the bottom (1) of the ladder represents people who have the least money, the lowest education, and the least respected jobs or no jobs. The experimenter asked the child which rung they think they stand on. The child pointed to the rung or responded verbally ( $M = 6.19$ ,  $SD = 2.35$ , range: 1 – 10).

### **Procedure**

The first 15 children were all 5-year-olds and were recruited and tested in a preschool in Shanghai, China in 2021. Due to pandemic-related restrictions on in-person testing, the remaining 85 children were recruited via social media and tested online between 2021 and 2024. For all children, parents provided electronic informed consent prior to the study.

For children tested in person, the experimenter conducted the study in a quiet, unoccupied room at the preschool. The experimenter sat next to children, showed children stimuli on PowerPoint slides on a tablet, and read the prompts and asked the children questions.

Given these children all lived in Shanghai, the residency maps for both tasks depicted Shanghai for the local residency and a larger map including Shanghai to indicate nonlocal residency.

Children's responses were audio recorded during the experiment.

For children tested online, parents filled out a prescreening question reporting their child's age and residing city. This prescreening info was used (a) to recruit equal numbers of children from megacities (Beijing, Shanghai) and non-megacities that were comparable in age and (b) to customize the visual stimuli for the residency portions of both tasks so that the map for local residency matched the city that the child currently lived in. Online testing was conducted using Tencent Meeting, an online video chat program. Children participated at home on a laptop with their parents, who were asked not to intervene or help their child answer questions. The child saw both the experimenter and the PowerPoint slides shared on the screen via Tencent Meeting, while the experimenter read the prompts and asked questions. Children's responses were video recorded during the experiment.

Children completed the Biological Essentialism task and then the Switched-at Birth-task. Children were then asked several exploratory questions about residency and SES; because these questions were exploratory, they are not coded or analyzed here. Then children were asked to rate their social status on the MacArthur Social Ladder.

At the end of the study, children answered a final set of comprehension check questions to verify that they correctly understood the meaning of gender, SES, and residency. For gender, children saw a male and a female character. For SES, children saw one character depicted with a nice house and nice toys, and the other character depicted with a poor house and unattractive toys. For residency, children saw two characters paired with the local and nonlocal residency maps. For each category, they were asked two questions to identify the labeled character (e.g.,

“Can you point to the poor person? Can you point to the rich person?”). Children could point to the character or verbally label the character’s membership (e.g. “the left one” or “the one with red cloth”). No feedback was given. If children failed the comprehension check question on a specific social category, their responses on that social category in both tasks were excluded from data analysis. The whole procedure took about 30 minutes.

After the experiment, parents were asked to complete an optional background information questionnaire, which asked about their education, family income, and other demographic information. However, due to low response rates (65 out of 100), this data was not analyzed. Based on available demographic data from parental survey, most children were born and raised in the same city they resided in and held residency of that city.

## Results

All analyses were conducted in R (R Core Team, 2022). All data and analysis code are available on OSF at [https://osf.io/eadh/?view\\_only=2b5f0a01ba274dee9607070a92764a5f](https://osf.io/eadh/?view_only=2b5f0a01ba274dee9607070a92764a5f). For mixed effects models, the *mixed* function of the *afex* package was used to obtain *p*-values for significant effects of interest via likelihood-ratio tests (Singmann et al., 2023). The *emmeans* package was used to calculate the tests of simple effects for significant interactions (Lenth, 2023). All *p*-values in this report are two-tailed. Preliminary analyses indicated that the pattern of significant effects did not change when controlling for child gender or direction of adoption in the Switched-at-Birth task. These factors were not examined further.

We first examined the extent to which the sample as a whole endorsed essentialist beliefs on each task (see Table 1) and whether this varied across social categories or children’s age. Children’s scores on the Biological Essentialism Task were analyzed with a generalized linear mixed model with social category (residency, SES, gender, pet-ownership), age, and their

interactions as fixed effects and participant as a random effect. Age was entered as a continuous variable and centered in all analyses. The model was specified with a binomial distribution because each question was coded as a binary outcome (yes, no). The model showed a main effect of age,  $\beta = -.15$ ,  $SE = .05$ ,  $\chi^2(1) = 10.17$ ,  $p = .001$ , suggesting that children's tendency to give essentialist responses decreased with age. There was also a main effect of social category,  $\chi^2(3) = 188.39$ ,  $p < .001$ . Post-hoc Tukey-corrected comparisons revealed that children gave significantly more essentialist responses for the gender category ( $M = .81$ , 95% CI [.77, .85]) than the residency category ( $M = .67$ , 95% CI [.62, .72]),  $z = 4.82$ ,  $p < .001$ , the SES category ( $M = .50$ , 95% CI [.45, .55]),  $z = 9.59$ ,  $p < .001$ , and the pet ownership category ( $M = .41$ , 95% CI [.36, .46]),  $z = 12.03$ ,  $p < .001$ . Children also gave significantly more essentialist responses for the residency category than the SES category,  $z = 4.94$ ,  $p < .001$ , and the pet ownership category,  $z = 7.51$ ,  $p < .001$ , and significantly more essentialist responses for the SES category than on the pet ownership category,  $z = 2.61$ ,  $p = .045$ . Finally, there was a significant interaction of age and social category,  $\chi^2(3) = 16.23$ ,  $p = .001$  (see Figure 3). Simple slope analyses indicated that children's essentialist responses decreased significantly with age for the residency category,  $\beta = -.16$ ,  $SE = .08$ ,  $z = -2.09$ ,  $p = .04$ , the SES category,  $\beta = -.27$ ,  $SE = .07$ ,  $z = -3.79$ ,  $p < .001$ , and the pet ownership category,  $\beta = -.26$ ,  $SE = .07$ ,  $z = -3.61$ ,  $p < .001$ , but not the gender category,  $\beta = .10$ ,  $SE = .08$ ,  $z = 1.15$ ,  $p = .25$ .

We also compared children's responses for each category to chance using a series of intercept-only generalized linear models specified with a binomial distribution. To correct for multiple comparisons,  $p$ -values for these models were compared to a Bonferroni-corrected alpha of .0125. Children gave essentialist responses significantly more often than expected by chance for the gender category,  $\beta = 1.40$ ,  $SE = .11$ ,  $z = 12.40$ ,  $p < .001$ , and the residency category,  $\beta =$

.68,  $SE = .10$ ,  $z = 6.74$ ,  $p < .001$ . Children's essentialism scores did not differ from chance for the SES category,  $\beta = 0.00$ ,  $SE = .09$ ,  $z = 0$ ,  $p = 1$ , and they were significantly below chance for the pet ownership category,  $\beta = -.31$ ,  $SE = .09$ ,  $z = -3.45$ ,  $p < .001$ .

These results suggest that, consistent with prior literature (Davoodi et al., 2020; Smyth et al., 2017), children viewed gender but not pet-ownership as biologically based. Children also endorsed the belief that residency was biologically based at above chance levels. Although their scores for the SES category were higher than the pet-ownership category, they did not differ from chance. This suggests that children viewed residency as biologically-based but were less certain about SES. Finally, children's tendency to view residency and SES as biologically-based decreased with age.

For the Switched-at-Birth Task, we first confirmed that for the physical trait, children selected the birth parent significantly more often than expected by chance for both the SES category, 66/94 children (70%),  $P < .001$  (cumulative binomial probability), and the residency category, 55/89 children (62%),  $P = .017$ . This suggests that children understood the task and expected physical traits to be inherited. These trials were not examined further.

Children's responses for the psychological traits were analyzed with a generalized linear mixed model specified with a binomial distribution with social category (residency, SES), age, and their interactions as fixed effects and participant as a random effect. Age was continuous and centered. The model revealed a marginal effect of age,  $\beta = -.14$ ,  $SE = .09$ ,  $\chi^2(1) = 3.10$ ,  $p = .078$ , suggesting a marginal trend for children's essentialist responses to decrease with age (Figure 3). No other effects were significant, all  $ps > .47$ . Children's responses for each category were also compared to chance using intercept-only generalized linear models specified with a binomial distribution (Bonferroni-corrected alpha = .025). Children selected the birth parents significantly

less often than expected by chance for both the residency category,  $\beta = -.82$ ,  $SE = .12$ ,  $z = -7.11$ ,  $p < .001$ , and the SES category,  $\beta = -.87$ ,  $SE = .11$ ,  $z = -7.70$ ,  $p < .001$ . This suggests that the sample as a whole did not treat SES or residency as predictive of psychological traits.

Next, we examined whether participants' essentialism of residency and SES varied as a function of their subjective SES or residency. Separate generalized linear models were run for children's responses for each category (residency, SES) in each task (Biological Essentialism Task, Switched-at-Birth Task). All models were specified with a binomial distribution and included children's subjective SES, residency (megacity vs non-megacity), age, and their interactions as between-subject factors. Age was continuous and both age and subjective SES were centered in the analyses.

For the Biological Essentialism Task, the model for the residency revealed no significant effects, all  $ps > .13$ . The model for the SES category revealed a significant effect of age,  $\beta = -0.21$ ,  $SE = .09$ ,  $\chi^2(1) = 5.25$ ,  $p = .022$ . Children were less likely to believe that SES was biologically based with age. No other effects were significant, all  $ps > .32$ .

For the Switched-at-Birth task, the model for the residency category revealed a significant three-way interaction between subjective SES, residency, and age,  $\beta = .20$ ,  $SE = .09$ ,  $\chi^2(1) = 5.01$ ,  $p = .025$  (see Figure 4). No other effects were significant, all  $ps > .31$ . To explore the three-way interaction, we conducted simple slope analyses separately for children from megacities and children from non-megacities. For children from megacities, the relationship between age and essentialism scores differed as a function of children's subjective SES. Specifically, for children with lower subjective SES (1 standard deviation below the mean), the tendency to attribute psychological traits to birth residency decreased significantly with age,  $\beta = -.47$ ,  $SE = .19$ ,  $z = -2.51$ ,  $p = .01$ . Children with higher subjective SES (1 standard deviation

above the mean) showed the opposite pattern, exhibiting an increased tendency to attribute psychological traits to birth residency with age,  $\beta = .50$ ,  $SE = .21$ ,  $z = 2.34$ ,  $p = .02$ . In contrast, for children from non-megacities, at both levels of subjective SES there was a numeric but non-significant decrease in essentialist responses with age, all  $ps > .47$ .

The model for the SES category of the Switched-at-Birth task revealed a marginal effect of age,  $\beta = -.20$ ,  $SE = .12$ ,  $\chi^2(1) = 2.93$ ,  $p = .087$ , and a marginal interaction between age and subjective SES,  $\beta = 0.11$ ,  $SE = .08$ ,  $\chi^2(1) = 3.67$ ,  $p = .055$ . Simple slope analyses suggested that for children with lower subjective SES (1 standard deviation below the mean), the tendency to attribute psychological traits to birth SES decreased with age,  $\beta = -.46$ ,  $SE = .18$ ,  $z = -2.57$ ,  $p = .010$ . For children with higher subjective SES (1 standard deviation above the mean), the tendency to attribute psychological traits to birth SES did not change with age,  $\beta = .06$ ,  $SE = .18$ ,  $z = 0.33$ ,  $p = .74$ . Finally, there was a marginal effect of residency,  $\beta = 0.40$ ,  $SE = .24$ ,  $\chi^2(1) = 2.86$ ,  $p = .09$ ; children from megacities ( $M = .34$ , 95% CI [.27, .41]) were marginally more likely to attribute psychological traits to birth parents than children from non-megacities ( $M = .25$ , 95% CI [.20, .33]). No other effects were significant, all  $ps > .24$ .

### Discussion

Despite the importance of residency in China, little is known about how children reason about this status-related category. The present study addressed this by examining whether 5-9-year-old Chinese children held essentialist beliefs about residency and SES, another status-related category. Children from megacities (Shanghai, Beijing) and from non-megacities completed two essentialism measures that examined whether they believed residency and SES are biologically based or predictive of one's psychological traits. Results suggested that

children's essentialist beliefs varied across the two categories, dimensions of essentialism, and their age and social-status background.

Focusing first on residency, scores for this category on the Biological Essentialism Task were both significantly above chance and significantly higher than the control category, pet-ownership. This suggests that even though residency is institutionally managed, Chinese children view this category as having a biological basis that is inherited and hard to change. In contrast, children did not use birth residency to draw inferences about an individual's psychological traits, suggesting they did not view this category as causally informative. These results are the opposite of those reported by Zhu et al. (2025), who found that Chinese adults in Shanghai viewed residency as causally informative but not biologically based. This suggests the possibility of a developmental shift in beliefs about residency across childhood and into adulthood: with age, Chinese children might become more aware that residency is not biologically based while coming to view it as causally powerful.

Indeed, we found that older children in our sample were significantly less likely to view residency as biologically based than younger children. Although our findings are cross-sectional, they suggest a shift in children's beliefs about the biological basis of residency is already evident between 5 and 9 years of age. This finding aligns with evidence that in Canada and the US, there is significant decrease in essentialist beliefs about the biological basis of nationality, another institutionally-managed category, between 5 and 9 years of age (e.g., Hussak & Cimpian, 2019; Siddiqui et al., 2020). However, as noted in the introduction, other studies have failed to find this pattern for nationality (Davoodi et al., 2020; Shahbazi et al., 2024). For instance, in Iran, children's belief in the biological basis of nationality remains stable between 5 and 10 years of

age (Shahbazi et al., 2024). Given that we examined a different category (residency vs nationality) in a different cultural context, we cannot say for certain why this discrepancy occurs. Shahbazi et al. (2024) speculated that contrasting findings regarding children's beliefs about nationality could reflect differences across countries in children's exposure to diversity, which can attenuate essentialist beliefs (e.g., Deeb et al., 2011; Smyth et al., 2017). Children in the US have more exposure to individuals of other nationalities than children in Iran, and this could contribute to declines over time in American children's belief that nationality is tied to biology. If this speculation is correct, then perhaps the age-related decline in we observed in the Biological Essentialism Task could reflect young Chinese children's exposure to diverse residency backgrounds (e.g., local and nonlocal individuals). Further work is needed to address this possibility.

We observed a more complex age-related pattern for the residency category of the Switched-at-Birth task: children's beliefs varied as a function of their age, residency, and subjective SES. Amongst children with megacity residency and higher subjective SES, older children were more likely than younger children to attribute an individual's psychological traits to birth residency. Children from megacities with lower subjective SES showed the reverse pattern: older children were less likely than younger children to draw psychological inferences about birth residency. In contrast, essentialist responses did not change significantly with age for children from non-megacities. The fact that it was the highest status children – those with both prestigious residency and high subjective SES – who more strongly endorsed the inductive potential of residency at later ages is broadly consistent with prior evidence that higher status individuals are more likely to essentialize status-related categories (e.g., del Río & Strasser, 2011; Kraus & Keltner, 2013; Mahalingam, 2003, 2007; Srivastava et al., 2025; Zhu & Scott,

2025; Zhu et al., 2025). In particular, Zhu et al. (2025) found that for Chinese adults, higher subjective SES and more prestigious residency predicted stronger essentialist beliefs about residency across multiple dimensions of essentialism. Our findings thus suggest that relationships between social-status background and essentialist beliefs about residency begin to emerge in early childhood. However, we only found significant effects of social-status background for the Switched-at-Birth task, not the Biological Essentialism Task, suggesting that relationships between social-status background and beliefs about residency might exhibit different developmental trajectories across different dimensions of essentialism.

Children's beliefs about SES differed somewhat from their beliefs about residency. Although their scores on the SES category of Biological Essentialism Task were significantly higher than the control category, pet-ownership, they did not differ from chance. This suggests that while they viewed residency as biologically based, they were ambivalent about whether SES is biologically based. This is consistent with previous studies that used this task to examine essentialist beliefs about SES with 5-9-year-old children in Iran, Turkey, and the US (Davoodi et al., 2020; Shahbazi et al., 2024). Scores for the SES category were also lower at later ages, suggesting that children's tendency to view this category as biologically based decreased with age, which aligns with the finding that adults in China do not view SES as biologically based (Zhu et al., 2025).

Results for the SES category of the Switched-at-Birth task suggest that children did not believe SES was predictive of psychological traits. This contrasts with the results of Zhu et al. (2025), who found that Chinese adults did view SES as causally informative. It is possible that beliefs in the causal potential of SES develop at a later age in China. This would be consistent with the supplementary findings of Xu et al. (2022), who found that Chinese adults were more

likely than Chinese children to use SES to make inductive inferences individuals. However, we did not find evidence for such an age-related increase in our sample: the effect of age was only marginal and trended in the opposite direction. Thus, if there is an age-related increase in beliefs about the inductive potential of SES, this occurs after 9 years of age. Moreover, the model examining relationships between children's own social status and the SES category of the Switched-at-Birth task revealed only marginal effects. This differs from what we observed for the residency category and suggests that relationships between social-status background and beliefs about SES do not emerge until later ages.

Residency and SES are both status-related categories and they are interrelated in Chinese society. However, our results suggest several differences in the essentialist beliefs that Chinese children hold about these categories in early childhood. Chinese children viewed residency, but not SES, as biologically based. Moreover, children's beliefs about the inductive potential of residency varied with their own age, residency, and subjective SES, whereas their beliefs about SES did not differ significantly with their social-status background. This latter finding contrasts with previous findings that 5-year-old Chilean children from higher SES backgrounds essentialize SES more strongly (del Río & Strasser, 2011). This suggests that in addition to differing from their beliefs about residency, Chinese children's essentialist beliefs about SES also differ from those of children in other contexts.

Together, these findings speak to theoretical accounts regarding the origins of social essentialist beliefs. According to biological relevance accounts (e.g., Davoodi et al., 2020; Shahbazi et al., 2024), social categories with some biological basis (gender, race) or observable markers that might suggest a biological basis (ethnicity, nationality) should be more readily essentialized than social categories without such markers (religion, SES). Consistent with this

account, in the present study children were more likely to view gender as biologically-based than every other category, and their essentialist beliefs about gender did not decline with age.

However, children (particularly younger ones) also viewed residency as biologically based, despite the fact that residency does not have observable markers. For instance, there are no readily observable differences between individuals who live in Shanghai but do not hold Shanghai residency and those who do hold Shanghai residency. Our results thus suggest while biological markers might encourage essentialist beliefs about a social category, these markers are not necessary for children to endorse essentialist beliefs, even as early as age 5.

Our results are consistent with recent theoretical proposals that cultural processes influence the development of social essentialism from early in childhood (e.g., Xu, Y. et al., 2022; Xu, Y. et al., 2025). However, our findings raise several questions about how this cultural process unfolds in China. The first concerns what types of input and experiences lead young Chinese children to view residency as biologically based, even though residency is externally managed by the government, and how these experiences differ from their experiences with SES, which they do not view as biologically based. Research conducted in the US suggests that the language used to describe a social category can impact children's essentialist beliefs. In particular, hearing a social category described with generic statements – statements that refer to an entire category (e.g., *boys like sports*) rather than a specific category member (e.g., *this boy likes sports*) – increases children's tendency to hold essentialist beliefs about that category (Leshin et al., 2021; Pronovost & Scott, 2022; Rhodes et al., 2012). If Chinese parents use generic statements discussing individual's residency, then this could potentially lead children to hold essentialist beliefs about this category. It is also possible that parents engage in less discussion of SES than they do of residency. Some research in the US suggests that while parents

attempt to teach their children financial skills like earning and saving money, they avoid discussing personal topics such as household finances or a person's income (e.g., Romo & Vangelisti, 2014). If parents in China are also reluctant to discuss SES, then this could explain why children were less likely to essentialize this status-related category.

These possibilities are purely speculative however, as there is very little work inside or outside of China on how parents discuss status-related categories with their children. It is therefore unclear how often children are exposed to these social categories and the types of information that they receive about them. There is thus a need for a direct examination of the types of input Chinese children receive about social-status categories, especially the frequency and content of parent-child conversations about such categories. Such examination might also help clarify why Chinese children essentialize residency along some dimensions but not others. If children hear more generic statements about residency than SES, that could lead them to essentialize the former category more than the latter. However, the frequency with which children hear such statements cannot explain why they view residency as biologically based but not causally informative. Further information about the *content* of the messages that children receive about residency could shed insight into this issue.

A second question is why children's essentialist beliefs about status-related categories change with age, and how their own social-status background comes to influence their essentialist beliefs about residency. The fact that only higher status children (i.e. prestigious residency and higher subjective SES) were more likely to view residency as causally informative at later ages could suggest that children from different status backgrounds receive different types of parental input about social-status related categories. Higher status adults are more likely to essentialize social status categories (e.g., Kraus & Keltner, 2013; Mahalingam, 2003; Zhu &

Scott, 2025), and Chinese adults with higher subjective SES and who hold prestigious residency are more likely to endorse essentialist beliefs about residency (Zhu et al., 2025). Given that children's residency is based on their parents' residency, it is likely that the children in our megacity group had parents who also held prestigious megacity residency. It is therefore plausible that the higher status children had parents who also held essentialist beliefs about residency, and they might convey these beliefs to their children in everyday conversations (e.g., Straka et al., 2024). Future investigations into how Chinese parents discuss status-related categories with their children should take into account the parents' own social status and beliefs about status-related categories.

It is also possible that children from different status backgrounds experience status differently in their everyday lives, which in turn leads to different developmental trajectories for their essentialist beliefs. For instance, children from higher status backgrounds likely experience benefits and privileges due to their higher status. If children perceived these benefits of their status, then with age this might lead to motivated reasoning: they might essentialize status-related categories more as a way to justify and protect their privileged status. This would be consistent with work suggesting that adults sometimes engage in essentialist reasoning as a way to protect their identity or social position (e.g., Diesendruck, 2021; Kraus & Keltner, 2013; Rad & Ginges, 2018; Shahbazi et al., 2024; Verkuyten, 2003; Zhu & Scott, 2025). However, it remains unclear whether, and at what age, children in China recognize links between residency, SES, and social inequality. The Switched-at-Birth task did not test whether children use residency or SES to draw inferences about social benefits and privileges, such as access to higher quality schools. Exploration of this issue could shed insight into the development of causal reasoning about status-related categories in China, as well as how this reasoning relates to

children's social status background and essentialist beliefs. Future work should also examine how essentialist beliefs about status-related categories relate to broader intergroup attitudes. Prior research conducted outside China suggests that stronger essentialist beliefs about a social category can be associated with negative attitudes and behaviors towards members of that category, including reduced warmth, more explicit prejudice, and reduced willingness to share resources (e.g., Mandalaywala et al., 2018; Mandalaywala et al., 2019; Pauker et al., 2020; Rhodes et al., 2018). This raises the possibility that early-emerging essentialist beliefs about residency could have important practical implications for young children's everyday social experiences, especially children without local residency. Understanding the relationships between essentialist beliefs, intergroup attitudes, and social behaviors is thus important for promoting positive intergroup relationships and outcomes in early childhood.

There are several limitations to the present study. First, our study is cross-sectional. While our results suggest that Chinese children hold different essentialist beliefs about residency and SES at different ages, longitudinal work is needed to draw definitive conclusions about developmental changes in these essentialist beliefs. This is especially important given the ongoing rapid changes in China's economic landscape, which could lead to cohort differences in children's experiences and reasoning about status-related categories. Second, the two essentialism tasks that we used presented children with binary forced-choice responses. Although this is a common approach in the essentialism tasks used with children (e.g., Birnbaum et al., 2010; Diesendruck et al., 2013; Hussak & Cimpian, 2019; Mandalaywala et al., 2019), it does limit our ability to detect nuances in children's beliefs (e.g., believing that *sometimes* residency is hard to change), which could be especially relevant at later ages. Future work examining the

developmental trajectory of essentialist beliefs should consider using tasks that allow for greater variability in responses to address this issue.

Third, due to the low response rates on the parental questionnaire, we lacked detailed demographic data about household income or parent education and could not control for these SES variables in our analyses. However, prior research with adults suggests that subjective SES is more predictive of essentialist beliefs about SES than objective indicators such as income (Kraus & Keltner, 2013; Zhu et al., 2025). It is therefore likely that children's subjective SES, which we did measure, is more predictive of their essentialist beliefs than objective SES indicators. Finally, although our sample size was sufficient to detect medium-sized effects, we might have lacked sufficient power to detect smaller effects, especially in the models involving three-way interactions. Indeed, the model examining the effects of background on the SES category of Switched-at-Birth task revealed only marginal effects. Future work with larger sample sizes is needed to identify whether there are smaller effects of age or social status background on Chinese children's essentialist reasoning.

In conclusion, this study provides the first evidence that Chinese children hold essentialist beliefs about residency and that there are age-related changes in these beliefs across early childhood. This is also the first study to examine relationships between children's own residency and subjective SES and their essentialist beliefs about SES and residency. Our findings demonstrate that Chinese children's essentialist beliefs about social status hierarchies vary across categories, dimensions of essentialism, and their own age and social status background.

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**Tables****Table 1***Mean (SD) and Score Range for the Essentialism Measures*

Measure	Mean (SD)	Range
Biological Essentialism Task		
Residency	3.32 (1.20)	0.00 – 5.00
SES	2.50 (1.26)	0.00 – 5.00
Gender	4.01 (.81)	2.00 – 5.00
Pet ownership	2.11 (1.21)	0.00 – 5.00
Switched at Birth Task (psychological traits)		
Residency	1.22 (1.03)	0.00 – 4.00
SES	1.18 (1.12)	0.00 – 4.00
Switched at Birth Task (physical traits)		
Residency	0.62 (0.49)	0.00 – 1.00
SES	0.70 (0.46)	0.00 – 1.00

### Figure Captions

**Figure 1.** *Example Trial from the Biological Essentialism Task.* Children viewed the characters (left) while the experimenter delivered the text (right). Question order was counterbalanced across children.

**Figure 2.** *Visual Stimuli from the SES Trial of the Switched at Birth Task.* Images depict the scenario where the child was born to a poor family (left) and then adopted by a rich family (right). Direction of adoption was counterbalanced across children.

**Figure 3.** *Proportion of Essentialist Responses on the Biological Essentialism Task (A) and the Switched at Birth Task (B) by Age and Social Category.* SES = socioeconomic status. The shaded areas indicate the 95% confidence intervals.

**Figure 4.** *Proportion of Essentialist Responses for the Residency Category of the Switched at Birth Task by Child Age, Residency, and Subjective SES.* Shaded areas indicate 95% confidence intervals.