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Enriching Thinking Through Discourse

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Abstract

Great effort is invested in identifying ways to change people's minds on an issue. A first priority should perhaps be enriching their thinking about the issue. With a goal of enriching their thinking, we studied the views of community adults on the DACA issue—young adults who entered the United States illegally as children. A dialogic method was employed, offering dual benefits in providing participants the opportunity to further develop their own ideas and to consider differing ideas. Yet, participants engaged in dialog only vicariously by observing the talk of a pair of actors who held opposing positions on DACA. The effect on participants' thinking was greatest in the condition in which they viewed a dialog between the two actors, rather than a comparison condition in which the actors individually expressed their positions. In control conditions, no presentation was observed. Probing questions included in all conditions encouraged a participant to examine and clarify for themselves their own position, potentially enriching it. This condition proved unsuccessful in enriching thinking; participants' justifications for their own positions in fact became simpler and less qualified. In contrast, observing a video of a like-minded and opposing other did enrich observers' thinking, yet to a greater degree in the dialogic than nondialogic condition. The findings thus suggest observed dialog as a promising practical approach in promoting deeper thinking.

Keywords: Reasoning; Explanation; Decision-making; Argumentation; Intellectual development; Discourse; Dialog; Observational learning; Polarization

1. Introduction

Inducing someone to change their mind on a significant controversial issue is a challenge, if not an impossibility, in contemporary culture (Baron, 2022; Gardner, 2006; Kahan, 2013; Sloman & Rabb, 2019; Stanley, Henne, Yang, & DeBrigard, 2020). People hesitate to explain themselves, especially on divisive issues. Asked for a position on an issue, they may respond

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with a self-identifying label rather than a robust argument or even explanation, especially on divisive issues (Barbera, Jost, Nagler, Tucker, & Bonneau, 2015; Fisher & Keil, 2014; Lagnado, 2021; Sloman & Fernbach, 2017). Better to play it safe and keep my thinking to myself. At the extreme, simply one's personal identity has become sufficient explanation, to others and even oneself: I hold this view because of who I am and connect to (Sloman & Fernbach, 2017). Nor then are people inclined to seek to sharpen their views by means of intellectual exchange, more likely using social engagement instead to advance personal goals (Mercier & Sperber, 2011).

While researchers and public opinion pollsters continue to invest much in ascertaining people's positions on social issues, less attention is paid to the nature and quality of the thinking underlying these opinions. In the present work, we focus on the perhaps more modest but certainly as important objective of enriching individuals' thinking about an issue, rather than seeking to change their position. Yet, if people are not inclined to seek such enrichment for themselves, it is not straightforward how best to pursue this objective.

One approach is to promote people's exposure to the views of the differently minded, hopefully bringing them closer together by encouraging careful listening (Sontoro & Markus, 2023). If affective commitment and group identity are already high, however, this approach may meet with resistance and be at best only modestly successful (Kahan, 2013; Kahne & Bowyer, 2017; Kalla & Broockman, 2018; Sloman & Rabb, 2019; Stanley et al., 2020) and even detrimental if it leads to further extremity (polarization), greater certainty and confidence, and reduced complexity of thinking about the issue (Fernbach & Van Boven, 2021; Kahne & Bowyer, 2017; Kugler & Coleman, 2020; Stanley et al., 2020), rather than enrichment.

A newer approach suggests reducing this risk and resistance by "meeting people where they are," engaging them in discussion of their own view on an issue, encouraging them to reflect on, explore, and clarify this view. Or, as Adam Grant (2021) puts it in titling his popular book advocating the approach, to *Think Again*. The approach emphasizes close listening and questioning, encouraging an individual to consider the specifics and implications of their position, seeking to lead them to a richer, more nuanced, and potentially less hardened position. The idea has received favorable reactions from practitioners as well as social scientists, but empirical evidence thus far has consisted more of anecdotal report rather than experimental comparison of contrasting approaches.

Thinking deeply is effortful. Cognitive laziness (Pennycook & Rand, 2019; Stanovich, 2011) works against engaging in it, with self-presentation concern a likely contributing factor. Is leaving an individual's own ideas untouched and introducing new ones thus a better alternative? Engaging individuals in discussion of their own position with like-minded others yields a small minority showing polarization, but more have been shown to expand and enrich the thinking underlying their position (Kuhn, Floyd, Yaksick, Halpern, & Ricks, 2018). How, then, might we expand such experience to incorporate close scrutiny of the thinking underlying positions that vary from their own?

Discourse with the differently minded has long been regarded as a powerful tool, ideally, as J. S. Mill (1859/1996) opined, confronting not just the ideas of others but the others themselves who espouse them (Iordanou & Kuhn, 2020). Doing so, however, invokes a contrasting

set of obstacles. Affective commitment and group identity create resistance to contrary ideas offered by others (Sloman & Rabb, 2019; Sloman, & Fernbach, 2017) and may lead not only to their rejection but to unwarranted certainty, polarization, and narrowing rather than enrichment, as noted above, and have led to an idea like Grant's (2021) of "meeting people where they are" (Bruun, Kuhn, & Geithner, 2022).

Is there, then, a productive middle ground to navigate between reflecting on one's own ideas and encountering ideas that differ from one's own? This possibility led us to investigate the method we employ here. How might people achieve and integrate awareness and understanding of ideas differing from their own, an understanding that stands to enrich their own thinking, while minimizing the obstacles and limitations posed by either self-focus or the potentially threatening interpersonal encounter that "meeting the other," either in person or merely through their ideas, demands? Our hypothesis is that this might be achieved by engaging an individual in the role of observer of argumentative discourse between holders of opposing positions. In this setting, the obstacles just summarized should largely drop away, while the potential for enrichment remains.

The hypothesis we thus test here is that vicarious argument, that is, witnessing argumentation between two individuals espousing opposing views on a topic, has the potential to enrich thinking on the part of the observing individual. The alternative we compare it to in a contrasting condition is removing the dialogic context and presenting simply the respective parties each explaining their positions, one following the other, with each party expressing the same set of ideas expressed in the dialogic condition. Only the structure and format of the presentation vary.

1.1. *The power of dialog*

The view of thinking as dialogic is a long-standing one going back as far as J. S. Mill, Baldwin (1913) and Mead (1934) to the present day (Billig, 1986; Gergen, 2015; Kuhn, 2019; Matusov, Smith, Sosla, Marjanovic-Shane, & vonDuyke, 2016). It draws as well on the work of Bakhtin (2010), who emphasizes that statements made in discourse are wed to their dialogic context, never independent. Walton (2014) refers to dialog theory as "the underlying structure on which to base the analysis and evaluation of argumentation" (p. 1). Walton attributes to Grice (1975) the introduction of dialogic theory to modern analytical philosophy and its further development to van Eemeren and colleagues (van Eemeren & Grootendorst, 1992), who emphasize the need to evaluate arguments within their conversational context. According to Grice, an argument should be evaluated on the basis of its collaborative value as a contribution to dialogue.

One need not erase all distinctions between language and thought to entertain a view of thinking as essentially dialogic. One can posit the interiorization of a spoken claim into silent thought without claiming that the process of interiorization leaves the form or substance of the claim unchanged. Consistent with a view of thinking as interiorized dialog is a now burgeoning contemporary empirical literature in psychology and education, inspired by ideas of Vygotsky (1937/1987) and Piaget (1962), as well as the theorists cited above. Documented are advances in argument skill as a function of extended engagement and practice in

dialogic argumentation, with peers of both equivalent and superior skill (Crowell & Kuhn, 2014; Felton & Kuhn, 2001; Hemberger, Kuhn, Matos, & Shi, 2017; Howe & Abedin, 2013, Iordanou, 2010, 2022; Kuhn & Crowell, 2011; Matos, 2021; Rapanta, 2021; Resnick et al., 2015; Shi, 2019, 2020; Tong & Chan, 2023). Such advances are seen both in dialogic argumentation and in individual written argument. A detailed review of approaches and outcomes has been published by Rapanta and Felton (2021).

What makes dialog effective in enhancing thinking? This question can be addressed with respect to the outcomes of a specific dialogic exchange or more broadly with respect to advances in argument strategies and skills over time. Regarding the latter, children and adolescents engage in argumentative discourse with peers as well as adults who display more advanced skills, both directly but also vicariously by overhearing it. Developmentalists ask how the young who are exposed to these more advanced argument strategies attend to and interpret them, eventually incorporating them into their own repertory? Rapanta and Felton (2021) ask, “How can learners learn how to argue effectively, when effective engagement in argumentation is a necessary part of such learning?” (p. 496). How do they appreciate skilled argumentation strategies unless they already possess the skill and understanding of the purpose they entail? Fedyk, Kushnir, and Xu (2019); Fedyk and Xu (2018) address this question by positing children’s possession of an epistemological theory of evidence that supports their learning, enabling them to recognize expertise and recognize its relevance to their goals. Since children infrequently receive explicit feedback with respect to their argumentation strategies, they depend largely on observing the outcomes of their own or others’ strategies. Presumably with time, strategies observed to be successful gradually make their way into the novice’s repertory and begin to replace less successful ones, as microgenetic methods (Kuhn, 1995; Siegler, 2006) have examined.

Turning now to the case of a specific dialogic exchange, the exchange can also be seen as undergoing development. Whether in external or only interiorized form in the mind of an individual, the dialogic process creates something new. An individual benefits to the extent the exchange has led them to a new understanding, with meaning regarded as a relational achievement, as Bakhtin (2010) stresses.

Intersubjectivity (Gillespie & Cornish, 2010) between interlocutors is essential if this new understanding is to be realized. In authentic dialog, each party is expected to address what the other has just said, at least indirectly if not directly. Their contributions are thus intersecting, in a way they are not in monologic form. What one party thinks and will say next is enriched in some way by what the partner previously responded—likely a “*Yes, but...*” taking one of a variety of forms. It can add, extend, qualify, question, limit, or debate the correctness of my premise or of the reasoning that connects premise and conclusion. In any of these cases, my position is enriched by now needing to incorporate these qualifications. In the same way, a partner’s position is enriched by my reaction to it. Central to dialog is thus each participant’s own meaning-making and reflection on what the other has said (Tong & Chan, 2023). An individual’s own arguments, in turn, depend for their meaning on how others respond (Gergen, 2015). A monologic format, in contrast, isolates the claims that constitute our respective positions; they do not intersect and potentially affect one another.

Dialog engaged initially interactively may take on an interiorized form, with the interlocutor only implicit. Another's reaction to my idea raises my confidence in its meaning. Committed arguers anticipate the defeasibility of their arguments as a consequence of others' objections, as well as envisioning their own potential rebuttals. In the process, all of these are refined, expanded, and even transformed. Willingness to engage in this effortful reflective process rests on the conviction that it is worthwhile—that one's beliefs warrant careful scrutiny. One is implicitly holding them up for inspection by the hypothetical "reasonable person," with the conviction that something of value will result. In so doing, the dialogic other is expected to hold their beliefs open to this same scrutiny.

1.2. *Vicarious discourse*

How does a dialogic conception of thinking apply when discourse is only vicarious, as we examine it in the present work? Research demonstrating the success of vicarious learning has a long history, much of it devoted to behaviors more than ideas (Bandura, 2001). With regard to conceptual learning, the importance of active involvement dominates the contemporary thinking of both sociocultural and educational theorists (Chi, 2009; Muldner, Lam, & Chi, 2014; Rogoff, 1990; Scribner & Cole, 1981/2013, Stenning et al., 1999). Passive observation is discouraged. Still, active engagement and involvement can occur at an interiorized, mental level, which leads to the kind of question posed in the present work: What conditions are most likely to elicit and sustain the cognitive engagement that can lead to conceptual enrichment and learning, even when such conditions do not require an observer to act?

In the case of the present topic of learning through argumentation, such learning is commonly observational. Children do not often receive explicit instruction or direct feedback with respect to argumentation strategies and depend largely on observing outcomes of others' more capable strategies, or of their own less capable efforts, as well as gaining meaning from the arguments themselves. Given the abundance of opportunities for observational learning, identifying its more and less productive forms is worthwhile, without regarding its status as equal or superior to that of direct experience.

1.3. *The present study*

An initial small-scale study to test our prediction regarding the power of an observed dialogic condition (Kuhn & Modrek, 2021), compared to that of a parallel monologic condition, proved successful; however, it was confined to college students who merely read the text of the two arguers under uncontrolled remote conditions and were then asked to elaborate and justify their own positions. In one group, the text was presented in the format of an interactive dialog. In a comparison group, the same ideas were included but each party expressed them in the form of individual statements explaining their positions. These published findings were strong enough to warrant a full-scale study involving more ecologically valid conditions than were possible during the period that the study was conducted. In the study reported here, rather than in written text, material was presented by live actors. Also, in the present work, we sought a broader, community-based population who would observe conversations enacted by real individuals and respond in conversational rather than written format.

The issue each participant was asked to express their thinking on has come to be referred to as the DACA (Deferred Action for Childhood Arrivals) issue: “What should be done about the problem of young people brought to the US as children and now living in the US illegally?” The respondent was asked to “...explain the thinking underlying your choice as fully as possible.” The issue is a complex one warranting nuanced thought and yet one that has received extensive coverage in the popular press such that most individuals will be familiar with it and have formed an opinion on it. The challenge the task invokes is bringing together two competing sets of considerations—those of the society and its laws and those of an individual who did not knowingly violate them. Single-factor thinking that ignores one of them has not fully addressed the issue (Kuhn, Cummings, & Youmans, 2020; Kuhn & Modrek, 2023). Consistent with the literature noted at the outset regarding the tendency toward weakly justified, simple explanations, in an earlier study of community adults posed this question (Kuhn et al., 2020), a majority cited a single factor or consideration as justification for their position (such as “They’ve worked hard” to justify a “let them stay” position or “They broke the law” to justify the opposing position); moreover, those identifying only a single factor as a justification for their position were more likely to express high certainty and high affect.

Contained in a Supplementary Appendix are verbatim transcripts of the words spoken by the actors in dialogic or monologic videos that participants in the present study viewed, prior to expressing their own opinions. A close comparison of the dialogic and monologic transcripts confirms them to be very nearly identical with respect to the ideas expressed for and against the opposing positions. The difference between them lies elsewhere. The monologic video segments contain slight elaborations of some of the ideas. In the dialogic video, in contrast, a number of characteristics unique to it are evident. The interlocutors ask questions of one another and may question one another’s claims, sometimes with respect to the evidence for them. They seek common understanding by acknowledging agreement or partial agreement with one another’s statements. At a broader level, they seek a shared understanding of the discourse itself, that is, exactly what it is they are debating about, and, finally, even go on to seek a resolution to the problem itself. In the present study, we ask, then, how observation of these dialogic versus monologic videos affect observers’ subsequent explanations of their own views.

2. Methods

2.1. Participants

Participants in the two experimental conditions were 70 community adults randomly assigned to either a dialogic ($n = 35$) or monologic ($n = 35$) video condition. Participants were recruited in public places (mostly parks and outside coffee shops) in a large Northeast U.S. city. The young female interviewer asked if they would answer a few questions for a school project she was doing. The conversation was audio-recorded. Genders were equally represented and 72% reported having graduated from college. Ethnicities were diverse but Caucasians were the most represented group with about one-quarter representing other ethnicities.

An additional 111 participants served in nonvideo control groups ($n = 61$ and $n = 50$), all from the same community population as the experimental sample and having comparable characteristics.

2.2. Procedure

After accepting the invitation to participate, the participant was first asked to view one or the other of two videos, depending on condition. This, it was explained, would give them an idea of how in general people felt about the issue to be discussed. Participants individually viewed a video of two actors, Ben and Sam, Caucasian males in their mid-30s wearing similar casual attire, *appearing together and facing one another*, expressing their views on the issue of illegal immigration. In the dialog condition, Ben and Sam engaged in an exchange. Each expressed their own views and addressed one another's ideas in a respectful manner. In the monolog condition, participants viewed the same two actors in separate segments presented sequentially (in counterbalanced order), each actor expressing the same set of ideas they expressed in the dialog video. Neither actor was given any instruction regarding how to present and justify their respective positions. Ben and Sam addressed the issue in broader terms than the particular case of minor children accompanying parents entering illegally (the question to be put to participants) with Ben voicing reasons that the immigrants should be sent back and Sam voicing reasons they should be allowed to stay in the United States. The monolog videos contained each actor presenting the same ideas as in their dialog video.

The text and form of discourse thus varied in the two video conditions, but the physical setting remained the same. The monolog videos were roughly equal in length, lasting 4 min 30 s in total; together, they contained 738 words. The dialog video lasted 3 min 50 s and contained 710 words. *See the Supplementary Appendix for a transcript of each video.* In his arguments, Sam advocated for illegal immigrants to remain in the United States by arguing that deportation is not an effective solution, that investing in a border wall diverts money from those in the United States who need it, that immigrants deserve a chance at a better life, that immigration laws can be changed, and that once integrated immigrants can become contributing members of society. Ben argued that illegal immigrants should be sent back because they broke the law, and that breaking the law to seek a better life is unreasonable. He also argued that a border wall is a viable solution, that immigrants may lie about their reasons to enter the United States, that immigrants take jobs from U.S. citizens, do not contribute, and burden the U.S. economy.

Participants were asked to indicate their own position on a 7-point scale from minus-3 to plus-3, where minus-3 stands for "send them back" and plus-3 for "let them stay." Because the population sampled in the present study skewed heavily on the positive ("let them stay") side, with less than five taking the opposing position, only those who indicated positive positions (+1,2,3) on the scale were asked to continue, in order to eliminate position as a source of variance. The participant was then asked how strongly they felt about the issue on a scale of 1–10 (10 = extremely strong), and how certain they were regarding their position on a scale of 1–10 (10 = extremely certain).

The participant was then asked to justify their position. They were asked, “Can you explain your view?” and, if needed as a further prompt, “What is your thinking that leads you to the position you chose on the scale?” When the participant finished speaking, the interviewer introduced a final prompt, “Can you say any more that would further explain your position to someone who had a different view?”

A set of follow-up questions was designed to prompt a participant’s contemplation of typically unaddressed and complicating aspects of their *Stay* position. The interviewer posed these questions in the order below, asking the interviewee to settle on a yes/no response to each.

What about their parents who brought them to the United States? Should they be allowed to stay?

What about grandparents who want to keep the family united?

What about aunts and uncles and other relatives who would like to stay too?

What about others not related but close to the family?

What about others not in the United States but who also want to come?

The interviewer listened as the participants often went on to elaborate their answer but did not comment.

2.2.1. Control groups

Control group participants did not view any video, to provide a baseline for assessing the effects of the video. The main control group, C1, otherwise underwent the same interview procedures as the experimental groups, with only a minor variation. The Group C1a ($n = 31$) procedure was identical to that in the experimental conditions. The Group C1b ($n = 30$) procedure differed from the C1a procedure only in the C1b group being asked the follow-up questions first, prior to explaining their own positions, in order to assess possible influence of these questions on their own views.

To provide a further baseline, participants in an additional control condition, C2 ($n = 50$), differed from C1 control groups only in participants not being asked to justify their answers, on either the main question or the follow-up questions. Furthermore, they had no interpersonal interaction with an interviewer. A sheet was handed to passersby in the same locations as those in all other conditions, asking them to indicate their views on the sheet and to deposit it in a box that sat nearby. Thus, C1b and C2 conditions assess responses to the main or follow-up questions without participants necessarily having constructed and expressed justifications for their positions and thus possibly being affected by the self-presentation demand characteristics of expressing their views to an unfamiliar person.

3. Results

All statements participants made in response to the initial open-ended question and probes were transcribed from the audiotape and segmented into idea units. These were further

Table 1

Percentages of participants exhibiting, or frequencies of appearance of, response indicators in experimental and main control groups

	Control (no video) Condition C1a	Control (no video) Condition C1b	Experimental (video) Condition Monologic	Experimental (video) Condition Dialogic
Mean number of words	98	97	138	186
	3.25	3.27	4.10	5.90
Dual focus (References to both Stay and Go positions)	25%	4%	29%	46%
Any <i>However</i> statements	4%	4%	6%	20%
Any Meta statements	33%	19%	26%	54%
Number of Meta statements	9	5	10	36
Mean number of Meta statements	0.375	0.230	0.285	1.028
Any reference to video presentation	(no video)	(no video)	21%	40%

$n = 31$; $n = 30$; $n = 35$; $n = 35$ respectively in Conditions C1a, C1b, Monologic video, and Dialogic video.

Note. Conditions C1a and C1b differ only with respect to the C1b group being asked the follow-up questions first, prior to explaining their own positions.

classified into categories summarized in Table 1, and inter-rater agreement was assessed. Roughly 50% of all idea units were coded independently by two raters blind to condition. Percentage agreement between two raters was 88% (Cohen's kappa 0.83), with differences resolved by discussion.

To assess the cognitive complexity of participants' open-ended responses, a number of coding schemes were employed to assess both individual idea units and a participant's response overall. These are summarized in Table 1 and described below, with emphasis on comparison of the two video conditions.

3.1. Magnitude of response

Magnitude of response was indicated by number of words and number of idea units a participant's open-ended response contained. For number of words, the overall condition effect (nonvideo conditions combined here and subsequently) was significant ($F = 12.468$, $df = 2$, $p < .001$). Tukey's post hoc tests showed a difference between monolog and dialog groups, ($p = .034$) and between nonvideo and dialog groups ($p < .001$).

For number of idea units, the overall condition effect was significant ($F = 15.813$, $df = 2$, $p < .001$). Tukey's post hoc tests showed a difference between monolog and dialog groups ($p = .002$) and between nonvideo and dialog groups ($p < .001$).

Hence, the dialog video condition yielded more extensive responses, in terms of both number of words and number of idea units, compared to the monolog video condition and compared to no video.

Table 2

Kinds of justifications participants offered for stay and go judgments

Idea units addressed to the “Stay” option:

- S1. Immigrant deserves charity and compassion
- S2. Immigrant deserves treatment consistent with American values/tradition
- S3. Immigrant deserves an opportunity for a better life, escape adversity
- S4. Immigrants benefit U.S. society
- S5. Immigrant families can be kept intact
- S6. Legal immigration policies are inadequate, faulty
- S7. Not immigrant’s choice to come

Idea units addressed to the GO option

- G1. Deported immigrant faces danger, hardship on return to own country
- G2. Immigrant families can be kept intact
- G3. Immigrants can be better helped by aid in their own countries
- G4. Deportation may affect further illegal entries
- G5. Illegal immigration violates U.S. law
- G6. Unrestricted immigration harms interests of U.S. citizens

Note. Reasons addressing either option are not necessarily reasons supporting that option but only ones that address it (e.g., citing negative consequences of a forced departure is categorized as addressing the GO option, even though the respondent was not in favor of this option).

3.2. *Dual focus*

As claimed earlier, a fully adequate, comprehensive justification for a position on the issue requires addressing both alternatives, in order to make the case that the preferred alternative is the superior one. Accordingly, each participant’s open-ended response was classified either as single-focus, if it made reference to only one option (Stay or Go), or dual-focus if it included reference to both options. A summary of the ideas participants expressed appears in Table 2. Frequencies of participants exhibiting a dual focus varied significantly by condition overall, $X^2(2) = 10.3997, p = .0055$. The dialog group alone also differed significantly from remaining groups, $X^2(1) = 10.492, p = .0012$.

3.3. *However connections*

The majority of participants classified in the dual-focus category addressed each of the options at some point in their response but did not necessarily connect them. A subset, assigned to the “*However*” category, directly connected reasons that supported opposing positions, usually using language such as “but” or “however” or “although”—a connection that recognizes their opposition, with their juxtaposition suggesting an attempt to weigh them relative to one another (e.g., “It’s against the law but it benefits us to have them here”).

Frequencies of participants showing one or more *However* connections varied significantly by condition overall, $X^2(2) = 6.9236, p = .0314$. The dialog group alone also differed significantly from the remaining groups $X^2(1) = 5.5673, p = .0183$.

3.4. Meta-level perspective

Meta-level idea units were those that reflected on the decision task itself, as distinguished from statements functioning to execute the task (justifying a Stay or Go choice). A meta-level statement thus sought to do more than make and justify the choice. Instead, it regarded the decision as one aspect of a broader and complex issue involving immigration policy, for example, “*Illegal immigration is a problem that is not so clear cut*” or “*There are many different facets and perspectives to consider.*” Some meta-level statements went on to specify a broader context that the particular decision needed to be situated within (“*Many of the issues around immigration are also related to class issues on a broader scale*” or “*We must think about what is fair, what is moral, and what is best for the country*”). Some such statements went on to suggest ways the system needed reform to reduce or avoid the particular dilemma posed (“*We should create incentives and disincentives that encourage legal immigration*”).

Appearing in Table 1 are the percentages of participants who ever made a Meta statement, as well as total and mean number of such statements, by condition. Frequencies of participants showing one or more Meta-level statements varied significantly by condition overall, $X^2(2) = 8.6374, p = .0133$. Also significant were differences between monolog and dialog groups, $X^2(1) = 5.5337, p = .0187$, as well as between the dialog group and nonvideo groups, $X^2(1) = 7.0172, p = .0081$. For mean number of meta statements, the overall condition effect was significant ($F = 10.856, df = 2, p < .001$). Post hoc comparisons showed a difference between monolog and dialog groups ($p < .001$), and between dialog and control groups ($p < .001$).

3.5. Reference to video presentation

Last to appear in Table 1 are percentages of participants in the two video conditions who in their own open-ended responses made explicit reference to the videos. Although they were not required to do so, those participants doing so can be regarded as having processed the video material at a deeper level and/or found it more relevant than participants who made no such reference. Although not reaching statistical significance, a comparison of the monologic and dialogic conditions in this regard showed such reference to be almost twice as common among participants in the dialogic than among those in the monologic condition. Similarly, the number of references in the dialogic group exceeded (although not reaching significance, $p = .079$) those in the monologic group.

3.6. Responses to follow-up questions

Table 3 summarizes responses to follow-up questions across conditions. Here, we see that the overall effect of presentation of the video material was to reduce what high levels of control group affirmative responses suggest to be a simplifying effect of the follow-up questions (irrespective of Condition C1a vs. C1b sequence variation) on responses. Specifically, the video manipulation yielded overall lower levels of agreement (*Yes* responses) than the more uniformly high levels that appeared in control groups. (A similar influence is notable in Table 1 which shows that Control condition 1b, which began with the follow-up

Table 3
Affirmative responses to follow-up questions

	No video			Video	
	Control condition 1a	Control condition 1b	Control condition 2	Monologic (sequential) video	Dialogic video
Parents stay?	100%	72%	94%	72%	91%
Grandparents stay?	90%	94%	88%	67%	83%
Aunts and uncles stay?	83%	81%	62%	53%	60%
Close others stay?	43%	55%	28%	14%	43%

questions, had a slight tendency to reduce the richness of responses, indexed in this case by Dual focus and Meta statements, from their Control condition 1a levels [25% to 4% and 33% to 19%], consistent with the conclusion that the follow-up questions overall reduced rather than enhanced richness of thinking.)

4. Discussion

Although space limitations preclude our discussion of the present findings in depth within each of these frameworks, implications of the present results in our view extend broadly to cognitive, social, developmental, educational, and political psychology, as well as clinical practice and applied opinion measurement, with the suggestion of caution in the use of extended probing in interviewing that could affect responses. Most important, the results pertaining to the main comparison between the two experimental conditions, monologic and dialogic, are positive in their implications, supporting the fruitfulness of providing exposure to contrasting views vicariously, removed from a context of direct dialogic interaction. Moreover, a dialogic rather than monologic context appears the more fruitful one as a means of prompting individuals engaging in deeper thinking about a complex social issue. We accordingly focus on the implications of this finding here.

A claim regarding the effectiveness of discourse in enriching thinking is far from a novel one, as noted earlier. Getting people of any age and background engaged in discourse with one another appears beneficial on multiple grounds, long-term and short-term. Doing so may serve as a source of longer-term cognitive and social development, and it may also serve as a contributor to one's thinking about a specific topic.

Hence, the results of this study's main comparison between dialogic and monologic exposure to new ideas would not be newsworthy were it not for the fact that participants themselves experienced this discourse only vicariously. What, then, that is productive in actual discourse might extend to discourse that is experienced only vicariously? The ideas one encounters in dyadic discourse are intersecting, unlike their occurrence in monologic form. As elaborated earlier, ideas one conversational partner expresses are enriched in some way by what the other responds—each response can add to, qualify, question, delimit, or debate that idea. In all these

cases, the claim is enriched. An observer may be left as well with an enriched understanding, of the topic and even of argumentation itself.

We do not claim that the enhancements in thinking following the observation of dialogic versus monologic argument that we have identified here are exhaustive. Additional structural and strategic differences may emerge across different topics, settings, and populations. Also relevant is the content and range of ideas observers adopt. Dialogs with a series of multiple others allow multiple ideas to be expressed and heard rather than only those more well-known or expressed by the more vocal in a larger group setting (Graff, 2022). The vicarious dialogic exposure examined here extends the forms in which the dialogic advantage can be realized, including written text of discourse, rather than video (Kuhn & Modrek, 2021), unidentified dialogic partners (Iordanou & Kuhn, 2020), or even a partner who is only imagined (Zavala & Kuhn, 2017).

An additional and important meta-level benefit occurs in the vicarious context examined here. Despite its confinement to observation, modeling takes place to show that discourse can be productive, rather than necessarily its opposite, ending badly with interlocutors entrenched in their positions. Absent the epistemological conviction that argument is worthwhile, the disposition to engage in it, even observationally, is bound to be missing (Rapanta & Felton, 2021). Finally, with regard to more traditional academic concerns, discourse offers a path to developing the academic skill long known as the most challenging for students of all ages and yet the most critical if they are to proceed to higher education—argumentative expository writing (Kuhn, Halpern, & Bruun, 2022; Philippakos & Graham, 2022). Extending the forms in which dialog can be productive, as we do here, can only be a plus in this regard.

The present results are nonetheless most noteworthy in extending beyond academic settings with their many performance expectations to community encounters among ordinary adults in everyday settings. We conclude with a return to the broad theme this article began with. Encouraging people to think deeply and comprehensively about the positions they take is an ambitious yet possibly more dependable goal than is persuading them to shift positions for reasons that may be unclear to us or them. Reflection continues to be highly regarded as a remedy for shallow thinking (Baron, 2022; Grant, 2021; Kuhn, 2022; Pennycook, 2023). “Just think about it,” we say to someone we are trying to persuade to our point of view. Findings presented here with respect to the follow-up questions, tending to lead participants to simplify rather than enrich their views, suggest that the outcome can risk being even more negative than simply ineffective.

It is in this framework that we see our findings regarding the effectiveness of discourse in enriching thinking as most significant. The idea goes back as far as J. S. Mill (1859/1996) that in order to truly know what they think, people need to engage with a multiplicity of views espoused by those who advocate them. Engaging in actual discourse with diverse others may remain the gold standard. Yet, in expanding the potential forms such engagement can take, we believe the present findings regarding the potential of vicarious discourse are worthy of further study, both in formal education settings with the youth population most critical to our future and more broadly in all contexts where the potential for enriching thinking exists. Also worthy of expansion are the target populations. Enriching thinking about the issues a person cares about is hardly debatable as a desirable developmental goal. The potential for

such development continues throughout the life span, yet that fact is not reflected in the high proportion of developmental research focused on just the first and second decades of life.

Results with respect to the follow-up questions come down on the side of not supporting the efficacy of a questioning method in which participants are individually engaged in further exploring and reflecting on their own positions, in contrast to the dialogic method featured here even if dialog is vicarious. In a word, asking advocates of a position to individually further explore and reflect on that position did not have the positive effects it might have. Any expectation that exploring their Stay position by contemplating its boundaries would lead them to a more nuanced, more qualified, or less certain view was disconfirmed. To the contrary, positions became simpler and uniform, rather than elaborated and enriched. They also tended to be unidimensional. In Condition C1, the majority (73%) offered only a single factor or consideration (e.g., “they’ve worked hard”) in support of their position; 81% answered all follow-up questions positively. Control condition 2 findings of fewer consistently affirmative responses further document the complication of self-presentation issues in engaging people directly in discussion of their views.

Or as we put it in an initial report of these responses to the follow-up questions (Bruun et al., 2022), asking people to reflect on their own position by exploring its nuances, thereby “meeting people where they are,” can alter where they are. Further notable were the strength and certainty self-ratings across conditions; the median rating was 10 on both scales and across conditions. Responses of control condition participants provide a baseline for comparison, making it possible to separate the effect of the interview experience. Control participants made similarly generous responses to questions regarding immediate family (parents and grandparents) but diverged from the positions taken by the experimental groups regarding more distant family members and nonfamily members (Table 3).

Why did the interview experience lead participants in the experimental conditions to become more positive and generous in their responses to the follow-up questions than they presumably would have been prior to the interview, as indicated by the responses of the control groups? Why did a majority assert that anyone from the aunts and uncles of undocumented youth to anyone else who knew them be granted residence, a view at striking odds with U.S. immigration policy as well as public opinion?

We suggest two explanations. One is cognitive laziness (Pennycook & Rand, 2019), also known as cognitive miserliness (Stanovich, 2011). Having committed to the Stay position, there appeared no simple way to make distinctions that would qualify it, and the easier path was simply to extend it to broader and broader categories, a stance requiring less cognitive effort than constructing and justifying distinctions among categories.

A second potential factor is the objective of consistency in the way one presents oneself to another, especially a stranger. Neither of these factors apply in Control condition 2.

This interpretation is consistent with research indicating that asking adults (or children) to explain themselves can be a mixed bag in its effects. Explaining can strengthen attachment to one’s views, making them resistant to further evidence and harder to abandon (Kuhn & Katz, 2009; Walker, Lombrozo, Williams, Rafferty, & Gopnik, 2017; Williams, Lombrozo, & Rehder, 2013). Contemplation may inspire people to update mental models, but that does not make the process easy (Chan, Jones, Jamieson, & Albarracín, 2017). Our intervention had the original intention of Chan et al.’s (2017) recommendation to: “create conditions that facilitate

scrutiny.” Getting people to think, and certainly to “think again,” is known to be hard, but the impediments highlighted here suggest it to be even harder than has been assumed.

If meeting people where they are may change where they are, should the present findings be taken as discounting this strategy? We maintain not. Where better to meet them? But those concerned likely need to be cautious in developing more nuanced approaches to the ways we engage them.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Supplementary Appendix