

---

# Democracy & Education

---

## “State Your Defense!”

Children Negotiate Analytic Frames in the Context of Deliberative Dialogue

Jennifer Hauver (Randolph-Macon College)

---

---

### Abstract

The purpose of this exploratory study was to identify the analytic frames children (ages 9 to 11) employed as they worked together to make sense of an ill-structured problem, what those same children did when their frames collided in the context of deliberative dialogue, and what they learned from the process of negotiation. Data included pre- and post-dialogue interviews with individual children as well as videotapes of the five dialogue sessions. Analysis suggests that children invoked six frames: *fairness*, *common good*, *safety*, *kindness*, *tradition* and *self-interest*. Of these, *fairness* and *common good* were super-ordinate frames, which resonated with peers and facilitated the building of consensus. Groups in which children demonstrated greater willingness to engage others' ideas made the most gains in their ability to employ multiple frames from pre- to post-task interviews. Findings suggest a need for explicit instruction about the sociocultural contexts delimiting individuals' framing of complex problems. Such instruction has the potential to grow students' civic capabilities as critical consumers of public discourse who can listen across difference and participate productively in shared decision making.

### Submit a response to this article

Submit online at [democracyeducationjournal.org/home](http://democracyeducationjournal.org/home)

### Read responses to this article online

<http://democracyeducationjournal.org/home/vol25/iss2/3>

**F**OUR FOURTH GRADERS are gathered around a table. They are tasked with making a collective decision about how to spend a sum of money allotted for playground improvements. The PTA has given them five choices. They can purchase a sunshade, a swing set, playground balls for all classes, or Hula-Hoops and jump ropes for all classes, or they can give the money to the pre-K children to spend on their playground. Oliver, Cody, and Adam each announce their preference: sunshade, pre-K, sunshade, respectively. Addie offers hers: “We *should* give the money to pre-K because they don’t have as much stuff as we do. So that’s my first choice.” Something about her use of the word *should* gives the group pause. Cody then states, “Say ‘aye’ if you want the pre-K playground.” Oliver and Adam look at one another, clearly taken by surprise. “What?” Adam says, “I wanted sunshade.”

“Me too,” says Oliver. To which Cody responds, “Well, then, state your defense.”

“What defense?” asks Adam.

“Your defense to keep your honor,” responds Cody.

“What?!”

---

---

JENNIFER HAUVER is an associate professor in the Education Department at Randolph-Macon College. Her interests center on democratic and civic education. She is editor of *Social Studies Education Review*, lead author of *Religion in the Classroom: Dilemmas for Democratic Education* (Routledge), and coeditor of *Feminist Community Engagement: Achieving Praxis* (Palgrave).

“I can go first,” offers Oliver.

“Okay, state your defense,” directs Cody again.

“Well, I’m thinking we can get the sunshade for the big playground because we all like running around mostly, and we get hot . . . and the pre-K-ers mostly play ball, like they throw the balls and they ride their bikes.”

Addie adds, “They have tricycles.”

“Yeah, they ride the bike, the little tricycle bike, and we run around. And we like running around, and we get hotter, but they just like riding bikes,” Oliver continues.

“I know. I didn’t think about that. And they have chalk and they have the blacktop,” Addie adds again.

What makes ill-structured problems ill-structured is that they not only lack a clear “best” solution but they lack a definitive “best” way of framing the problem so that one might determine a best solution (Kuhn, 2015). In this brief excerpt, the three boys begin the dialogue by stating their personal preferences. Addie shifts the conversation by framing the problem normatively: in terms of what the group *should* do according to some abstract sense of right and wrong. This new framing comes with some power. Immediately one of the boys calls for a vote in favor of Addie’s proposed solution and, when he is challenged, demands that the challenger “state his defense.” In defending his side, Oliver seems to feel that not only must he justify his preference *for* the sunshade but he must simultaneously *refute* Addie’s assertion that spending money on themselves would not be the right thing to do. He explains that the pre-K children mostly play ball and ride bikes—toys they already have—and that the older children have greater need for new equipment. He seemingly accepts Addie’s concern for fairness as a legitimate one but rejects it as an acceptable frame for this particular problem. In lieu of a fairness frame, he speaks on behalf of all other big kids, asserting that it is in their common interest to purchase a sunshade.

Most research on children’s argumentation has focused on interventions that may grow the sophistication of their arguments (often in writing). In particular, interventions are typically aimed at increasing children’s use of evidence to support claims and their ability to engage both sides of a debate. Such studies suggest that young children are less likely to offer dual or integrative arguments or to understand the significance of evidence for argument development (Brem & Rips, 2000; Kuhn, 2001; Kuhn & Crowell, 2011; Kuhn & Udell, 2003). Pontecorvo and Giradet (1993) went so far as to report that nine-year-olds offer one-sided (personal) arguments over 80% of the time. This may be because, developmentally, it has been argued, children are just growing their perspective-taking ability about this time (Flavell, 2004). While such work is helpful in shedding light on children’s ability to construct and articulate a sound argument, it rarely unpacks children’s reasoning about ill-structured problems along the way. And, as Kuhn and Udell (2003) asserted, much less attention has been paid to the process of children’s argumentative discourse than to the constructions of their individual arguments.

An exception to this trend is work by Zhang and colleagues (2013), which suggested that even young children apply a variety of

analytic frames as they make sense of complex problems and that these frames can be understood as culturally relevant. In their study of Chinese and American children’s reasoning about a moral dilemma in the book *The Pinewood Derby* (McNurlen, 1998), these scholars found that Chinese students were more likely to demonstrate altruistic tendencies in their framing of the problem, calling on principles of honesty, empathy, and friendship (common values in collectivist cultures) while American children were more likely to express egocentric concerns such as personal consequences for doing the “right” thing. After participating in a series of dialogue sessions, however, all children demonstrated increased willingness to consider new ways of framing the problem (suggesting that development is not the only factor in explaining children’s growing perspective taking ability).

Much more research is needed, however, that strives to understand the nature of children’s arguments as they represent understandings they have about the world. How do children frame the problem? What general principles or perspectives contribute to that framing? What happens when children’s frames collide in dialogue? Furthermore, much remains to be discovered about children’s process as they collectively negotiate among analytic frames for a given problem, and how their experience may facilitate differing learning outcomes. Such insights would provide a foundation from which to make informed pedagogical and policy decisions with regards to elementary civic education. In this article, I describe the analytic frames children (ages 9–11) employed to make sense of the ill-structured problem described above, as well as what those same children did when their frames collided in the context of deliberative dialogue, and what they learned from the process of negotiation.

## Deliberative Dialogue

Unlike other forms of discussion, *deliberation* has as its aim “deciding on a plan of action that will resolve a shared problem . . . The opening question is usually some version of, ‘What should we do about this?’ (Parker, 2003, p. 131). “Generally speaking, deliberation processes engage people in discussion with others about public issues that are controversial but require collective decision making and action” (Carretero, Haste, & Bermudez, 2016, p. 302). Though deliberation leads, at best, to a provisional resolution, it nonetheless requires consensus among members of a group on what to do now given what we know.

Deliberative discussion is grounded in a participatory conception of democracy and a belief that effective citizens demonstrate “a variety of social capacities for working with others . . . to influence public and civic life by building coalitions, seeking consensus, negotiating differences, and managing conflict” (Carretero, Haste, & Bermudez, 2016, p. 297). As Gutmann and Thompson (2004) argued, deliberative democracy is a form of government

*. . . in which free and equal citizens (and their representatives) justify decisions in a process in which they give one another reasons that are mutually acceptable and generally accessible, with the aim of reaching*

conclusions that are binding in the present on all citizens but open to challenge in the future. (p. 7)

Ideally, deliberative dialogue is characterized by mutuality and approached with humility and caution. It requires that one grant others epistemic privilege and acknowledge the ever-present possibility that one may be wrong (Parker, 2003). “Talk thus breaks through the walls of the private world of family, friends and neighbors and ordains concourse with strangers in a larger artificial world of political citizenship” (Barber, 2003, p. 189). Humility means acknowledging that one’s “knowledge and experience are limited and incomplete” (Barber, 2003, p. 12). This acknowledgment requires that one enter and navigate interactions with caution. Parker (2003) wrote, “If I am cautious when listening and responding, I will engage carefully so that I am not denying or dismissing the validity of the insider’s point of view, nor even appearing to do so” (p. 93). The democratic concept of mutuality recognizes the inevitability of one’s self being part of an authentic civic relationship. Humility and caution are necessary only because we cannot ever truly escape the private spaces we inhabit and the ways they shape our knowing. Competent participation in a civic space, then, involves

*listening as well as talking, striving to understand points of view different from one’s own, challenging ideas and proposals rather than persons, admitting ignorance, slowing the rush to decision so as to clarify or reframe the problem or gather more information . . . even appreciating the principle attributed to Voltaire: “I disapprove of what you say, but I will defend to the death your right to say it.” (Parker, 2003, pp. 87–88)*

Barber (2003) asserted:

*“I will listen” means . . . I will put myself in his place, I will try to understand, I will strain to hear what makes us alike, I will listen for a common rhetoric evocative of a common purpose or a common good. (p. 175)*

Phillips (2004), in discussion with “a fellowship of six students,” three Jewish and three Arab, found a powerful example of such listening. Iyad, an Arab student, says of his evolving friendship with his Jewish colleagues:

*We did start to speak, but carefully, still saying what we felt we had to say, but also being sensitive to the other’s feelings. And we listened carefully to each other’s responses. We realized we had similar concerns and hopes—to live free of fear, to have security for our families, to have some control over our lives, our futures.*

Dorothy, a Jewish member of the group, agreed:

*Instead of trying to win an argument, we voiced our concerns, but also we really opened ourselves up to the concerns of the other. . . . Because once you recognize how legitimate each other’s concerns are, then I think you have to go the next step and address them. (pp. 165–166)*

As seen here, a disposition toward active and authentic communication enables the sort of mutuality necessary for the “creative resolution of conflict” (Hunt & Metcalf, 1955/1996). Mutuality in

civic dialogue, then, involves negotiation through collaborative, empathic processes (Selman, 1980), integration of the needs of self and other (Gilligan, 1982), and authenticity (Siddle Walker & Snarey, 2004). It is not just talking and listening, per se, that matter—rather, talking and listening with humility, in an effort to understand the other, sensitive to her feelings, and in search of common ground. Such skills are particularly important within the context of civic deliberation, where it is not enough to simply “agree to disagree.”

To this end, it would seem, “schools ought to teach students to share their reasoning with each other, to listen to competing points of view, to consider new evidence, and to treat each other as political equals” (McAvoy & Hess, 2013, p. 19). Effective teachers, however, are hamstrung if they know little about how their students learn, what emerging competencies look like, and what instructional methods facilitate growth. Thus, it was not my intention to evaluate the degree to which children’s engagement matched this deliberative ideal; rather, I sought to understand children’s thought and action within the deliberative context established.

### **Sociocultural Theories of Communication**

Communication is the process of producing and negotiating meanings and is always culturally situated (Schirato & Yell, 2000). The deliberative dialogue sessions described here, for instance, were particular contexts in which children with unique backgrounds talked together. But their encounters were nested within larger contexts. And children’s understandings of those larger contexts shaped how they approached and engaged in the dialogue (James, Kobe, & Zhao, 2017). Children had prior knowledge of *the school*, for example, as a social milieu—of normative behavioral expectations, of what counted as knowledge, of their positions relative to others in this space. They had experience of *the classroom*, in so far as it had been a space where they came to know their peers. Intersecting with these fairly immediate contexts were the milieus where children spent time outside of school—families and communities. In each of these spaces, children consistently received messages about what was valued, expected, understood to be right or good or true—messages that informed the solutions to the problem they generated.

Whether consciously or subconsciously, children (like adults) are always in the process of reading the spaces they encounter. Such reading involves asking *What is expected here? What is appropriate? How will I be perceived or positioned by others?* and is necessarily shaped by our *cultural* and *sociocultural understandings*. Examples of *cultural understandings* include shared conceptions of masculinity and femininity (Hofstede, 1991), understandings about a “good life” or moral good (Kluckhohn & Strodtbeck, 1961), and general norms and practices of a culture that codify acceptable behavior. Cultural understandings are, of course, experienced and understood by individuals and groups differently; they are not monolithic. Nonetheless, these understandings represent generally accepted (and typically dominant) ways of being and thinking. *Sociocultural understandings* emerge from the groups of which we are a part. Some of these

groups we choose (service groups, occupational groups, political parties). Others, we are born into (racial and ethnic groups, families, age groups, gender groups). These groups “enforce sets of expected behaviors (norms and rules) and have shared values” that influence our communication with others (Gudykunst & Kim, 2003, p. 47). The process of reading and rereading spaces allows us to acquire a “practical sense,” or the ability to make our utterances relevant or appropriate in the spaces where we spend time (Bourdieu, 1991).

The utterances we make, then, are the result of the relation between our *linguistic habitus* (our reading of the space) and the specific linguistic field, or *market*,<sup>1</sup> in which we find ourselves (Bourdieu, 1991). Each context is a market, in that resources (different kinds of capital) are distributed and exchanged. One’s accent, for example, or command of local dialect, and social status are all forms of capital that contribute to an individual’s relative power in a linguistic market. Because markets are not all the same, our power, our status relative to others, our ability to effect change, also vary from context to context. A speaker’s sense or expectation of the value that linguistic practices will have in different markets is thus also part of his or her linguistic habitus.

As applied here, sociocultural theories of communication allow us to see children’s analytic frames as reflective of their own cultural positions. The negotiation of children’s analytic frames is also a culturally situated process of meaning making where some frames likely have more capital than others. Borrowing from the field of political science (and, admittedly, research conducted with adults), I use the term *resonant* to describe those analytic frames that carry greater power in a particular dialogic space (Desrosiers, 2007; Martin, 2015; Rojecki, 2007; Woodyly, 2007). Desrosiers (2007) explained:

*When filtered through common identity referents, the language, the images and ideas [called] upon are so close to what individuals know, so consistent with their social reality that they can seem commonsensical, justifiable and fitting. These collective referents are reinterpreted, not invented—but by being historically or normatively grounded in a common cultural stock, when used to build appeals, they can help achieve greater resonance and in parallel crystallise sentiments of group attachment to foster solidarity and justify collective action. (p. 2)*

Put simply, ideas have resonance when they strike participants as being more intelligible or persuasive than others. Savvy participants may even tap into highly resonant ideas, or what Poggi (2005) called “super-ordinate goals,” in order to gain traction for their own particular subordinate goals. It is safe to say that young children will relate to dialogue and reason about ill-structured problems differently than adults do. Understanding these differences was the subject of this inquiry. Specifically, research questions included:

1. What analytic frames do children deploy in this deliberative dialogue session?
2. How do children negotiate differing analytic frames in the context of deliberative dialogue?

3. Which analytic frameworks have the most resonance? Why?
4. How does participation in the deliberative dialogue contribute to changes in how individual children frame the problem from pre- to post-interview?

## Methods

Findings reported here are part of a larger two-year design-based research study<sup>2</sup> in which a team of researchers sought to understand relationships between young children’s thought and action across four civic spaces: *deliberative dialogue sessions*, *bystander dilemmas*, *collaborative inquiry*, and *group discussion*. Here, I focus explicitly on children’s participation in deliberative dialogue sessions. The design of these tasks provided rich opportunities to access children’s thought and action at both an individual and a group level.

## Community, School, and Classroom

Cobb Elementary School is located in the Southeast United States. The student body at Cobb Elementary is made up of approximately 500 children, 39% of whom are African American, 7% Asian, 5% Hispanic, 46% White, and 3% multiracial (self-identified). Students hail from 30 states and 23 countries. Cobb is seated in a city with one of the highest poverty rates in the nation (nearly 40%). Sixty-five percent of students receive free or reduced lunch.

The focus classroom consisted of 20 fourth graders, ages 9–11. This age group was selected because we understand the period between ages 7 and 10 to be critical for growth in communication skills (McDevitt, Spivey, Sheehan, Lennon, & Story, 1990). Children in this age span are said to grow increasingly capable of monitoring their speech from another’s perspective and consider the perspectives of others (Flavell, 2004) and to be experiencing a reduction in egocentrism and a greater ability to acknowledge and understand the motives and intentions of others (Piaget, 1950; Wadsworth, 2003). Because research suggests that this process begins earlier for girls, due to their tendency for attachment (Gilligan, 1982), and among African American students (roughly 40% of the students with whom we worked) (Siddle Walker & Snarey, 2004), we hoped that students in this class would demonstrate a range of civic performances and understandings. Detailed demographic data about the children whose families consented for them to participate is included in Table 1 below.

**Table 1. Student Participant Demographics**

Pseudonym	Race	Socioeconomic Status	Gender
Anna	Multiracial	Economically disadvantaged	Female
Adam	White	Noneconomically disadvantaged	Male
Addie	African American	Economically disadvantaged	Female
Brittany	African American	Not reported	Female

(continued)

**Table 1. Student Participant Demographics (continued)**

Pseudonym	Race	Socioeconomic Status	Gender
Caleb	White	Noneconomically disadvantaged	Male
Cody	White	Noneconomically disadvantaged	Male
Curtis	African American	Economically disadvantaged	Male
Daniel	African American	Economically disadvantaged	Male
Dominic	African American	Not reported	Male
David	White	Economically disadvantaged	Male
Eddie	African American	Economically disadvantaged	Male
Helen	Asian American	Noneconomically disadvantaged	Female
Joshua	White	Noneconomically disadvantaged	Male
Jacob	African American	Noneconomically disadvantaged	Male
Mary	White	Economically disadvantaged	Female
Maggie	White	Noneconomically disadvantaged	Female
Oliver	African American	Economically disadvantaged	Male
Paula	White/Hispanic	Noneconomically disadvantaged	Female
Rachel	White	Noneconomically disadvantaged	Female
Taylor	African American	Economically disadvantaged	Female

### *Deliberative Dialogue Session: Playground Equipment*

Deliberative dialogue, defined here as the process of collaboratively arriving at a decision about a problem by comparing, contrasting, and evaluating alternatives (Asterhan & Babichenko, 2015), has been shown to incite more effective participation than those in which students are expected to persuade others or simply engage in open discussion (Garcia-Mila, Gilabert, Erduran & Felton, 2013; Schwarz, 1995). Deliberative dialogue sessions are particularly generative when they engage students in shared reasoning about an ill-structured problem—one that challenges students to apply various analytic frames in an effort to weigh better and worse solutions, but is open ended in that different frameworks may yield different “best” answers (Adey & Shayer, 1990; Asterhan & Schwarz, 2009; Kuhn, 2015). Drawing on the literature, we crafted a task that was authentic and ill-structured and required students to strive for consensus.

The topic for this deliberative dialogue session was grounded in real conversations members of the Cobb Elementary School

community were having. Their new school still required a number of finishing touches, including outside areas for playing and gathering. Children often discussed their desire for more play-ground equipment and shady areas to escape the intensity of the sun. Adults, including family members, teachers, administrators and other school personnel, frequently participated in similar conversations. As this task was being presented to the children, members of the Parent-Teacher Association (PTA) were engaged in discussions about what equipment to purchase next. We explained to the children that the results of their peer deliberations would be shared with the PTA. We introduced the task to the students by explaining the situation to them. The task read as follows:

Your grade level has been given some money to buy more playground equipment.

You have five options:

- You could buy a sunshade for your playground.
- You could buy a swing set for your playground.
- You could buy a set of playground balls for your class to use.
- You could buy a set of jump ropes and Hula-Hoops for your class to use.
- You could give the money to the preK students so they can buy playground equipment.

Think about all of the choices. Decide which choice is best. How would you spend the money?

**Figure 1.** Playground task.

The task was bounded by the five choices, which members of the PTA were indeed considering. This enabled us to see how individuals and groups of children reasoned about and selected among those choices. The closed nature of the task also enabled us to see whether or not the children thought beyond the task’s parameters. The task also challenged the students to think about whose interests were being served by the different options presented and to decide which considerations were most important to make.

### *Data Collection*

Data collection included individual pre- and post-task interviews with each child and videotapes of groups of children as they deliberated. During the pre-task interview, the researcher read the task to the child and offered an image of each playground improvement option in order to make the task less abstract. The child was given some time to think about the problem. After the child decided which choice s/he felt was best, the researcher asked the child a series of questions to learn more about his/her decision as well as how the child was thinking about the discussion s/he was about to have. Each child was asked to discuss how s/he conceptualized the problem and to predict how his/her group discussion would unfold. (See Appendix A: Pre-Task Interview Protocol.)

After each of the individual pre-task interviews was completed, group members were brought together and read the task.

The researchers provided the children with images of the five choices and a group recording sheet. They were given approximately 20 minutes to discuss the issue and decide how the money should be spent. The group discussion sessions were video-recorded from two different angles. This allowed us to see how the children were engaging with one another, performing in both verbal and nonverbal ways, and enacting (or changing) their self-described stances. We used tabletop microphones in order to improve the quality of the audio.

After the discussion session concluded, each of the children was again interviewed by a researcher. The post-task interview was designed to elicit the students' interpretation of their group's discussion and decision. They were asked to evaluate the nature and quality of their discussion by describing how the conversation went and how they felt about the outcome of their conversation. Both the pre- and post-task interviews were videotaped (audio-taped on rare occasions when we ran into technical difficulties). (See Appendix B: Post-Task Interview Protocol.)

### Data Analysis

**Establishing codes.** Zhang and colleagues (2013) identified nine moral principles from which children drew in their reflective essays: honesty, fairness, empathy, friendship, promise, trust, golden rule, common good, don't tattle. These they identified *a priori* (through careful reading of the text to which children would respond) and checked against an initial reading of children's essays. A robust example of research on young children's analytic frames (and one of the only examples), this work offered a useful place to begin. I followed much the same process in generating codes for analytic frames. Because I was present when data was collected, I had an idea of the frames children had employed individually and in dialogue. I generated a list of frames based on my understanding of the ill-structured problem and my experience while watching children participate in the task. I generated five codes: *fairness*, *kindness*, *safety*, *common good*, and *self-interest*. After careful reading of the pre-task and post-task interviews and video transcripts, I added a sixth code: *tradition*.

I then invited four research assistants to read one complete data set (pre- and post-task interviews and video transcript for one group), openly coding for analytic frames. We met as a group to discuss their codes, and despite the assistants' having given the codes slightly different names (*being nice* for *kindness* and *personal gain* for *self-interest*), their collective list was the same as my own. From here, I went on to code each pre-task and post-task interview as well as video transcript. I sought first to describe how often each of the six analytic frames was invoked within each group's dialogue. Based on my reading of Zhang et al.'s (2013) work, I hypothesized that fairness may be a prominent frame.

**Identifying opportunities for negotiation.** Because I was interested in understanding what happens when children's differing analytic frames collide in dialogue, I then revisited the videotape transcripts to identify "opportunities for negotiation." These I defined as occurrences when analytic frames were offered by children. I wished to understand what happened when a frame

was offered. *Did other children agree with the speaker's framing? Reject it? Ignore it?* In this second layer of analysis, I coded each conversational turn following the identified "opportunity for negotiation" with the following: A (asserted), I (ignored), C (contested) or E (echoed). Coding stopped when the negotiation of a particular frame ended.

The following is an example of a group's negotiation of an analytic frame (safety):

- ADDIE: You know how they told us not to be sliding down those other poles? People might slide down these poles [of the sunshade] and they might fall. (Safety-A)
- OLIVER: But they won't be able to get on them. (Safety-C)
- ADAM: Yeah, they're vertical with a top. They're straight up and down. (Safety-C)
- CODY: Curiosity is, someone might run *into* the poles. (Safety-E)
- ADDIE: Yeah, people can run into the poles when they're running . . . (Safety-E)
- OLIVER: They might run into y'all's poles. But people, well people are supposed to look in front and look to see where they're going . . . I haven't seen anybody hit a pole on their face or anything before. (Safety-C)
- CODY: It would be nice to have a tree house, wouldn't it?

In this example, Addie and Cody offered up safety concerns as a way of framing the problem to determine a best solution. Oliver and Adam contested this framing, first by saying that children can't climb the poles and then explaining that it's unlikely anyone would run into the poles. Seemingly convinced, Cody shifted the conversation to talk about his wish for a tree house and safety was not brought up again.

Contrarily, the following is an example of an analytic frame being echoed once it is introduced. After her group had collectively dismissed both safety and fairness as acceptable ways to frame the problem, Helen asked, "Well then why do you think it's good to have a sunshade?"

- TAYLOR: Because when it's really hot outside, we can sit in the shade. (Common good-A)
- DOMINIC: Yeah, or when some kids are playing, they can be in the shade. (Common good-E)
- JOSHUA: Yeah, some people like to walk around where they won't be bothered by the hot sun. Plus the sun isn't shining in your eyes. (Common good-E)
- JOSHUA: It's also a built-in umbrella, so everyone can go outside while it's raining. (Common good-E)

In this example, the group found a way of framing the problem on which they can all agree. In response to Helen's prompting, the other three children suggested that the sunshade was good for "we," "some kids," "some people," and "everyone." They argued that the sunshade was the best solution because so many people would benefit from it—those who wanted to sit, play, or walk in the shade, those who didn't like sun in their eyes, or

disliked feeling hot, even those who wanted to play outside when it's raining. Once this framing was offered, it gained momentum, resonating with other members of the group. They felt comfortable making their decision because they agreed that it would do the most good for the most people.

Upon completing this second layer of analysis, I wrote thick narrative descriptions for each group's performance in dialogue that sought to answer the questions: *Which frames are in play? Which ones seem to resonate? How do children weigh the relative power of differing frames?* Some frames were easily and often contested, such as those appealing to self-interest. Others seemed to present children with a challenge. They felt they needed to resolve the issue a frame posed or to choose the particular solution the frame was used to justify. As predicted, fairness was one of these more challenging frames with which children felt compelled to wrestle. Common good was another. The latter examples I identified as *super-ordinate* (Poggi, 2005) analytic frames—ones that resonated the most with the greatest number of children.

**Documenting shifts in thinking.** The final step of the analysis involved revisiting the interview transcripts to see what changes, if any, were evident in children's framing of the problem from pre- to post-task. I was specifically interested in seeing what frames students employed in their post-task interview that they hadn't before, and how they might explain any shifts in their thinking. I began by recording all of the frames offered by children in their pre-task interviews as potential ways of thinking about the problem (ones that they or others might offer). I then did the same with the post-task interviews, noting any new frames that children offered. Finally, I recorded which children brought which frames to the dialogue in order to look for patterns (in quantity and by demographic group).

## Results

### *Children's analytic frames*

Across the three data sources (pre-task interviews, video-taped dialogue sessions, post-task interviews), children employed six analytic frames: *fairness, kindness, safety, common good, self-interest, and tradition*. I describe each below.

**Fairness.** Especially when children argued in favor of giving the money to the pre-k kids, children framed the problem as a question of fairness. For the most part, fairness was understood as a matter of equality. Maggie said, "They don't have a lot of stuff like we do." Helen said, "Yeah, they have nothing to do." Often, these arguments included comparisons made through numbers. "We have two rocks, a spider web and a climbing thing. They have only one thing to climb on." Counter arguments that also invoked fairness as a frame included "They have bikes and bouncy balls" and "They have more equipment than we do. We have only structures."

**Common good.** An oft-invoked frame was that of common good. Typically, children's framing of the problem as an issue of common good meant that they thought one solution to be better than another because more people would like it or benefit from it. Sometimes these arguments were fairly utilitarian: "There are only

about 30 pre-K-ers, and there are at least 160 kids in fourth and fifth grade, so we should keep the money." More often, common good arguments highlighted the ways different groups of children would benefit from the decision. Dominic said, "We all get hot. I think other kids will like it." Taylor added, "Some people like to sit in the shade, some like to run around. This way we have choices." Conner said, "I've heard a lot of people say they want a swing set."

**Safety.** Many children framed the problem as one of safety, saying such things as "The poles might be dangerous . . . People could run into them"; "People could get hit by the balls. It's not safe"; "Someone might get hit in the head"; and "If it's too sunny, we can't see, and we might run into people and get hurt."

**Kindness.** Children who framed the problem as an issue of kindness offered such arguments as "I think we should be generous," "It would be nice for them," "They might even write a song for us to thank us," and "They'd be so happy!" Contrarily, counter arguments were offered such as "If we don't give it to them, they'd be sad."

**Self-interest.** At some point in each conversation, at least one child talked about his or her personal preference, framing the problem as one of self-interest. Mary said, "They're fun to play with. I like this one." David offered, "I'd rather be hot than cold, so I pick sunshade." Later he said, "I pick me. And I'm sunshade." Sometimes children couched their arguments in shared self-interest. David said, "We should have greatness before we leave elementary school." Cody said, "The sunshade will take too long to build. By the time it's up, we'll be in middle school."

**Tradition.** Occasionally, children framed the problem as one of tradition. They suggested that because they used to have one of the playground options (usually the swing set), they should again. Curtis said, "We had that at our old school. So we should have one here."

Though the frames are described here as distinct, they often overlapped in interesting and complex ways. Self-interest was sometimes oriented toward "we," suggesting that the speaker hoped to tap into others' personal interest and find some common ground. If other children didn't share the speaker's interest, however, the contribution was dismissed as selfish or irrelevant. Safety too had an element of common good—students who offered safety as a frame seemed to be suggesting that it was in everyone's best interest to choose one thing or another because everyone would be safer. Interestingly, children almost always determined that safety was not a reasonable framing of the problem because the safety concerns raised were not likely to be experienced by the majority of children. As I explain in the next section, common good and fairness played particularly powerful roles in dialogue. The ability of individual children to connect safety, kindness, tradition or their own self-interest to concerns about fairness or common good mattered. For this reason, I consider fairness and common good to be what Poggi (2005) called "super-ordinate" frames, and the others, "subordinate."

### *Negotiating Analytic Frames*

Table 2 represents the number of times a particular frame was engaged in some way during children's deliberation. The first

column includes the total number of conversational turns in which children attended to the frame overall. This includes the number of times the frame was asserted, echoed, and contested. From this chart, it is clear that *fairness* and *common good* were the most often engaged frames. Fairness occupied 72 conversational turns. Though it was only asserted eight times, children contested it 53 times. Common good occupied 51 conversational turns. It was asserted 36 times and contested thrice. That these two frames were so prevalent in conversation yet treated so differently by children is significant, and I return to it in the next section.

**Table 2. Negotiating Analytic Frames Overall (Frequencies)**

Analytic Frame	Conversational Turns	Asserted	Ignored	Agreed	Contested
Fairness	72	8	0	11	53
Common Good	51	36	(3)	12	3
Safety	26	12	(4)	5	9
Kindness	21	10	(6)	0	11
Self-Interest	9	8	(7)	0	1
Tradition	1	1	(1)	0	0

*Self-interest* and *tradition* were the least often engaged frames. They were neither asserted very often, nor were they taken up by peers. It could be that children didn't believe these frames would resonate with their peers, and so they didn't offer them very often. It might also be that children learned this along the way. When these frames were offered during dialogue, they were almost always ignored by the other children. Failing to have others pick up on their offering, children dropped these frames.

*Kindness* and *safety*, though asserted fairly frequently, were just as often contested. This suggests that children found these frames worthy of some consideration, but not the best frames for the problem at hand. Often, children's kindness assertions were ignored. If they were taken up, they were met with explanations about how the young children's feelings wouldn't actually be hurt because the fourth graders are nice to them in other ways and they have other things to make them happy. Safety concerns were typically dismissed as unlikely, and so dropped. Taken together, we could say that these frames had some resonance—children seem to believe that being kind and safe are important considerations—but that in deciding this particular issue, kindness and safety were not the most pressing concerns.

In what follows, I offer a description of how deliberations unfolded within the five groups and the critical role fairness and common good played in each.

### ***Fairness as a Super-Ordinate Frame***

Findings suggest that children called on a number of analytic frames to make sense of the problem before them. When those frames collided in deliberative dialogue, some frames gained traction, resonating across the group, while others faded to the

background. Among the analytic frames offered by children, fairness was a super-ordinate analytic frame—one that had resonating power with all children.

Once deliberation was under way, each group first wrestled with whether or not it was right to keep the money or give the money to the pre-K children to spend. Fairness was the analytic frame invoked most often during these initial parts of the deliberation. Four of the five groups resolved this issue of fairness, and three did so rather quickly. In Group One, despite having been the one to assert that giving the money to the pre-K children would be the fair thing to do, Addie was quick to abandon her position once Oliver asserted that the pre-K children had more equipment than the older kids. She said, "I didn't think about that. And they have chalk and they have a black top." Adam echoed this, saying, "They have like balls and stuff." Back and forth the group went, naming all of the specific equipment and activities the pre-K children already enjoyed. Once they agreed that fairness was not an issue, meaning they could keep the money for themselves, they shifted gears to consider other possible solutions.

In Group Two, Dominic started by saying that the pre-K children didn't have much stuff to play with, and Helen agreed. Joshua confidently responded, "They have a lot of running space. I'll tell you that right now." Helen inserted, "I don't think you guys like that idea." And Joshua said, "Nope." Fairness did not come up again.

Group Five also quickly put the pre-K question aside. Paula offered, "They have a lot of stuff already," and the rest of the group agreed. They didn't return to pre-K as a viable solution to the problem nor to fairness as a frame.

In Group Three, the issue of fairness was not so quickly put to rest. It came up in the first minute of the conversation when Jacob said, "Pre-K doesn't have anything to play with." The dialogue continued and children considered other possible solutions. Throughout the course of the dialogue, Conner interrupted by reminding his peers that they weren't being particularly fair or kind. He said, "So we eliminated pre-K because you guys are heartless people who don't care about little kids." Later he said, "I thought you were good-hearted people, but apparently I was wrong." Each time Conner offered these critiques, the group banded together to refute his accusations that they are unfair or unkind. They repeatedly told him that "they have lots of stuff," that "there aren't as many kids in pre-K," and "they'll get to use the sunshade when they're older." Eventually, Conner seemed satisfied and the group moved on to consider other solutions.

Group Four also wrestled with the question of fairness. Unlike the other groups, however, they were unable to resolve it. The dialogue began with three of four children in favor of the sunshade. The most vocal sunshade proponent consistently argued for his own self-interest throughout the course of the deliberation. Contrarily, the original proponent of giving the money to the pre-k children consistently framed the problem as one of fairness. Eventually, the balance switched and three of four children opted for giving the money to pre-K, each offering a variety of kindness and fairness arguments. The one remaining proponent for

sunshade was unable to persuade his peers. His self-interest frame did not resonate like the fairness one did. In the end, the group failed to reach consensus.

### Common Good . . . or Nothing

What happened once the fairness question was put to rest within a group? Then children were left to look for another super-ordinate analytic frame that would pull them together and help them sort among the choices. In three groups, once fairness was addressed, common good rose to the top as a super-ordinate analytic frame. In Group Two, for instance, children worked together to build a common good case, identifying more and more populations within the school who would benefit from the sunshade. In the third group, children justified their choice of the sunshade by saying that more children would benefit today from their choice and eventually the pre-K children would get to partake as well. And in Group Five, the group quickly decided on the sunshade by articulating how all children get hot and would enjoy the shade.

Group Four, because they could not resolve the fairness problem, never got to the point of looking for a second super-ordinate frame. Fairness trumped the dialogue and they worked right up to the end of their time trying to address it.

In the first group, the children did resolve the fairness question, but then struggled to find another super-ordinate frame that resonated with all members. Individual children offered lots of frames—safety, common good, self-interest—but none resonated across the group. Each was quickly refuted. Left without one, they resorted to standing in their respective positions arguing for their own self-interest. At the end, no decision was reached.

Table 3 represents the super-ordinate frames employed by groups to reach consensus. All groups began by working through the problem as a question of fairness. Four groups resolved the fairness question. Of these, three went on to employ common good as an organizing frame. Group One, though they resolved the fairness question, could not then identify another analytic frame that resonated across the group. And Group Four never was able to resolve the fairness question. Thus, in the end, only the three groups that resolved fairness and shifted to common good as a second super-ordinate frame were able to reach consensus.

**Table 3. Super-Ordinate Analytic Frames Employed by Group**

Group	Initial Super-Ordinate Frame	Second Super-Ordinate Frame	Consensus
One	Fairness	None	No
Two	Fairness	Common good	Yes
Three	Fairness	Common good	Yes
Four	Fairness	Can't resolve fairness	No
Five	Fairness	Common good	Yes

### What Children Learn

Did individual children's understanding of the problem shift as a result of their participation in the deliberative dialogue? If so, how?

As represented in table 4, 11 out of 20 children demonstrated understanding of at least one additional frame during their post-task interview than they had before the dialogue. Interestingly, these gains were not evenly distributed across groups. Whereas all children in Group Three grew in their ability to offer multiple ways of framing the problem, for example, only one child in Group Five made gains. In each of the other three groups, gains were moderate. A closer look at the narratives generated for each group offers some possible explanation for these differences.

Groups One and Four took the longest to complete their dialogue. Because neither group could reach consensus in the end, the researchers had to stop their conversations at the 25-minute mark. In both of these groups, gains in children's framing from pre- to post-task interview were moderate, though for seemingly different reasons. Group One, remember, was unable to come up with a second super-ordinate frame after they resolved the fairness issue. When they could not, the children settled into their respective positions, arguing for their personal preferences. It seems that for this group, while children were exposed to a variety of frames, none but fairness was compelling enough to hold their attention.

Group Four was also unable to reach consensus because they could not resolve the issue of fairness. One group member insisted that his idea (sunshade) was best despite his peers' concern that pre-K children deserved the money. Here, it seems, children were not exposed to many frames, and so their growth from pre- to post- were limited. Interestingly, in this group, only Curtis and Rachel showed gains. David and Maggie, the two who were most set in their positions from start to finish (David arguing for sunshade throughout and Maggie arguing for pre-K throughout), did not. Here, children's openness to hear others' ideas, it seems, played a powerful role in whether they showed gains from pre- to post-task interview.

Group Two also showed moderate gains. Though this group considered a variety of frames and did ultimately reach consensus, their conversation was relatively short (15 minutes), and so it seems they had fewer opportunities to engage alternative frames than their peers.

The group with the greatest amount of growth, Group Three was the group that spent the longest amount of time deliberating *and* who ultimately reached consensus. Not only did children discuss the problem at length, considering a number of analytic frames, but they also seemed willing to *listen* to one another in a collective effort to make a decision with which everyone would be happy. This is despite the fact that members of the group brought with them the fewest number of frames as they approached dialogue (four initial frames, as with Group Five). Thus it seems that time and a willingness to engage others' ideas were facilitative conditions for children's learning.

The group with the least gains, Group Five, held the shortest deliberation and reached consensus faster than any other group (13 minutes). This brief conversation seemingly denied students opportunities to thoughtfully consider a wide variety of analytic frames.

**Table 4. Frames Discussed by Children (Pre-/Post-)**

Student	Pre-	Post-	New Frames
<b>Group One</b>			
Addie	2	2	0
Adam	4	4	0
Cody	4	5	1
Oliver	3	4	1
5 initial frames: fairness, self-interest, common good, kindness, tradition			
<b>Group Two</b>			
Dominic	2	4	2
Helen	3	3	0
Joshua	4	4	0
Taylor	2	3	1
6 initial frames: fairness, self-interest, common good, kindness, tradition, safety			
<b>Group Three</b>			
Brittany	2	4	2
Caleb	3	4	1
Jacob	1	2	1
Maddy	2	3	1
4 initial frames: fairness, self-interest, common good, tradition			
<b>Group Four</b>			
Maggie	2	2	0
Curtis	2	4	2
David	3	3	0
Rachel	2	3	1
5 initial frames: fairness, self-interest, common good, kindness, tradition			
<b>Group Five</b>			
Anna	3	4	1
Daniel	3	3	0
Eddie	1	1	0
Paula	2	2	0
4 initial frames: fairness, self-interest, common good, safety			

Perhaps not surprisingly, self-interest was the frame most frequently mentioned by students during their pre-task interviews (see table 5). Recall that Zhang and colleagues (2013) found that American children were more likely to express egocentric concerns such as personal consequences for doing the “right” thing. Despite self-interest being a common initial frame, however, it was not offered by many children in the context of dialogue, only being asserted eight times overall. That self-interest was a familiar frame (at least as familiar as fairness and common good), and yet not offered in dialogue suggests that children shared an understanding that it would not resonate with their peers. Whether conscious or

not, I cannot say. But children seemed to know not to advance a self-interest position here. Was this because selfishness was understood as a poor character trait? Addie’s pre-task interview suggested this interpretation. She said, “I was trying to make a decision about the preK equipment and the swing set . . . because I really do want the preK to have equipment, but I don’t want to be selfish; that is why I put this as my choice.” It could also be that children’s previous experience taught them that asserting their own preference would be insufficient to persuade others.

Fairness and common good were the second most frequently discussed initial frames. This may explain why these two frames were offered most often and seemed to resonate with children more than the others. Unlike self-interest, these two frames were frequently employed in discussion. It seems that children believed these frames were worth putting on the table, perhaps because teachers and others in the school context often discussed problems and solutions using these frames.

**Table 5. Children’s Initial Frames**

Frame	No. of Children
Self-Interest	16
Common Good	14
Fairness	9
Tradition	4
Safety	3
Kindness	2

A closer look at children’s initial frames offers no compelling finding about demographic patterns. Self-interest, common good, fairness, and safety were frames brought by children of both genders, all races, and both socio-economic identifiers. Tradition, perhaps interestingly, was only raised as a frame by White children (three boys and one girl). Kindness was raised only by two White boys. Of course, given the small sample of children participating in this exploratory study, I feel unable to make much of these specific results, except to say that tradition and kindness were perhaps frames less frequently encountered in the school setting.

## Discussion

This exploratory study suggests that children do indeed think deeply about problems, considering different concerns that they believe should be taken into account, framing problems in a variety of ways. They seem to also have a keen sense of which frames will be the most persuasive in group dialogue. Though research suggests that children often think about problems as a matter of self-interest, data here suggest that they may refrain from asserting their personal preferences when deliberating with their peers. Instead, calling on fairness and common good as ways of reasoning about the problem that are more likely to resonate across the group. Children, it seems, are knowledgeable of cultural norms at play in the school context. Whether children would call upon the same analytic frames in different contexts is beyond the scope of this

study. Finally, analysis of data here suggests that certain conditions of peer dialogue may lead to greater gains in children's ability to invoke and move between multiple analytic frames. Children who demonstrated a willingness and desire to engage others' ideas were more likely to show gains.<sup>3</sup> Relatedly, children who spent time working through the problem with their peers showed greater gains. It seems safe to say that the greater number of initial frames held by children in a group has the *potential* to facilitate greater gains for participants, but, as I have shown, this condition is not sufficient on its own. If children are unwilling to listen to one another, get stuck on one frame, or move too quickly to consensus without unpacking everyone's ideas, children are less likely to benefit from their peers' rich thinking.

Existing research on the nature of children's participation in shared reasoning looks primarily at the type of rhetorical moves and argumentative strategies children employ (Clarke, Resnick, Rose, 2015). Evidence suggests that children's engagement in transactive discourse (particularly when other-oriented), for instance, contributes to greater conceptual change and reasoning ability (Chi, 2009; Teasley, 1997). We have also come to understand that children appropriate various strategems, (such as prompting a peer, citing evidence, and restating one's position) over the course of a given dialogue session (Anderson et al., 2001). To my knowledge, however, this is the first study of its kind to examine the analytic frames children employ to make sense of problems, how they make sense of competing frames *in the context of deliberative dialogue*, and what they learn as a result. More research is certainly needed to expound upon these preliminary findings. In what follows, I offer some possible implications for teachers and researchers based on this initial foray into children's negotiation of analytic frames.

Peer dialogue does indeed have the potential to be a powerful pedagogical space. Teachers committed to engaging dialogic practice, however, may want to consider how to foster children's willingness to engage others' ideas and how to provide ample time for doing so in the context of the school day. Educators often ask children to state their opinions and then to justify their arguments. Rarely do we push them then to think through why some arguments may strike us as better than others. And yet this additional layer of engagement with one another's thinking is important. Not only can unpacking analytic frames (identifying new frames, asking why some frames resonate and others do not in particular contexts) perhaps make children more skilled deliberators, it may also help them become more critical consumers of other people's frames. Rojecki (2007), for example, reveals frames used in media commentary to privilege the goals of a movement opposed to teaching scientific evolution. Similarly, Martin (2015) described how megachurch pastors promoted fiscal conservatism following the 2008 financial crash, deploying "language and arguments that emphasize American economic providence and the need for individuals to take personal responsibility" (p. 39). In the media, in church, in a multitude of venues in which citizens spend time, speakers and writers intentionally frame arguments to persuade. They do so by calling on values and norms we hold, maybe even subconsciously. A lack of awareness

of this intentional framing leaves individuals vulnerable to persuasion and manipulation.

Relatedly, it seems children would benefit from an examination of the consequences of employing one frame over another. Group One, which was unable to find a second super-ordinate frame that resonated with everyone, ultimately resorted to debating their own personal preferences. Drawing this scenario out, one can imagine a community where citizens fail to identify a single concern or goal that unites them. Without common ground of this sort, their arguments fall upon deaf ears and they are unable to reach consensus about a shared problem. Unfortunately, the consequence of this inability (or unwillingness) to find common ground results in frustration with one another, a lack of collective action, and—as is often the case—decisions made by technical procedures that leave portions of the community feeling unheard.

A number of intervention studies have shown that intentional instruction about argumentation strategies lead to children's enhanced argumentation ability. But these focus mostly on rhetorical strategies rather than on the difficult work at the intersection of cognitive and moral reasoning—the negotiation of value systems is tricky. This work does suggest, however, that focused and intentional instruction about effective dialogue is worthwhile. That is, once we have a clearer sense of what such interventions should involve. Continued research into children's thinking and doing is necessary for making informed practical recommendations. Much remains to be understood, for instance, about the frames children use, how they come to know them, how they understand their relative power in dialogue, and what they learn from deliberation of them. The small-scale study described here, I believe, raises interesting and important directions for this work. We could better understand how context matters for children's analytic framing, if indeed it does. We could also better understand how aware children are of the frames they use and why, and what would come from more explicit talk about them. Finally, larger, more diverse samples may help us to identify patterns among children in the frames they employ.

## Notes

- 1 My use of the work *market* here is in the simple sense of exchange, à la Bourdieu (1991), and not in the traditional capitalistic economic sense, as in Friedman et al.'s "free market" ideology.
- 2 This research program was generously supported by a grant from the Spencer Foundation's *New Civics* Initiative.
- 3 In previous work, we highlight the critical role that trust plays in children's willingness to engage collaboratively (James, Kobe, & Zhao, 2017).

## References

- Adey, P., & Shayer, M. (1990). Accelerating the development of formal thinking in middle and high school students. *Journal of Research in Science Teaching*, 27(3), 267–285.
- Anderson, R. C., Nguyen-Jahiel, K., McNurlen, B., Archodidou, A., Kim, S., Reznitskaya, A., . . . & Gilbert, L. (2001). The snowball phenomenon: Spread of ways of talking and ways of thinking across groups of children. *Cognition and Instruction*, 19(1), 1–46.

- Asterhan, C. S. C., & Babichenko, M. (2015). The social dimension of learning through argumentation: Effects of human presence and discourse style. *Journal of Educational Psychology, 107*(3), 740–755.
- Asterhan, C. S. C., & Schwarz, B. B. (2009). The role of argumentation and explanation in conceptual change: Indications from protocol analyses of peer-to-peer dialogue. *Cognitive Science, 33*(3), 374–400.
- Barber, B. R. (2003). *Strong democracy: Participatory politics for a new age*. Berkeley: University of California Press.
- Bourdieu, P. (1991). *Outline of a theory of practice*. (R. Nice, Trans.). Cambridge, UK: Cambridge University Press.
- Brem, S., & Rips, L. (2000). Evidence and explanation in informal argument. *Cognitive Science, 24*, 573–604.
- Carretero, M., Haste, H., & Bermudez, A. (2016). Civic education. In L. Corno & E. M. Anderman (Eds.), *Handbook of educational psychology* (3rd ed., pp. 295–308). London, UK: Routledge Publishers.
- Chi, M. T. (2009). Active-constructive-interactive: A conceptual framework for differentiating learning activities. *Topics in Cognitive Science, 1*(1), 73–105
- Clarke, S. N., Resnick, L. B., Rose, C. P. (2015). Dialogic instruction: A new frontier. In L., Corno & E. M. Anderman (Eds.) *Handbook of educational psychology* (3rd ed.). London, UK: Routledge Publishers.
- Desrosiers, M. (2007). *Framing strategies to play the communal card: Illustrations from the Sri Lankan and Bosnian cases*. Paper presented at the Annual International Studies Association Convention, Chicago, IL.
- Flavell, J. H. (2004). Theory-of-mind development: Retrospect and prospect. *Journal of Developmental Psychology, 50*(3), 274–290.
- Garcia-Mila, M., Gilabert, S., Erduran, S., & Felton, M. (2013). The effect of argumentative task goal on the quality of argumentative discourse. *Science Education, 97*, 497–523.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gudykunst, W. B., & Kim, Y. Y. (2003). *Communicating with strangers: An approach to intercultural communication* (4th ed.). Boston, MA: McGraw Hill.
- Gutmann, A., & Thompson, D. (2004). *Why deliberative democracy?* Princeton, NJ: Princeton University Press.
- Hofstede, G. (1991). *Cultures and organizations*. London, UK: McGraw-Hill.
- Hunt, M. P., & Metcalf, L. E. (1996). Rational inquiry on society's closed areas. In W. C. Parker (Ed.), *Educating the democratic mind* (pp. 79–93). Albany, NY: SUNY Press. (Original work published 1955)
- James, J. H., Kobe, J., & Zhao, X. (2017). Examining the role of trust in shaping children's approaches to peer dialogue. *Teachers College Record*.
- Kluckhohn, F., & Strodtbeck, F. (1960). *Variations in value orientations*. New York, NY: Row, Peterson.
- Kuhn, D. (2001). Why development does (and doesn't) occur: Evidence from the domain of inductive reasoning. In R. Siegler & J. McClelland (Eds.), *Mechanisms of cognitive development: Neural and behavioral perspectives* (pp. 221–249). Mahwah, NJ: Erlbaum.
- Kuhn, D. (2015). Thinking together and alone. *Educational Researcher, 44*(1), 46–53.
- Kuhn, D., & Crowell, A. (2011). Dialogic argumentation as a vehicle for developing young adolescents' thinking. *Psychological Science, 22*(4), 545–552.
- Kuhn, D., & Udell, W. (2003). The development of argument skills. *Child Development, 74*(5), 1245–1260.
- Martin, S. A. (2015). Recession resonance: How evangelical megachurch pastors promoted fiscal conservatism in the aftermath of the 2008 financial crash. *Rhetoric & Public Affairs, 18*(1), 39–78.
- McAvoy, P., & Hess, D. (2013). Classroom deliberation in an era of political polarization. *Curriculum Inquiry, 43*(1), 14–47.
- McDevitt, T. M., Spivey, N., Sheehan, E. P., Lennon, R., & Story, R. (1990). Children's beliefs about listening: Is it enough to be still and quiet? *Child Development, 61*, 713–721
- McNurlen, B. (2001). *Pine Wood Derby*. Center for the Study of Reading, Champaign, IL
- Parker, W. C. (2003). *Teaching democracy: Unity and diversity in public life*. New York, NY: Teachers College Press.
- Phillips, C. (2004). *Six questions of Socrates*. New York, NY: W. W. Norton & Co.
- Piaget, J. (1950). *The psychology of intelligence*. (M. Piercy and D. Berlyne, Trans.). London, UK: Routledge & Kegan Paul.
- Poggi, I. (2005). The goals of persuasion. *Pragmatics & Cognition, 13*(2), 297–336.
- Pontecorvo, C., & Girardet, H. (1993). Arguing and reasoning in understanding historical topics. *Cognition and Instruction, 11*, 365–395.
- Rojecki, A. (2007). *Selling intelligent design: The creation of cultural resonance*. Paper presented at the annual meeting of the American Political Science Association.
- Schwarz, D. L. (1995). The emergence of abstract dyad representations in dyad problem solving. *Journal of the Learning Sciences, 4*, 321–354.
- Schirato, T., & Yell, S. (2000). *Communication and culture: An introduction*. Thousand Oaks, CA: SAGE Publications.
- Selman, R. (1980). *The growth of interpersonal understanding*. New York, NY: Academic Press.
- Siddle Walker, V., & Snarey, J. R. (2004). *Race-ing moral formation: African American perspectives on care and justice*. New York, NY: Teachers College Press.
- Teasley, S. D. (1997). Talking about reasoning: How important is the peer in peer collaboration? In L. B. Resnick, R. Saljo, C. Pontecorvo, & B. Burge (Eds.) *Discourse, tools, and reasoning: Essays on situated cognition* (pp. 361–384). Berlin, Germany: Springer.
- Wadsworth, B. J. (2003). *Piaget's theory of cognitive and affective development: Foundations of constructivism*. (5th ed.). Boston, MA: Allyn & Bacon Publishers.
- Woodly, D. (2007). *The discursive architecture of resonance*. Paper presented at the annual meeting of the American Political Science Association.
- Zhang, X., Anderson, R. C., Dong, T. Nguyen-Jahiel, K., Li, Y., Lin, T., & Miller, B. (2013). Children's moral reasoning: Influence of culture and collaborative discussion. *Journal of Cognition and Culture, 13*, 503–522.

## Appendix A: Pre-Task Interview Protocol

1. What is the problem?
2. Which choice do you think is best? Why do you think that?
3. How strongly do you feel about your choice? Why?
4. How do you think others will feel about this problem? What do you think others will choose? How do you think others will respond to your idea?
5. How do you think the conversation will go? What makes you think it will go this way?
6. As a group your goal is to come to an agreement. By the end of your conversation do you think your group will come to agreement? Why/why not?
7. As you go into this conversation, what are you going to try to do?
8. What will you do if others disagree?
9. How are you feeling about having this conversation?
10. What do you hope will happen?

## Appendix B: Post-Task Interview Protocol

1. How did you feel about the conversation you just had? Why do you feel that way?
2. How did the conversation go? Did it go as you expected? Explain.

3. Did anything surprise you? What?
4. How did each member of your group think about the problem?
5. Do you think the other people in your group wanted to know what you thought? How do you know?
6. Do you think the other people in your group thought your ideas were important? What makes you think that?
7. Do you think others considered your ideas? How do you know?
8. Did you want to know what the other people in your group thought? Why?
9. Did you think the ideas your group members shared were important? Why? How did you show them their ideas were important? Which ones were most important to you?
10. Did you consider the ideas your group members shared? Why? How did you show them you were considering their ideas?
11. Did you learn anything about the topic? Did you learn anything about having discussions? Did you learn anything about any of your group members?