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Someone Who Knows and Someone I Trust: Investigating How and With Whom U.S. 8- to 14-Year-Old Youth Seek to Learn About Racial Inequality

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This study investigated 8- to 14-year-old U.S. children's (N = 202, 47% girls, and 49% White) evaluations of statements reflecting individual and structural attributions for the causes of racial inequality between Black and White people in the United States, the epistemic characteristics they used to seek out more information on this topic, and who they believed reflected these characteristics. With age, participants increasingly endorsed statements reflecting structural attributions for racial inequality (i.e., educational and occupational exclusion), and increasingly reasoned about privilege and racism. In contrast, participants did not endorse statements reflecting individual attributions at any age (i.e., group differences in intelligence and effort), instead reasoning about equality between racial groups. Overall, participants sought expertise (i.e., content knowledge) and interpersonal trust (i.e., closeness and support) in a scenario where they could choose a discussion partner to learn more about racial inequality, and were most likely to seek out their family members, though some also sought out their friends, teachers, and the internet or social media. This study provides insights into who children see as relevant sources for learning about racial inequality and their reasons for trusting them.

Public Significance Statement

This study found that as children get older, they are more likely to acknowledge that there are differences in access to opportunities between Black and White people in the United States. When looking to find out more about these differences, they are most likely to go to people who they think are experts on the topic or who they have a close relationship with, and usually associate these characteristics with their family members.

Keywords: racial inequality, epistemic trust, individual and structural attributions

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Understanding that racial inequalities are caused by structural factors (e.g., systemic racism) rather than individual factors (e.g., racial group differences in effort) is a crucial prerequisite to youth judging these inequalities as morally wrong and seeking to address them (Elenbaas et al., 2020). Although they do not always do so, beginning in late childhood and more certainly by late adolescence, youth in the United States are typically able to attribute racial inequalities to structural factors within U.S. society, such as educational or occupational exclusion (Elenbaas & Killen, 2017; Seider et al., 2022). However, developmental scientists currently know less about *how* youth reach these conclusions. One possibility is

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that over the transition from childhood to adolescence, youth increasingly drive their own learning in this area, selectively seeking out opinions and information from others whom they may perceive to be experts in the topic area, reliable sources of correct information, or honest people who will tell the truth about racial inequalities (Diaz et al., 2022; Harris et al., 2018). To address this question, this study drew on theories of children's and adolescents' moral reasoning about racial inequality (Elenbaas et al., 2020) and epistemic trust in social learning contexts (Harris et al., 2018) to investigate 8- to 14-year-old's decisions in a scenario where they could seek out more information about racial inequality between Black and White people in the United States. Key research questions examined age differences in participants' structural (education and occupation) and individual (intelligence and effort) explanations for racial inequality, the principles they used to inform their own social learning in this area (expertise, reliability, and honesty), and who in their lives they believed would reflect those principles (their family members, friends, teachers, the internet, or social media).

Theoretical Frameworks: Social Reasoning Developmental (SRD) Model and Epistemic Trust

Inequalities in opportunities and outcomes between racial groups in the United States are often explained in two ways: (a) *individual*

explanations attribute racial inequalities to one group being more intelligent, working harder, or being more responsible than the other and (b) structural explanations attribute racial inequalities to group differences in access to resources and opportunities (Kluegel & Smith, 1986). One branch of developmental research on reasoning and judgments about racial inequality has drawn on the SRD model, an integrative framework that brings together social domain theory (Smetana et al., 2014) and social identity development theory (Nesdale, 2004) to explain how children understand moral issues in intergroup contexts (Elenbaas et al., 2020). This research has found that when children attribute racial inequalities to structural rather than individual factors, they are more likely to judge them as morally wrong and seek to address them, and that structural attributions are more common among older children than younger children (Elenbaas & Killen, 2017; Rizzo et al., 2020). In general, research drawing on the SRD model uses changes in reasoning to understand changes in judgments as children become better able to balance concerns for fairness and intergroup dynamics with age (Killen & Rutland, 2011).

When learning and forming judgments about racial inequalities, children and adolescents can draw on their own personal experiences and they can also draw on the knowledge of others (Guerrero et al., 2019). Research on epistemic trust investigates the principles children apply when determining if they believe others' testimony (Harris et al., 2018). This research shows that children trust the testimony of people they have determined to be expert (well-informed in the topic area), reliable (correct in the past), and honest (not misleading) over others (Marble & Boseovski, 2020). No prior studies have applied the framework of epistemic trust to understand how children shape their own learning about racial inequality, however, the issue is well suited for this framework. While children regularly experience the effects of racial inequality in the United States, the systems that perpetuate it have deep historical roots that youth are unlikely to fully discover through personal experience without the aid of expert, reliable, or honest sources of factual information (Moffitt & Rogers, 2022; Roberts & Rizzo, 2021).

Both the SRD model and the framework of epistemic trust share a constructivist theoretical perspective, positing that children are active explorers of their environment, learning through their personal and social experiences how to make sense of their social world (Piaget, 1970). Bringing these two areas together, this study placed children and adolescents in a scenario where they could actively seek out information from others to inform their beliefs about the causes of racial inequality between Black and White people in the United States.

Individual and Structural Reasoning About the Causes of Racial Inequality in the United States

Prior research on children's and adolescents' individual and structural attributions for racial inequality suggests that individual attributions emerge first in development. For example, by middle childhood (6–8 years), many U.S. children believe stereotypes that White people are smarter and work harder than Black people (Bigler & Liben, 1993; Pauker et al., 2016), suggesting that inequality is because of racial group differences in intelligence and effort. Assumptions about individual causes persist into adolescence. Even 18-year-olds frequently believe that success is attributable to effort alone (i.e., how hard you work) and that everyone has equal chances to succeed in the United

States, though adolescents of color have been shown to endorse this less than White adolescents (Gurin et al., 2015; Seider et al., 2022).

At the same time, older children begin to show awareness of broader racial inequalities between Black and White people in the United States around ages 10–11, with structural attributions becoming more common with age (Elenbaas & Killen, 2017). Across the middle and high school years (ages 14-18 years), work with Black and Latinx U.S. adolescents shows that they are increasingly likely to explain racial disparities in educational opportunities and outcomes in terms of both racism and White privilege (Bañales et al., 2020; Seider et al., 2022; Wray-Lake et al., 2023). This also points to late childhood and early adolescence as an especially important transitional period for the formation of beliefs about racial inequality, as youths' views on intergroup relations, social issues, and moral reasoning about equity and rights undergo significant development and differentiation (Elenbaas et al., 2020; McGuire et al., 2015). However, few studies have focused on how youth think about the causes of racial inequality during the developmental period of late childhood to early adolescence, with the majority of studies examining the beliefs of older adolescents (e.g., Bañales et al., 2020; Diaz et al., 2022; Seider et al., 2022; Wray-Lake et al., 2023). To investigate differences in developing beliefs across a transitional developmental period, this study included older children and early adolescents, while still remaining developmentally appropriate to older children's abstract understanding of race (Abaied & Perry, 2021).

Notably, there is an imbalance in prior research between studies examining individual attributions or racial stereotypes with majority White samples and studies examining structural attributions with majority Black and Latinx samples (Moffitt & Rogers, 2022). Further examining how both individual and structural beliefs develop in White and Black, Indigenous, People of Color populations is important, as the developmental trajectory for these beliefs could differ by youth's racial background. More specifically, recent work in this area has noted a key need for further research examining how White youth develop (or fail to develop) an understanding of their privilege in society (e.g., Hazelbaker et al., 2022; Moffitt & Rogers, 2022; Wray-Lake et al., 2023). White supremacy is embedded into U.S. society, and messages that race does not matter for success are the norm (Moffitt & Rogers, 2022). Thus, it is crucial to understand both if and when White youth can identify the system that benefits them, and the privileges that White people hold in U.S. society. As such, this study situated participants in a paradigm where White privilege had to be acknowledged to endorse structural attributions, examining how youth of all racial backgrounds think about the White privilege that is embedded in opportunities within the United States.

Epistemic Trust and Learning About Racial Inequality

Researchers have also begun to investigate how people such as parents (Bañales et al., 2020), teachers (Diemer et al., 2021), and peers (Diaz et al., 2022) may shape developing beliefs about racial inequality. These lines of research share a broad assumption that learning about inequality is at least in part child-driven, with youth seeking answers to their own questions about racial inequality. Research on epistemic trust has not traditionally addressed how children learn about social issues (Marble & Boseovski, 2020), but it provides a well-established framework for understanding the cognitive processes that underlie self-driven social learning in general when children have little to no prior experience with the topic. The criteria that

children use to determine who to believe in such situations may likewise apply when they seek to learn about racial inequality.

Specifically, prior research points to three main characteristics youth could be considering in inequality contexts. First, children trust experts with verified subject matter knowledge over laypeople when learning social (e.g., who is smart), historical (e.g., how long countries have existed), and scientific (e.g., how many muscles a person has) content (Heyman & Legare, 2005; Wang et al., 2019). Racial inequality is rooted in history, suggesting that expertise may be relevant in this context as well. Second, children believe reliable, previously accurate people over those who have been wrong in the past when learning new information (e.g., labeling novel objects; Corriveau & Harris, 2009). Depending on their prior experience, understanding the causes of racial inequality may be a novel task for children, suggesting that past reliability may be relevant in their search for a useful person with whom to discuss the issue. Third, children prefer to learn from people who are honest with them over dishonest people (e.g., when given conflicting testimony about the location of a new object; Q. G. Li et al., 2014). Given that the true causes of racial inequality are difficult to verify without outside assistance, children may seek out people with a track record of honesty over people who they feel may mislead them.

Assuming children and adolescents may seek expert, reliable, and honest people to inform their own leaning about racial inequality, the question of who they believe might fit those criteria is also an open one. For youth of color, parents or other family members may be trusted, as extensive research has documented the benefits of parental racial socialization for children's and adolescents' understanding of racism (Bañales et al., 2020; Umaña-Taylor & Hill, 2020). For White children, however, family members may not be perceived as expert, reliable, or honest in this context, as research indicates that many White parents are hesitant to discuss race in the United States at all (Williams & Banerjee, 2021).

At the same time, racial inequality in the United States is rooted in history, and teachers or potentially specific media sources may be especially trusted in this area. For example, in one recent study, Wang et al. (2019) found that older children were more likely to believe historical facts when they were explained by teachers and the internet, rather than by peers who may have more limited knowledge. Many schools have academic units about race and history as well (Seider et al., 2017), potentially supporting the perception of teachers as expert, reliable, or honest sources on information on the topic. Finally, in a recent study on how Black and Latinx adolescents explain access to opportunity in the United States, Diaz et al. (2022) found frequent spontaneous references to experiences with friends that helped shape adolescents' beliefs (e.g., observations of older peers' experiences with the college admissions process), suggesting that peers, too, may be trusted sources of information about racial inequality. In general, trust in both peers (Smetana & Rote, 2019) and the internet and social media (Vogels et al., 2022) increases across the transition from childhood to adolescence, suggesting that adolescents may be more likely than children to seek out friends or media figures when learning about racial inequality.

It is also important to note that, across family members, friends, teachers, and internet sources, the race of the informant could also influence who children perceive to be knowledgeable and trustworthy. For example, when examining if children prefer to learn from Black or White teachers, Hwang and Markson (2023) found that children generally demonstrated a bias toward White teachers

when learning novel nonsocial information. It is possible that the same could be true for children and adolescents seeking to learn about the causes of racial inequality. Alternatively, given that people of color directly experience the negative effects of racism and discrimination (Roberts & Rizzo, 2021), youth could also perceive them to be, on average, more expert, reliable, or honest informants on the issue than White individuals might be.

Current Study Overview

This study extends prior research on children's understanding of racial inequality in the United States. Previous work in this area has primarily explored either children's responses to experimental scenarios (e.g., Elenbaas & Killen, 2017) or adolescents' evaluations of individual and structural causes (e.g., Diaz et al., 2022). Studies have not yet explored who children turn to in their environment to help them answer their questions about inequalities, nor why they trust those sources. Likewise, prior work on how children learn novel information from others has largely focused on young children's learning of nonsocial information gained from unfamiliar informants in an experimental context (Marble & Boseovski, 2020). To extend beyond this work, this study asked older children and early adolescents directly about their agreement with common individual and structural explanations for racial inequalities and explored who youth themselves prioritize seeking social information from amongst the sources actually available to them in their daily lives, and their self-generated explanations for why they trust their chosen informant in this context.

Framed by prior research on understanding inequality drawing on the SRD model (Elenbaas et al., 2020) and prior research on social learning drawing on the epistemic trust framework (Harris et al., 2018), the current study investigated older children's and early adolescents' assessment of structural (education and occupation) and individual (intelligence and effort) explanations for racial inequality, the principles they used to inform their own learning in this area (expertise, reliability, and honesty), and who in their lives they believed would reflect those principles (family members, friends, teachers, the internet, or social media). To answer these questions, the study placed 8- to 14-year-olds in a scenario where they could seek out more information to inform their beliefs about the causes of racial inequality between Black and White people in the United States.

Hypotheses

We predicted that, with age, participants would increasingly endorse statements reflecting structural attributions for racial inequality and explored whether they would explain their beliefs with reference to racism, privilege, or both (Elenbaas & Killen, 2017; Seider et al., 2022). We also explored whether, with age, participants would be less likely to endorse statements reflecting individual attributions for racial inequality and explain their beliefs by rejecting myths about equality and meritocracy, although prior research provided less support for an age-related directional prediction about statements reflecting individual attributions. For statements reflecting both structural and individual attributions, if age differences emerged, we planned to explore whether age differences in reasoning would mediate age differences in beliefs, in line with predictions from the SRD model (Elenbaas et al., 2020).

We predicted that participants would reference expertise, reliability, and honesty in explaining why they would seek someone out to learn about racial inequality (Harris et al., 2018), demonstrating a novel application of the epistemic trust framework to learning about this social issue. We did not make a priori predictions about which criteria would be associated with which people, but expected stability in the likelihood that older children and early adolescents reported an intent to seek out family members and teachers, and age-related increases in the extent to which they reported an intent to seek out friends and the internet or social media (Killen et al., 2002; Smetana & Rote, 2019; Vogels et al., 2022). As with statements reflecting attributions, if age differences emerged, we planned to explore whether age differences in epistemic reasoning would mediate age differences in beliefs about who could provide that trusted testimony.

We tested all hypotheses with a sample of 8- to 14-year-old majority-White youth representative of their region of the country in terms of gender, race, ethnicity, and socioeconomic status (SES), and included these demographic variables as covariates to explore potential variability in beliefs, reasoning, and decision making.

Method

Participants

Participants were 8- to 14-year-old children and early adolescents (N=202, M=10.82 years, SD=1.91 years) recruited between the summer of 2021 and summer of 2022 from nine community sites in Rochester, New York, such as public parks, public libraries, and summer camps. A priori power analyses in G*Power (Faul et al., 2009) based on the most complex models described in the data analytic plan indicated that a sample size of approximately 150 would be necessary to detect medium effects ($\beta=.20$; Elenbaas & Killen, 2016) with at .05 and power at .80. The total study N exceeds the required sample size estimate because not all children completed all measures.

Table 1 provides complete demographic information for the sample. The sample was relatively balanced by child gender. At the time of data collection, the median annual family income in the area was \$62,087 and 39% of adults held a Bachelor's degree or higher. Regional demographics were 70% White, 16% Black, 4% Asian, 3% Multiracial, and across groups, 10% Latinx (U.S. Census Bureau, 2021). Of note for the focus of this study, the region was also characterized by high de facto residential and school segregation between Black and White families (ACT Rochester, 2020). Relative to the region, the study sample was more racially and ethnically diverse (49% White), had a higher median family income level (average \$75,000–\$100,000), and more children had parents who held a Bachelor's degree or higher (51%).

Procedure

The study was approved by the Research Subjects Review Board at the University of Rochester, STUDY00006433: How children learn about their diverse world from others. Parent consent and child assent were obtained for all participants. All participants were individually interviewed for approximately 10–20 min by trained research assistants. Interviews were audio recorded and later transcribed.

Table 1Sample Demographics

Participant characteristic	%	n
Child age in years		
8	12	25
9	18	36
10	18	36
11	14	29
12	13	26
13	14	29
14	11	21
Child gender		
Boy	49	98
Girl	47	95
Another identity	4	9
Child race or ethnicity		
White	49	98
Black	21	43
Latinx	10	20
Asian	4	9
Multiracial or multiethnic	10	20
Another identity	6	12
Approximate annual family income		
<\$10K	1	2
\$10K-\$25K	6	12
\$25K-\$35K	4	7
\$35K-\$50K	10	21
\$50K-\$75K	10	20
\$75K-\$100K	7	15
\$100K-\$150K	12	24
\$150K-\$200K	13	26
\$200K-\$250K	2	3
\$250K-\$300K	3	6
>\$300K	3	7
Not provided	29	59
Parent highest level of education		
Some high school	2	4
High school graduate	8	17
Some college	11	23
Associate's degree	9	18
Bachelor's degree	20	40
Graduate or professional degree	31	62
Not provided	38	19

Note. N = 202.

Measures

At the outset of the interview, participants were asked "Have you ever talked about race before?" to briefly acclimate them to the topic of the study. Researchers acknowledged any comments the child made and responded neutrally before moving onto the interview questions. Participants were then asked to imagine that they had overheard people making statements that reflected common individual and structural attributions for racial inequality in the United States, to report how much they agreed or disagreed with what they heard, and to explain why. Next, participants were asked how likely they would be to discuss what they overheard with a family member, friend, teacher, and the internet or social media, to choose one person who they would be most likely to seek out, and to explain why.

Endorsement of Statements Reflecting Individual and Structural Attributions and Reasoning

Attributions. We presented participants with two statements reflecting individual and structural causes for racial inequality in

the United States, both of which implied a racial group-based hierarchy. To assess statements reflecting individual attributions, participants were told "Let's say you overheard some people talking about how White people are smarter and work harder than Black people," asked how much they agreed or disagreed that (a) White people are smarter than Black people and (b) White people work harder than Black people, and asked to explain why they agreed or disagreed with both points. To assess statements reflecting structural attributions, participants were told "Let's say you overheard some people talking about how White people have more chances to get a good education and good jobs than Black people do,' asked how much they agreed or disagreed that (a) White people have more chances to get a good education than Black people do and (b) White people have more chances to get good jobs than Black people do, and asked to explain why they agreed or disagreed with both points. All questions used a scale from 1 = strongly disagree to 6 = strongly agree.

Responses on the two individual questions were highly correlated, r = .533, p < .001, and averaged for analyses. Responses on the two structural questions were also highly correlated, r = .759, p < .001, and averaged for analyses.

Reasoning. Participants' reasoning about why they agreed or disagreed was coded into four different conceptual categories reflecting two main themes, individualistic explanations and structural explanations, expected a priori based on research from the SRD model (Elenbaas & Killen, 2017; Rizzo et al., 2020) and related research on causal reasoning about racial inequality (Seider et al., 2022). Table 2 presents the four categories, their definitions, and examples from each category. Responses could receive multiple codes. Responses that did not fit into any category were coded as "other." Coding was conducted by two graduate research assistants. Based on 20% of the interviews (n = 40), intercoder reliability was high: equality $\kappa = .87$, meritocracy $\kappa = .90$, privilege $\kappa = .82$, racism $\kappa = .85$, and other $\kappa = .87$.

Reasoning about the two questions within each attribution type (individual and structural) was highly consistent (e.g., if participants reasoned about equality in the "smarter" question they also reasoned about equality in the "work harder" question). For statements reflecting individual attributions: equality, $\chi^2(1, N = 202) = 6.94, p = .008$; meritocracy, $\chi^2(1, N = 202) = 31.06$, p < .001; privilege, $\chi^2(1, N =$ 202) = .61, p = .44; racism, $\chi^2(1, N = 202) = .50$, p = .49; and other, $\chi^2(1, N=202) = 21.54$, p < .001. For statements reflecting structural attributions: equality, $\chi^2(1, N = 201) = 30.61$, p < .001; meritocracy, $\chi^2(1, N = 201) = 18.16$, p < .001; privilege, $\chi^2(1, N = 201)$ 201) = 26.41, p < .001; racism, $\chi^2(1, N = 201) = 31.17$, p < .001; and other, $\chi^2(1, N = 201) = 14.55$, p < .001). For analyses, we created a frequency scale for each code within each attribution type (individual and structural). Frequencies ranged from 0 to 2, such that participants could have reasoned about each code/concept 0, 1, or 2 times in the individual context, and the same concept 0, 1, or 2 times in the structural context.

Epistemic Trust and Reasoning

Ratings. For each of the two attribution types (individual or structural), participants were told "Now let's say you wanted to talk to someone about what you overheard, that ... to learn more about it. How likely would you be to go to each of the following people or places for more information?" Participants were asked about a

family member, a friend, a teacher, or the internet or social media, all on the same scale from $1 = very \ unlikely$ to $6 = very \ likely$.

Likelihood to go to each person across the individual and structural contexts was highly correlated and averaged for analyses; family member: r = .456, p < .01, friend: r = .661, p < .01, teacher: r = .686, p < .01, and internet or social media: r = .728, p < .01.

Choices. Finally, participants were asked "Now think about the person or place you would be most likely to go to in order to find out more. Who are they, and why would they be a good person or place to ask about this?" Follow-up questions also asked specifically who participants would approach (e.g., "Which person in your family?") and explored how they would describe that person's race or ethnicity (e.g., "What is their race or ethnicity?").

Choices across the two attribution types (individual and structural) were highly consistent: family members, $\chi^2(1, N=173)=62.23$, p<.001; friends, $\chi^2(1, N=173)=40.83$, p<.001; teachers, $\chi^2(1, N=173)=45.86$, p<.001; internet or social media, $\chi^2(1, N=173)=81.32$, p<.001. For analyses, we created a frequency score ranging from 0 to 2 referring to the number of times (0, 1, or 2) participants chose each person/place (family, friends, teachers, and media) as the person/place they would be most likely to go to.

Reasoning. Participants' reasoning about trust in their preferred person was coded into four different conceptual categories. Three categories were expected a priori based on research on epistemic trust: reliability, expertise, and honesty (Harris et al., 2018). One category was identified and added post hoc: interpersonal trust. Table 3 presents the four categories, their definitions, and examples from each category. Responses could receive multiple codes, but eventually received only one code, as very few (<10%) could be multiply coded. Responses that did not fit into any category were coded as "other." Coding was conducted by two graduate research assistants. Based upon 20% of the interviews (n = 40), interrater reliability was high: expertise $\kappa = .92$, reliability $\kappa = .93$, honesty $\kappa = 1.0$, interpersonal $\kappa = .92$, and other $\kappa = .90$.

Reasoning across the two attribution types (individual and structural) was highly consistent (e.g., if participants reasoned about expertise when explaining who they would seek out in the individual context they also reasoned about expertise when explaining who they would seek out in the structural context), for expertise, $\chi^2(1, N=173)=21.67,\ p<.001;$ reliability, $\chi^2(1, N=173)=17.80,\ p<.001;$ honesty, $\chi^2(1, N=173)=26.06,\ p<.001;$ interpersonal, $\chi^2(1, N=173)=26.74,\ p<.001;$ other, $\chi^2(1, N=173)=29.49,\ p<.001)$. For analyses, we created a frequency scale for each code across contexts. Frequencies ranged from 0 to 2, such that participants could have reasoned about each code/concept 0, 1, or 2 times as they explained why they would seek out their chosen person.

Demographics

See Table 1 for full demographic information for the sample. Children self-reported their age (from 8 to 14 years) and their gender in an open-ended format. Both children and parents reported children's race and/or ethnicity in an open-ended format; in instances of disagreement, parent report was used in analyses. Parents reported their highest level of education on a scale from $1 = some \ high \ school$ to $6 = graduate \ or \ professional \ degree$, and their approximate

 Table 2

 Structural and Individual Attributions Reasoning Coding System

Category	Definition	Example
Equality	References to equality between racial groups and/or absence of racial group differences	"I mean because like some, in other like countries and stuff, some Black people might not get a good education [and] good jobs, but here in the USA, from what I understand everyone should be equal and they should be able to get what they need and what they deserve" (9-year-old)
		"This is just not true, skin color does not determine how hard you work or how smart you are. People who think like that, well their skin color also doesn't determine how dumb they are." (13-year-old)
		"Strongly disagree, because I feel like since everyone's equal they can have a equal chance at learning and education it doesn't matter what color your skin is." (12-year-old)
Meritocracy	References to personal characteristics that contribute to success or failure	"It doesn't matter what you look like, it just matters how much you care about something and how much you're willing to put into something that matters, how hard you're willing to work on it." (11-year-old)
		"I disagree because it depends if they like the job." (8-year-old)
		"Because no matter what race you are, it's probably the intelligence you have that's going to get you a better success, not your color." (9-year-old)
Privilege	References to racial disparities in access to resources and/or opportunities that benefit some groups	"Agree, because White people have always been able to get whatever they want and they can get away with whatever they want especially in today's time, and history too, and it's kind of just because of their skin color and who they're related to or how much power they have." (14-year-old)
		"Well in past years White people have been more favored and there have been laws keeping Black people or colored people out of the workplace which means that majority of people who do get jobs or certain positions are White." (12-year-old)
		"I think it's unfair that White people get more opportunities but I do think it's true unfortunately. Because like the way that society has built like these ideas into our heads because of White privilege and history and how history repeats itself history has patterns, um because like first there was, like people realized the differences in each other, and so they used that to their advantage, um, and like [thought] some people don't deserve like human rights—[thought] some people deserved human rights more than others because of the way they look or the way they act." (13-year-old)
Racism	References to racism and racial inequality restricting success for some groups	"Well society is somewhat biased against Black people, at least in this country. This country has a very very long history of slavery and then of being cruel and denying rights to anyone who isn't a White male which is unfortunate." (13-year-old)
		"Because this world is kinda like built around the fact that well not the fact, the idea that White people are quote unquote better than everyone else. So the world is still impacted by those beliefs that were built a long time ago. So things can still be more challenging for a person of color to get the same opportunities." (14-year-old)
		"Because for like years and years, Black people have um, they haven't been struggling, but they have been like um oppressed and people have been putting them down and making them feel worthless and stuff and I don't think anyone works harder, I think it's just that it's a bunch of stereotypes and stuff. But like sometimes I think the oppressed people are stronger and stuff because like we have survived from like so many years and like the oppressors have been trying to kill us off but we still thrive Um well in this situation or the situation I have in my head, like the White people are the oppressors and the Black people are being oppressed." (13-year-old)

annual family income on a scale from 1 = less than \$10,000 to 11 = more than \$300,000.

Data Analytic Plan

Analyses were conducted using IBM SPSS 28 (IBM, 2021). We used linear regressions to examine participants' endorsement of statements reflecting individual and structural attributions for racial inequality, reasoning about why, likelihood to seek out each person to discuss racial inequality, and reasoning about why. All models tested for differences in participants' responses across 8–14 years of age. To explore whether age differences in reasoning would mediate age differences

in decisions, we used a bootstrapping method (Preacher & Hayes, 2008), which generates an empirical approximation of the sampling distribution of the total and specific indirect effects through repeated random resampling with replacement from the original data set, using this distribution to calculate p values and CIs for the effects. A 95% confidence interval (CI) containing zero reflects nonsignificant effects. For this analysis, we used 5,000 bootstrap samples. Across all models, standardized betas (β) are reported as effect size indices and standard errors (SEs) as indices of point estimate precision.

The sample was evenly balanced by gender, majority White, and majority middle- to upper-middle SES. Although prior research did not provide enough evidence to generate a priori hypotheses for this

 Table 3

 Epistemic Reasoning Coding System

Category	Definition	Example
Expertise	References to competency in and/or knowledge of a subject	"I would probably ask my grandparents, because they've been around a long time, and they probably know a lot about it. Probably my grandma because she is older than my grandpa." (9-year-old)
		"A teacher. I trust them the most to know about information because they, their job is to teach people about different topics and it just seems easier if, more likely that a teacher or an adult would know more than a friend who's still would be a teen, like my friends are all teens. It's more likely for an adult to know more than a teenager." (13-year-old)
		"Family member because my mom is a teacher in the city schools so she knows about this stuff first hand and my dad does a lot of stuff, he's with the PAB if you've heard of that? The police accountability board and stuff, so both my parents are pretty involved with this stuff." (13-year-old)
Reliability	References to prior accuracy	"My aunt. Because she gives good advice about things." (12-year-old)
		"Family member, again we just talk about these things all the time and when we see it, we like to point it out and like discuss how that is wrong." (13-year-old)
		"Cause when I ask my family members anything about like a race or something, they will sit there and explain it to me and explain how they're treated and everything. So, my mom, she would sit there, have a talk with me and everything. After she's done talking and answering my questions, she'll ask me why I asked that, and then she'll add more to what she first said." (13-year-old)
Honesty	References to telling the truth	"Because family members are much more trustworthy than teachers, friends, are, you kind of know them but you haven't known them that much, and the internet some people on the internet are either disrespectful or tell lies, and there are not that many people who would tell the truth like a family member, friend, or teacher would." (10-year-old)
		"Family member I know they wouldn't lie to me they would just give me hard facts and they wouldn't try to soften it like that because they'd be completely wrong. I trust them because again I've lived with them my entire life and they're not going to sugarcoat racism." (12-year-old)
		"Because, my family is very honest with each other, especially my grandparents, they have many, many different news sources and I think that they're really the ones to ask. A friend will always say it through their point of view, and not saying a family member wouldn't, but one of my family members would be a lot more likely to give me the full truth" (11-year-old)
Interpersonal	References to interpersonal relationships, closeness, and support	"You probably trust your family the most instead of like a friend, you don't know if they're going to tell someone else. You don't know if they're going to start like a bunch of gossip or anything like that." (11-year-old)
		"Family member, because I know about them, I trust them, and I love them." (8-year-old)
		"Friend, because I feel like my friends understand more than parents. They be like why? Why? What? What? I feel like my friends have bigger ears to listen because sometimes I have to repeat myself and then I forget what I said [with my family]." (9-year-old)

study about the roles of gender, race/ethnicity, and SES in participants' decisions and reasoning, we checked all three variables as potential covariates, particularly given the imbalance in prior research between studying individual attributions with majority White samples and structural attributions with majority Black or Latinx samples. Associations of gender, race/ethnicity, and SES (as indexed by parent education) were few and inconsistent, and the inclusion or exclusion of these covariates did not change the pattern of significance regarding our primary hypotheses and open questions. We did not retain these variables as covariates in the analyses reported in the article; the following analyses test only for age differences in our outcomes. However, we include results for all of our models with all three of these covariates included in the online supplemental materials in order to inform future research.

Transparency and Openness

We report power analyses for sample size determination (above), data exclusions (none), and all measures (above). We do not have permission to publicly share data from this study. The study and its analyses were not preregistered.

Results

The following sections report the results of the data analytic plan above. Table 4 displays descriptive statistics and correlations for all study variables.

Endorsement of Statements Reflecting Individual and Structural Attributions and Reasoning

Individual Attributions

Overall, participants did not endorse statements reflecting individual attributions for racial inequality in the United States, M = 1.64 (SD = .75). The overall regression model was not significant, F(1,200) = 1.65, p = .20, $R^2 = .008$. There was no significant effect for age, b = -.04 (.03), $\beta = -.09$, F(1,200) = 1.65, p = .20 (see Figure 1).

 Table 4

 Descriptive Statistics and Correlations for All Study Variables

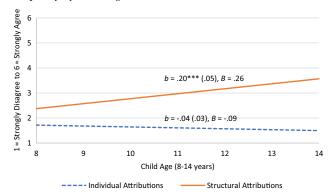
Variable	n	M	SD	1	2	3	4	5	6	7	8	9	10
1. Individual endorsement	202	1.64	0.75	_									
2. Structural endorsement	202	2.95	1.44	.057	_								
3. Family likelihood	173	4.86	1.10	.042	.001	_							
4. Friend likelihood	173	3.68	1.33	047	.035	.221**	_						
Teacher likelihood	173	3.62	1.21	.000	035	.215**	.767**	_					
6. Internet or social media likelihood	173	2.39	1.48	009	.134	.002	.163*	.148	_				
7. Child age	202	10.82	1.91	090	.262**	021	.124	.118	.064	_			
8. Child gender	202	0.49	0.50	.217**	037	069	256**	251**	051	034	_		
9. Child race	202	0.51	0.50	048	084	007	113	.007	.058	088	.050	_	
10. Parent income	143	6.02	2.43	109	002	.092	154	064	058	139	.026	.339**	_
11. Parent education	164	4.58	1.49	199*	.071	.127	109	103	108	095	078	.324**	.647**

Note. Gender coded as 1 = male; race coded as 1 = White. * p < .05. ** p < .01.

Reasoning. Within the individual attribution questions, reasoning about equality was high (M=1.23, SD=.73, e.g., "Because race doesn't affect your abilities and what you can do and how smart you are"). Meritocracy was moderate (M=.44, SD=.67, e.g., "Because anyone can be smart if they work hard"). Racism was low to moderate (M=.28, SD=.50, e.g., "Because Black people have to work twice as hard to get what they want. Because that's just how the world is nowadays. For some messed up reason, no one can accept that Black people can be as equal as White people"). Privilege was low (M=.10, SD=.31, e.g., "Maybe White people may be smarter because they have better education but work wise they work equally. And being smart is maybe knowing more, but I'd say they are equal, they work hard equally, but they turn out to be in different places because of how they start out"). See Figure S1 in the online supplemental materials.

The overall regression model for meritocracy was significant, $F(1, 200) = 5.11, p = .025, R^2 = .03$, and with age participants were more likely to reason about meritocracy, b = .06 (.03), $\beta = .16$, F(1, 200) = 5.11, p = .025. The overall regression model for privilege was also significant, F(1, 200) = 9.34, p = .003, $R^2 = .05$, and with age participants were more likely to reason about privilege, b = .03 (.01), $\beta = .20$, F(1, 200) = 9.34, p = .003. The overall regression

Figure 1
Endorsement of Individual and Structural Attributions for Racial
Inequality by Child Age



Note. SEs are in parentheses. See the online article for the color version of this figure.

models for equality, F(1, 200) = 1.20, p = .16, $R^2 = .01$, and racism, F(1, 200) = .94, p = .334, $R^2 = .005$, were not significant.

Thus, endorsement of statements reflecting individual attributions remained stable (and low) across 8–14 years. Though there were some age-related differences in participants' reasoning, since the age effect for endorsement was not significant, we did not explore potential mediation by reasoning.

Structural Attributions

Overall, participants moderately endorsed statements reflecting structural attributions for racial inequality in the United States, M = 2.90 (SD = 1.42). The overall regression model was significant, F(1, 200) = 14.72, p < .001, $R^2 = .07$, and with age participants were more likely to endorse statements reflecting structural attributions, b = .20 (.05), $\beta = .26$, F(1, 200) = 14.72, p < .001 (see Figure 1).

Reasoning. Within the structural attribution questions, reasoning about equality was moderate (M = .70, SD = .78, e.g., "Now things have gotten better and now Black people and White people, they can get the same jobs. There's a lot of people that have like stood up for Black rights and that White people and Black people should be treated equally with like jobs and everything, and people have taken it seriously so now they are trying to improve on that"). Racism was moderate (M = .61, SD = .77, e.g., "I think that a lot of the time because of systemic racism people of color end up in poorer neighborhoods which is a restriction, and also just bias, whether implicit or not, can restrict job opportunities as well as how people are perceived in general"). Privilege was low to moderate (M = .33, SD = .61, e.g., "Because White people are more privileged than us, you look at a White person and think this person is ready to learn, this person wants to learn"). Meritocracy was low (M = .21, SD = .50, e.g., "It shouldn't matter, I think [it's] based on how the person is. Like if you have experience for the job or how hard you want it"). See Figure S1 in the online supplemental materials.

The overall regression model for racism was significant, F(1, 199) = 15.83, p < .001, $R^2 = .07$, and with age participants were more likely to reason about racism, b = .11 (.03), $\beta = .27$, F(1, 199) = 15.83, p < .001. The overall regression model for privilege was also significant, F(1, 199) = 8.20, p = .005, $R^2 = .04$, with age participants were more likely to reason about privilege, b = .06 (.02), $\beta = .20$, F(1, 199) = 8.20, p = .005. The overall regression model for equality was also significant, F(1, 199) = 8.21, p = .005, $R^2 = .04$, with age participants were

^{***} p < .001.

less likely to reason about equality, b = -.08 (.03), $\beta = -.20$, F(1, 199) = 8.21, p = .005. The overall regression model for meritocracy was not significant, F(1, 199) = .38, p = .54, $R^2 = .002$.

Thus, early adolescents endorsed statements reflecting structural attributions to a greater extent than older children and were more likely to explain their beliefs with reference to both racism and privilege.

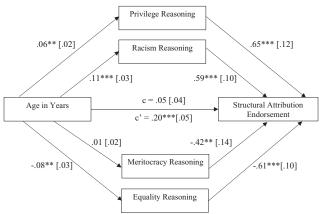
Mediation. Because we found age differences in both endorsement and reasoning about statements reflecting structural attributions, we explored if the age differences in endorsement might be mediated by age differences in reasoning. The model testing mediation was significant, F(1, 199) = 15.19, p < .001, $R^2 = .27$ (see Figure 2). As demonstrated by a 95% CI not containing zero, the total indirect effect of age on endorsement of statements reflecting structural attributions was significant, b = .15, $\beta = .20$, 95% CI [.07, .24]. Furthermore, the specific indirect effects of reasoning about racism, b = .06, $\beta = .09$, 95% CI [.02, .11], privilege, b = .04, $\beta = .05$, [.01, .08], and equality, b = .05, $\beta = .07$, [.02, .09], were all significant. Thus, increases in reasoning about racism and privilege and decreases in reasoning about equality over the transition from childhood to adolescence likely underlie increases in endorsement of statements reflecting structural attributions for racial inequality.

Epistemic Trust and Reasoning

Ratings

Overall, participants were highly likely to seek out family members to discuss racial inequality, M = 4.86 (SD = 1.07), somewhat likely to seek out friends, M = 3.68 (SD = 1.33), somewhat likely to seek out teachers, M = 3.62 (SD = 1.21), and unlikely to seek out media sources, M = 2.39 (SD = 1.48) (see Figure S2 in the online supplemental materials). None of the overall regression models examining age differences were significant: family members, F(1, 171) = .07, P = .79, P = .00; friends, F(1, 171) = 2.70, P = .10,

Figure 2
Reasoning About Privilege and Racism Mediates the Association
Between Age and Endorsement of Structural Attributions for
Racial Inequality



Note. SEs are in parentheses. C = total effect and c' = indirect effect. ** p < .01. *** p < .001.

 $R^2 = .02$; teachers, F(1, 171) = 2.40, p = .123, $R^2 = .01$; media, F(1,171) = .71, p = .40, $R^2 = .00$.

Choices

Participants' choices of who they were most likely to go to for more information differed significantly from a chance for both individual, $\chi^2(3, N=173)=198.4, p<.001$, and structural, $\chi^2(3, N=172)=185.35, p<.001$, questions. Across contexts, 66% of participants sought out their family members, 13% sought out a friend, 15% sought out a teacher, and 6% sought out the internet or social media (see Figure S3 in the online supplemental materials). None of the overall regression models examining age differences were significant: family members, $F(1, 172) = .58, p=.45, R^2 = .00$; friends, $F(1, 172) = .00, p=.99, R^2 = .00$; teachers, $F(1, 172) = .83, p=.46, R^2 = .00$; internet or social media, $F(1, 172) = .12, p=.73, R^2 = .00$.

Within participants who sought out family members, 88% went to one or both of their parents, 7% went to their grandparents, and 5% went to another family member. Within those who sought out friends, 56% went to their best friend, and 44% went to another or no specific friend. Within those who sought out teachers, 22% went to a history or social studies teacher, and 78% went to a different teacher. Within those who sought out the internet or social media, 65% mentioned looking it up on the internet in general, and 45% mentioned something else.

The racial/ethnic backgrounds of participant's most likely sources varied. Of participants who sought out a family member, 40% went to someone identified as White, 30% to someone identified as Black, and 30% to someone identified as having a different racial/ethnic identity. Of participants who sought out friends, 48% went to someone identified as White, 34% to someone identified as Black, and 18% to someone identified as having a different racial/ ethnic identity. Of participants who went to a teacher, 69% went to someone identified as White, 12% to someone identified as Black, and 19% to someone identified as having a different racial/ethnic identity. Finally, of participants who sought out the internet or social media, 5% went to someone identified as White, 0% went to someone identified as Black, and 95% went to someone identified as having a different racial/ethnic identity than Black or White, or no racial/ethnic identity (e.g., a webpage by an unknown author).

Additionally, 81% of White youth chose someone identified as White as their most likely source, 2% chose someone identified as Black, and 17% chose someone identified as having a different racial/ethnic identity. For youth of color, 20% chose someone identified as White as their most likely source, 38% chose someone identified as Black, and 42% chose someone identified as having a different racial/ethnic identity.

Overall, participants were very likely to seek out family members, moderately likely to seek out friends and teachers, and unlikely to seek out the internet or social media to discuss racial inequality, but there were no age-related differences in their likelihood to seek out each person.

Reasoning

Reasoning about expertise was high, M = .66 (SD = .90); for example, "My mom ... because she knows like back in the day,

she like was very focused on history and she has a lot of books on history in her room, so she probably understands way more and be able to tell me more information so I would understand and think it through." Interpersonal trust was high, M = .60 (SD = .90); for example, "Family member, because they know and are more the same as me and the person that are always next to me. Because they are a more trusted person than the other people." Reliability was low, M = .18 (SD = .45); for example, "Family member ... They've been able to answer all my questions before, why would they not answer this?" Honesty was low, M = .09 (SD = .35); for example, "Family member because I feel like they would give me their honest answer no matter how brutal it is ..." (see Figure 3). None of the overall regression models examining age differences were significant: expertise, F(1, 172) = 1.09, p = .30, $R^2 = .00$; interpersonal, F(1, 172) = 3.0, p = .09, $R^2 = .02$; reliability, F(1, 172) = 2.03, p = .16, $R^2 = .01$; and honesty, F(1, 172) = .23, p = .63, $R^2 = .00$. As there were no significant age effects, we did not explore potential mediation by reasoning.

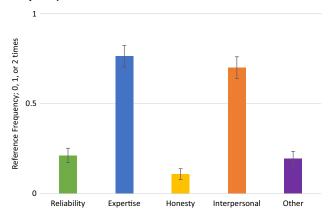
Thus, participants prioritized expertise when determining whom to seek out to learn more about racial inequality. Interestingly, they also prioritized interpersonal trust, a criterion that has rarely been examined in past research in epistemic trust. However, the reasons participants gave for seeking out one person or another did not differ with age.

Discussion

Guided by prior research drawing on the SRD model (Elenbaas et al., 2020), and theories of epistemic trust (Harris et al., 2018), this study examined how 8- to 14-year-old youth thought about the causes of racial inequality between Black and White people in the United States, the epistemic principles they used to guide their own learning in this area, and who they believed would reflect these principles. The results make three main novel contributions to developmental scientists' understanding of how children shape their own learning about social issues including racial inequality. First, over the transition from late childhood to early adolescence,

Figure 3

Epistemic Reasoning When Seeking to Understand Racial Inequality



Note. Bars represent the standard error of the mean. See the online article for the color version of this figure.

participants increasingly endorsed statements reflecting structural attributions for racial inequality in the United States and reasoned about privilege and racism. Second, both older children and early adolescents used epistemic principles to determine who to seek out to inform their own beliefs about racial inequality, clearly prioritizing both expertise (i.e., knowledge of the subject matter) and interpersonal trust (i.e., relationship closeness). Third, participants primarily associated these principles with their family members and were more likely to seek them out to discuss the issue than their friends, teachers, or the internet or social media. Overall, this study is a first step in understanding how children play an active role in shaping their own learning about racial inequality in the United States.

Individual and Structural Reasoning About Racial Inequality

Between 8 and 14 years of age, youth moved from disagreeing with statements reflecting structural attributions for racial inequality to moderately (but not fully) endorsing them, with increased reasoning about privilege and racism explaining this age-related increase. This is consistent with similar prior work showing that from age 14 and older, Black and Latinx youth often attribute differences in access to opportunities to privilege and racism, but also frequently endorse meritocratic attributions as well (Seider et al., 2022). Endorsement of statements reflecting individual attributions stayed consistently low across all ages in this study, with children disagreeing that race is linked to one's intelligence and effort (e.g., "Race doesn't determine how smart you are"). Still, within the structural reasoning contexts, many younger children denied differences in access to opportunities between racial groups in favor of assertions of equality and meritocracy (e.g., "Because some people don't get good jobs and some people do, but it's not based off their skin color, it goes based off what you know"), illustrating that even when children do not explicitly endorse statements reflecting individual attributions, this does not mean they necessarily endorse structural ones.

In early adolescence, participants began to shift to moderate agreement with statements reflecting structural attributions for racial inequality, reasoning about the roles of privilege and racism on access to opportunities. Some early adolescents were nuanced in their explanations, talking, for example, about the links between race and wealth, and how this impacts opportunities for success (e.g., "A lot of the time people of color live in poorer neighborhoods and therefore don't have access to the quality of education that a lot of richer neighborhoods have. And to become successful they have to overcome that, which is arguably harder than being born into a position of privilege"). Some also referenced the privileges that White people have in comparison to Black people (e.g., "Cause most White people are more privileged and most people look at a Black person and think they're uneducated, hoodlum, poor, dirty, and stupid"), and the racism that Black people face in both educational (e.g., "So, for like, education, like there are a lot of racist people. And if someone that helps kids in, like the principal or vice principal or someone like that, if they're actually racist, they might find a way to not let the child get in ...") and occupational (e.g., "They do judge, they do judge people who they hire based on their race") settings. Such reasoning shows a growing awareness in early adolescence that White privilege exists and influences opportunities in the United States.

Importantly, however, while some early adolescents did reason about privilege and racism, others continued to assert that Black and White people have equal opportunities for success. This parallels prior work which finds that across adolescence some youth begin to think more critically about social systems while others continue to assert meritocratic and equality-based reasoning when explaining access to opportunities in the United States (Seider et al., 2022). Together, this suggests that, starting in early adolescence, U.S. youth begin to recognize systemic differences in access to opportunities between White and Black people in the United States, but these differences are not universally endorsed (Bañales et al., 2020; Seider et al., 2022).

Notably, these findings emerged in a sample of primarily White children and adolescents. Given recent calls to examine how White youth recognize and understand White privilege (Moffitt & Rogers, 2022), this study provides key evidence that White early adolescents are indeed capable of recognizing unequal U.S. systems, similar to prior findings with samples of adolescents of color (Bañales et al., 2020; Seider et al., 2022). Promoting antiracism in White youth is a key to fostering a more equitable society and requires collective action challenging structural inequalities (Hazelbaker et al., 2022). In this study, by early adolescence, White youth were able to (at least moderately) recognize and accept the role of Whiteness in access to opportunities when the possibility for it was posed. This is important given that acknowledging an inequality exists is a prerequisite for seeking to rectify it (Elenbaas et al., 2020).

Going forward, it is crucial to continue to examine how structural beliefs develop among children and adolescents from multiple racial and ethnic backgrounds, as well as why some adolescents continue to endorse individualistic reasoning while others do not, including potentially the individual differences and family experiences that may contribute to this. For example, it would be interesting to explore how aspects of youth's home environments, like their parent's system justification beliefs (the idea that some social inequality is a natural and acceptable part of society; Jost & Hunyady, 2005), might contribute to thinking about the validity of individual and structural attributions for racial inequality. This may be especially important to explore given the high likelihood for children to seek their parents for explanations on the topic, as observed in this study.

It is also important to note that our attribution questions asked participants about their agreement with statements reflecting common attributions for the causes of racial inequality in the United States without explicitly linking either question to the existence of racial inequality. Future work should more directly link each attribution with racial inequality in the United States or ask youth open-endedly if they think there is racial inequality in the United States and what they believe are its causes.

Epistemic Reasoning and Learning About Racial Inequality

Prior work on intergroup relations has implied that youth's family members, friends, teachers, and the media are important influences upon children's intergroup attitudes (Moffitt & Rogers, 2022). Yet, no work has focused on if and why youth trust the information these sources provide. We investigated if principles of epistemic trust in testimony, previously studied in terms of children's learning about nonsocial issues (Harris et al., 2018), could be applied to

examine why youth trust certain people over others when seeking out information about racial inequality. We found that indeed, youth did rely on epistemic principles, and were consistent in their use of these principles from late childhood into early adolescence. Reasoning about expertise (e.g., "My parents know a lot about sort of this type of thing") and interpersonal trust (e.g., "Family member because I know that I feel more comfortable with them ...") were especially prominent.

This study shows a novel application of the epistemic trust framework to how children and adolescents evaluate potential informants (discussion partners) on their ability to provide important social information to help facilitate their learning. It also identified a new key epistemic principle that children employed when seeking to learn more about racial inequality: interpersonal trust. Children of all ages reasoned about this frequently, explaining that they would go to their chosen person, often a family member, because of interpersonal closeness and the specific relationship they have with them. This is important because the large majority of prior work in epistemic trust has used experimental studies where unfamiliar adult researchers convey information to participants, but the real sources of testimony in children's and adolescent's lives are much more likely to be people they already know. While the conceptual category of interpersonal trust was not predicted a priori, some recent research is beginning to examine its role in children's learning (e.g., Q. Li et al., 2021). This study provides further evidence that perceptions of who is interpersonally trustworthy in social learning contexts should be included in future research on epistemic trust; it is an important principal youth decidedly value.

Who Is Trustworthy

Both older children and early adolescents in this study primarily chose to seek out their family members to discuss racial inequality, reasoning that they were the most expert and interpersonally trustworthy. Though we hypothesized that youth might increasingly seek out their peers with age (Smetana & Rote, 2019), the finding that youth of all ages prioritize their family members make sense in light of other work showing that continuity in relational closeness, strong emotional ties, and help in navigating their environment are key features of parent-child relationships, even into adolescence (Laursen & Collins, 2009). Youth in this study frequently referenced such ties in explaining why they would go to a family member (e.g., "Family member because ... they could explain it more and that you can express your feelings more because they understand you and they like to just help you understand"), suggesting that trust in one's family and the closeness youth feel to them is a strong motivator to seek them out when learning new information on racial inequality.

These results are also interesting considering our majority White sample. Prior research shows that White parents rarely discuss race with their children (Williams & Banerjee, 2021), and thus White parents may not be fully prepared to have such conversations with their children, even if children perceive them to be the best source to go to. In addition, research also shows that White parents are more likely to promote colorblind ideologies to their children, conveying that race does not matter and should not be acknowledged (e.g., Abaied & Perry, 2021). These kinds of socialization messages, while often intended to teach race egalitarianism, actually perpetuate racial inequality by failing to acknowledge real racial disparities between

Black and White people and implying that structural causes of racial inequality are a myth (Abaied & Perry, 2021). Considering that youth seem to view their parents as an expert source on racial inequality, it is concerning that White youth may be further exposed to such messaging when they ask their parents questions about the issue. Moreover, because the contexts of White children's and adolescents' lives do not always include people who challenge their beliefs about racial inequality, over time, a single source of discussion and engagement, although interpersonally warm, accepting, and trustworthy, may allow White children to ignore or accept historical and current disparities that benefit them. That is, their strong tendency to view (White) parents as epistemic authorities on racial inequality may leave White youth at risk of receiving a limited set of opinions on how race operates in the United States, constraining their learning relative to what they could explore with other people, such as friends and teachers. Given these possibilities (i.e., White parents' relative underpreparation for conversations about racial inequality and the risks of a single source of testimony for White children's learning in this area), future work should continue to examine how White parents might approach these conversations, their actual level of knowledge, and youth's evaluations of their

Interestingly, and on a related point, while the majority of youth were most likely to go to a family member for more information (66%), a large number also went to other sources (34%), like their friends, teachers, and the internet or social media. For example, one participant said that they would go to their friend because of that friend's intense personal experiences with racism: "I have a friend ... [who] really knows about racism and she's been through it cuz her uncle died by a White police officer. The police officer shot him and that's how I learned." Likewise, youth sometimes chose the internet or social media, such as one participant who explained that social media could provide them with more diverse views: "Because on social media there are people with all different types of backgrounds and history and umm jobs and experiences, who have experienced other things, umm different from me, so I find it's better to go to social media for that than a family member." Similarly, some youth went to a teacher based on perceived professional expertise: "Teacher, because they've dealt with job experience ... [and] their purpose is to educate you on things.'

Such findings align with recent prior work by Diaz et al. (2022), on personal experiences with friends, school, and media impacting beliefs about structural inequality. This is promising because it shows that while (majority White) youth often do rely on their family members when seeking new information about the causes of racial inequality, they do not exclusively do so. Instead, they are likely to seek knowledge about racial inequality from a variety of people and places, depending on who they perceive to have expertise and be interpersonally trustworthy.

Limitations and Future Directions

This study had three primary limitations that also suggest directions for future research. First, future research should examine how a more racially/ethnically and socioeconomically diverse sample might reason about the epistemic principles of expertise and interpersonal trust when seeking to learn about racial inequality. For example, within the category of "expertise" some children of color mentioned their family members' direct experiences with

racism, in line with prior work on family racial socialization, when explaining why they were experts on the topic; for example, "I have a lot of old family members so they could have experienced some of what we're talking about today, and if they have then they can give me good background knowledge based on what they already know and have experienced." By contrast, some White children also perceived their parents to be experts, but in terms of more general life experiences; for example, "Because my mom works with a lot of different people and ethnicities and she would know about discrimination ..." Given prior work showing that White parents are more likely to avoid discussions about race with their children (Williams & Banerjee, 2021), further research may benefit from examining how White parents are conveying expertise about racial inequality to their children.

This study was also cross-sectional, which limits the conclusions we can draw regarding age and directionality of beliefs. For instance, the epistemic principles youth prioritize and who they associate them with may change in late adolescence, given the importance of peers later in the teenage years (e.g., Smetana & Rote, 2019). It is also possible that when it comes to matters of social inequality youth do not seek out their friends as much as they might on other topics, perhaps because of perceived topic sensitivity (e.g., one child said "[I'd go to my family] because they've always been who I'm open with to talk about touchy subjects like race and stuff"). Future work should examine how youth reason epistemically as they move from early to late adolescence, how trust in testimony may shift, and the implications for inequality beliefs. Additionally, our measure of youth's beliefs in individual and structural attributions did not specifically link them to racial inequality in the United States (e.g., "There is racial inequality because White people have more chances ..."). Future work should more directly link both types of attributions to the racial group-based hierarchy in the United States that is attributes racial inequality to either differences in individual characteristics, or societal structures.

Finally, future work should examine the role of intergroup contact on developing beliefs about racial inequality. For instance, some participants referenced seeing their friends or members of their community succeed in explaining their individual and structural beliefs (e.g., "Strongly disagree ... all my friends are that color and they get higher test scores than some of my classmates who are White"). When examining who youth sought out as their most likely source, we also saw that, descriptively, White youth seemed to be more likely to go to White sources, while youth of color (as a group, including Black youth) were more varied. However, through youth's reasoning about their most likely source, we found that informant choices were consistently based upon who they perceived to be an expert on the topic, or whom they had a close interpersonal relationship with, regardless of participant's own racial/ethnic identity (i.e., there were no significant differences in likelihood to go to a certain source or epistemic reasoning for why they chose that source across White youth and youth of color).

Future research should continue to examine this interplay, where youth of different racial backgrounds seek out informants for the same reasons, but the racial/ethnic backgrounds of the sought-out-sources seem to differ by participant race. This likely differs as a function of factors like neighborhood diversity, peer group racial composition, teacher demographics, and youth's parents' own friend groups. For example, Hwang and Markson (2023) found that children with greater neighborhood diversity were more likely to seek

information from a Black teacher over a White teacher (when both were available in an experimental paradigm) than those with less neighborhood diversity were. This is especially important to note when considering the current sample, where participants live in a highly segregated region of the country. Perhaps White youth in this sample did not seek out informants of color as often because of limited access to, for example, teachers of color. Though it is beyond the scope of the current study, it would be fruitful to examine how such experiences may be impacting youth's perceptions of the causes of racial inequality in the United States, who knows about racial inequality and why, and how this impacts their endorsement of individual and structural causes.

Conclusion

In conclusion, this study found that children's and adolescents' endorsement of statements reflecting structural attributions for racial inequality between Black and White people in the United States increased between 8 and 14 years of age, while their endorsement of statements reflecting individual attributions remained consistently low. We found that youth primarily sought expertise on the subject matter and interpersonal closeness when determining who to seek out for more information on racial inequality and often associated these characteristics with their parents rather than friends, teachers, or the internet or social media. Overall, these findings contribute to developmental scientists' understanding of who children see as relevant sources for learning about racial inequality, with implications for how and with whom youth may be most likely to critique inequitable systems.

References

- Abaied, J. L., & Perry, S. P. (2021). Socialization of racial ideology by White parents. Cultural Diversity and Ethnic Minority Psychology, 27(3), 431– 440. https://doi.org/10.1037/cdp0000454
- ACT Rochester. (2020). Hard facts update: Race and ethnicity in the nine county greater Rochester area. https://actrochester.org/tinymce/source/2020HardFactsUpdate/2020HardFacts.pdf
- Bañales, J., Marchand, A. D., Skinner, O. D., Anyiwo, N., Rowley, S. J., & Kurtz-Costes, B. (2020). Black adolescents' critical reflection development: Parents' racial socialization and attributions about race achievement gaps. *Journal of Research on Adolescence*, 30(S2), 403–417. https://doi.org/10.1111/jora.12485
- Bigler, R. S., & Liben, L. S. (1993). A cognitive-developmental approach to racial stereotyping and reconstructive memory in Euro-American children. *Child Development*, 64(5), 1507–1518. https://doi.org/10.1111/j.1467-8624.1993.tb02967.x
- Corriveau, K., & Harris, P. L. (2009). Choosing your informant: Weighing familiarity and recent accuracy. *Developmental Science*, 12(3), 426–437. https://doi.org/10.1111/j.1467-7687.2008.00792.x
- Diaz, B., May, S., & Seider, S. (2022). Black and Latinx adolescents' developing understandings about poverty, inequality, and opportunity. *Applied Developmental Science*, 27(2), 115–135. https://doi.org/10.1080/10888691.2022.2040361
- Diemer, M. A., Pinedo, A., Bañales, J., Mathews, C. J., Frisby, M. B., Harris, E. M., & McAlister, S. (2021). Recentering action in critical consciousness. *Child Development Perspectives*, 15(1), 12–17. https://doi.org/10 .1111/cdep.12393
- Elenbaas, L., & Killen, M. (2016). Children rectify inequalities for disadvantaged groups. *Developmental Psychology*, 52(8), 1318–1329. https://doi.org/10.1037/dev0000154

- Elenbaas, L., & Killen, M. (2017). Children's perceptions of social resource inequality. *Journal of Applied Developmental Psychology*, 48, 49–58. https://doi.org/10.1016/j.appdev.2016.11.006
- Elenbaas, L., Rizzo, M. T., & Killen, M. (2020). A developmental science perspective on social inequality. *Current Directions in Psychological Science*, 29(6), 610–616. https://doi.org/10.1177/0963721420964147
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. https://doi.org/10.3758/ BRM.41.4.1149
- Guerrero, S., Sebastián-Enesco, C., Pérez, N., & Enesco, I. (2019). Myths in science: Children trust but do not retain their teacher's information. *Journal of Applied Developmental Psychology*, 62, 116–121. https:// doi.org/10.1016/j.appdev.2019.02.007
- Gurin, P., Sorensen, N., Lopez, G. E., & Nagda, B. R. A. (2015). Intergroup dialogue: Race still matters. In R. Bangs & L. E. Davis (Eds.), *Race and social problems* (pp. 39–60). Springer.
- Harris, P. L., Koenig, M. A., Corriveau, K. H., & Jaswal, V. K. (2018). Cognitive foundations of learning from testimony. *Annual Review of Psychology*, 69(1), 251–273. https://doi.org/10.1146/annurev-psych-122216-011710
- Hazelbaker, T., Brown, C. S., Nenadal, L., & Mistry, R. S. (2022). Fostering anti-racism in white children and youth: Development within contexts. *American Psychologist*, 77(4), 497–509. https://doi.org/10.1037/amp000 0948
- Heyman, G. D., & Legare, C. H. (2005). Children's evaluation of sources of information about traits. *Developmental Psychology*, 41(4), 636–647. https://doi.org/10.1037/0012-1649.41.4.636
- Hwang, H. G., & Markson, L. (2023). Black and White children's race-based information endorsement and teacher preference: Effects of school and neighborhood racial demographics. *Developmental Psychology*, 59(5), 893–907. https://doi.org/10.1037/dev0001507
- IBM Corp. Released. (2021). IBM SPSS Statistics for Macintosh, Version 28.0.
- Jost, J. T., & Hunyady, O. (2005). Antecedents and consequences of systemjustifying ideologies. *Current Directions in Psychological Science*, 14(5), 260–265. https://doi.org/10.1111/j.0963-7214.2005.00377.x
- Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C. (2002). How children and adolescents evaluate gender and racial exclusion. *Monographs of the Society for Research in Child Development*, 67(4), vii. https://doi.org/10 .1111/1540-5834.00218
- Killen, M., & Rutland, A. (2011). Children and social exclusion: Morality, prejudice, and group identity. Wiley/Blackwell Publishers. https://doi.org/10.1002/9781444396317
- Kluegel, J. R., & Smith, E. R. (1986). Beliefs about inequality: Americans' views of what is and what ought to be (1st ed.). Routledge. https://doi.org/10.4324/9781351329002
- Laursen, B., & Collins, W. A. (2009). Parent–child relationships during adolescence. In R. M. Lerner & L. Steinberg (Eds.), Handbook of adolescent psychology: Vol. 2: Contextual influences on adolescent development (pp. 3–42). Wiley.
- Li, Q., Li, Z., Zhang, W., Wang, Y., & Heyman, G. D. (2021). Cross-sectional and longitudinal associations among children's interpersonal trust, reputation for trustworthiness, and relationship closeness. *Frontiers in Psychology*, 12, Article 634540. https://doi.org/10.3389/fpsyg.2021.634540
- Li, Q. G., Heyman, G. D., Xu, F., & Lee, K. (2014). Young children's use of honesty as a basis for selective trust. *Journal of Experimental Child Psychology*, 117, 59–72. https://doi.org/10.1016/j.jecp.2013.09.002
- Marble, K. E., & Boseovski, J. J. (2020). Content counts: A trait and moral reasoning framework for children's selective social learning. In J. B. Benson (Ed.), Advances in child development and behavior (Vol. 58, pp. 95–136). JAI. https://doi.org/10.1016/bs.acdb.2020.01.004

- McGuire, L., Rutland, A., & Nesdale, D. (2015). Peer group norms and accountability moderate the effect of school norms on children's intergroup attitudes. *Child Development*, 86(4), 1290–1297. https://doi.org/ 10.1111/cdev.12388
- Moffitt, U., & Rogers, L. O. (2022). Studying ethnic-racial identity among white youth: White supremacy as a developmental context. *Journal of Research on Adolescence*, 32(3), 815–828. https://doi.org/10.1111/jora.12762
- Nesdale, D. (2004). Social identity processes and children's ethnic prejudice. In M. Bennett & F. Sani (Eds.), *The development of the social self* (pp. 219–245). Psychology Press. https://doi.org/10.4324/9780203391099
- Pauker, K., Xu, Y., Williams, A., & Biddle, A. M. (2016). Race essentialism and social contextual differences in children's racial stereotyping. *Child Development*, 87(5), 1409–1422. https://doi.org/10.1111/cdev.12592
- Piaget, J. (1970). The principles of genetic epistemology (W. Mays, Trans.). Routledge & Kegan Paul.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. https://doi.org/10.3758/ BRM.40.3.879
- Rizzo, M. T., Elenbaas, L., & Vanderbilt, K. E. (2020). Do children distinguish between resource inequalities with individual versus structural origins? *Child Development*, 91(2), 439–455. https://doi.org/10.1111/cdev.13181
- Roberts, S. O., & Rizzo, M. T. (2021). The psychology of American racism. American Psychologist, 76(3), 475–487. https://doi.org/10.1037/amp0000642
- Seider, S., Graves, D., & Diaz, B. (2022). The development of awareness of racism in adolescents of color over 4 years of high school. *Journal of Community Psychology*, 50(1), 64–89. https://doi.org/10.1002/jcop.22494
- Seider, S., Tamerat, J., Clark, S., & Soutter, M. (2017). Investigating adolescents' critical consciousness development through a character framework. *Journal of Youth and Adolescence*, 46(6), 1162–1178. https://doi.org/10.1007/s10964-017-0641-4

- Smetana, J. G., Jambon, M., & Ball, C. (2014). The social domain approach to children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (2nd ed., pp. 23–45). Psychology Press.
- Smetana, J. G., & Rote, W. M. (2019). Adolescent–parent relationships: Progress, processes, and prospects. *Annual Review of Developmental Psychology*, 1(1), 41–68. https://doi.org/10.1146/annurev-devpsych-121318-084903
- Umaña-Taylor, A. J., & Hill, N. E. (2020). Ethnic-racial socialization in the family: A decade's advance on precursors and outcomes. *Journal of Marriage and Family*, 82(1), 244–271. https://doi.org/10.1111/jomf.12622
 U.S. Census Bureau. (2021). *American community survey*. https://data
 - census gov/
- Vogels, E. A., Gelles-Watnick, R., & Massarat, N. (2022, August 10). Teens, social media and technology 2022. Pew Research Center. https://www .pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/
- Wang, F., Tong, Y., & Danovitch, J. (2019). Who do I believe? Children's epistemic trust in internet, teacher, and peer informants. *Cognitive Development*, 50, 248–260. https://doi.org/10.1016/j.cogdev.2019.05.006
- Williams, A. D., & Banerjee, M. (2021). Ethnic-racial socialization among Black, Latinx, and White parents of elementary school-age children. *Journal of Social Issues*, 77(4), 1037–1062. https://doi.org/10.1111/josi.12493
- Wray-Lake, L., Alvis, L., Plummer, J. A., Shubert, J., & Syvertsen, A. K. (2023). Adolescents' developing awareness of inequality: Racial and ethnic differences in trajectories. *Child Development*, 94(2), 439–457. https://doi.org/10.1111/cdev.13870

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