

Pro-social Reasoning in Deliberative Policy Choices^{*}

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Deliberation theory suggests that in thoughtful discussions citizens look at issues not just from their personal perspectives, but from other perspectives as well. If they do see things from additional perspectives, they may be more inclined to accept ‘community-oriented’ or ‘pro-social’ reasons as considerations they should take into account as they deliberate. Both research and theory suggest deliberation may promote pro-social thinking especially when participants are reminded that they are citizens—i.e., when they are reminded that they are members of their community or society, and that this membership is part of their identities, part of ‘who they are’. Online discussion in particular can help moderate the influence of purely self-oriented thinking and boost pro-social thinking. This paper examines the reasons for policy choices given by participants in a large Pittsburgh deliberative process. The study found that pro-social reasons do indeed have an impact on the policy choices of people who are reminded of an important group identity: their citizenship. It also found an even greater effect of pro-social reasons when reminders of citizenship are introduced into online deliberations.

Additional information for researchers: Pro-social considerations may be especially activated in contexts that remind participants of group identities, according to Mead’s psychology, the Social Identity and De-individuation (SIDE) model, and agency theory. Research on online discussion indicates that online environments can help restrict individual identity cues while reminding people of their group identities—thus activating pro-social considerations. This paper examines a variety of reasons offered to explain the policy choices of a representative sample of 568 Pittsburgh residents who participated in face-to-face or online discussion or who were assigned to a control group that engaged in non-social contemplation. Using cluster-robust Ordinary Least Squares, the present study finds an increased impact of pro-social reasons on policy attitudes for people who are reminded of an important group identity—their citizenship—and a similar impact for the interaction between online deliberation and citizenship.

Deliberative theorists and practitioners hold out the hope that citizen deliberation will encourage people to give greater weight in their judgments to the needs of ‘the community’. Indeed, researchers have found repeatedly that public policy opinions change considerably in deliberations, typically in the direction of expert opinion¹—opinion that generally accords greater consideration to the well-being of the broader public.

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Of course, such findings do not establish directly that participants have shifted their views *because* they have taken into account the impact of their choices on society. But they do provide preliminary evidence for the possibility of such a causal relationship. Some research has found that people who simply talk about politics are able to list a wider range of arguments for various policy positions than those who do not.² Again, this suggests that people who deliberate may be taking into account a greater variety of perspectives in the formation of their policy preferences than people who do not do so. Nevertheless, little, if any, research has directly examined the impact of deliberation on whether participants' post-deliberation policy choices are influenced to a significant degree by reasons that better take into account the needs of the community—reasons that are less purely self-interested, i.e., are more 'pro-social'.

This paper examines the question of whether face-to-face and online deliberation had an impact on the role of pro-social reasons in affecting people's post-deliberation policy choices in a representative sample of 568 Pittsburgh residents recruited to participate in a one-day deliberation about local educational issues. It finds that deliberation in fact increased the effect of pro-social reasons, and that the effect is further enhanced by, first, reminding participants of their identity as citizens, and second, by combining such reminders with deliberation online in particular.

Theory and Research

Habermas³ believes that people have a basic capacity for communicative rationality—a capacity, constitutive of the ability for language, to communicate in ways that permit people to come to reasoned settlement of issues over which they disagree. Habermas contrasts communicative rationality with instrumental rationality, according to which people act strategically on the basis of their perceived self-interest. From a societal or communal point of view, instrumental rationality frequently leads to collective action dilemmas, or even irrational outcomes. For example, as Downs explains in his widely read political science treatise,⁴ a typical strategic actor would not vote, because doing so imposes a cost that is not offset adequately by a corresponding gain. After all, the odds of one vote altering the outcome of an election are vanishingly small, and instrumentally rational actors are (by definition) concerned only with the consequences to themselves of their own actions. If the electorate were composed

solely of strategic actors, representative democracy would come to an end. This is one of many examples of collective action problems to which instrumental rationality gives rise.

According to Habermas, reasoned discourse allows people to escape collective action dilemmas. By enabling people to agree upon a normative or ethical framework for evaluating actions and states of affairs, communicative rationality allow people to commit themselves to what is in their collective interest.⁵ Ethics, in other words, emerges out of people's basic social and linguistic competence. Indeed, research on cooperation shows that people who have met and talked with each other are significantly more likely to cooperate in collective action situations than those who have not.⁶ Mere speech, then, appears to have some power to undermine instrumental self-interest and promote pro-social behavior.

In Dawes's 1995 experiment, however, people were more likely to collaborate simply after exchanging social niceties.⁷ Collaboration in this setting thus did not result from some verbal agreement, as might be inferred from Habermas's theory. Moreover, the kind of collaboration Dawes observed—in which people collaborated more with those with whom they spoke—would not be the product of a sophisticated sense of ethics. A generalized ethics would not encourage people to favor others just because they have socialized with them. (Of course, this conclusion does not rule out a limited, group-oriented form of moral reasoning as an explanation for Dawes's finding.) Speech, or at least physical co-presence, thus appears to exert a power to promote collaboration beyond enabling immediate reasoned agreement or stimulating the exercise of a sophisticated ethics.

The power of speech and co-presence to generate collaboration may owe in part to the human capacity for identification with a group. In the psychological thought of George Herbert Mead, people develop personal identity by viewing themselves from the perspective of others.⁸ Personal identity is not possible without seeing the self from the external point of view offered by various social perspectives. The individual, then, is socially constituted and identification with groups of other persons is natural. Interacting with others whose perspectives a person is inclined to share may stimulate greater concern for their well-being by activating social perspectives within the individual. This offers a possible explanation of the experimental results Dawes obtained. As people coordinate a multiplicity of perspectives, they develop a 'generalized other'—a general perspective that in its most complex form gives rise to ethics. But an advanced ethical sense is inconsistent with giving preference to those with whom one is most

familiar. Hence, it is doubtful that the people in Dawes's research possess such an advanced sense. A moment's reflection on the state of inter-group relations in the world suggests this may be true for many people. Even if some do have a sophisticated sense of ethics, they may nonetheless be more responsive to the needs of people who are closer or more visible to them, both figuratively and literally. Visibility and interaction with others may trigger more particularistic rather than generalized obligations. In agency theory, for example, people carry with them a multiplicity of perspectives or identities, including more-particular and more-general ones, any of which might be activated by environmental cues that prime a given identity.⁹

The Social Identity and De-individuation (SIDE) model states that people in settings that do not remind them of their individual identities will be more susceptible to environmental cues that can prime their collective identities.¹⁰ Online contexts do not remind people of their individual identities as readily because they provide fewer social cues such as awareness of others watching and non-verbal reactions. In the relative absence of such individual identity cues, reminders of *collective* (shared) identity may have more of an effect in online settings. Thus, research based on the SIDE model has found that participants who deliberate online are more likely to concur with opinions that are presented as the typical opinion of people like themselves. Such opinions apparently activate participants' collective identity.

As will be apparent shortly, the SIDE model suggests hypotheses that differ from the view that deliberation alone and irrespective of context results in pro-social reasoning. In contrast, a simple reading of Habermas might lead to the conclusion that deliberation pure and simple will result in pro-social reasoning. Habermas himself, however, might not subscribe to such a simple conclusion. He allows for the fact that people differ developmentally in moral reasoning, with intermediate levels of development corresponding to ethical views that give preference to particular groups and people with whom a person identifies.¹¹ At these levels of development, moral reasoning may well give rise to the kinds of effects observed in SIDE research. Habermas can be read as suggesting that, through prolonged social discourse, people might be able to develop their ethical abilities and understandings to the point at which SIDE effects do not occur and people in discourse genuinely consider what is in the best interests of all. This would be a long-term consequence of deliberation, not something immediately observable.

Hypotheses

Previous research and theory suggest the following hypotheses to be tested in the data presented in this paper:

Hypotheses, Set 1: Online deliberators who are reminded of their citizenship will be more likely than members of a control group (non-discussants who are not reminded of their citizenship) to cite pro-social reasons as important reasons for their policy choices, and/or those reasons will have more of an impact on their actual policy choices. Specifically, there should be an interaction effect between being online and being reminded of one's citizenship that results in pro-social outcomes.

The hypotheses of Set 1 follow from the SIDE model's contention that collective identity reminders should have a greater effect in an online setting. Being reminded in a general or broad manner that a person is a citizen should activate his or her collective identity as a citizen. In other words, seeing matters from the perspective of a citizen should stimulate people to think more in terms of what is best for the community; i.e., they should be more likely to think in pro-social terms. This result could manifest itself in participants citing pro-social reasons more often in their policy choices and/or these reasons having a stronger effect on policy choices. Set 1 hypotheses hold that deliberation pure and simple—unaccompanied by citizenship reminders or occurring face-to-face—will not enhance the effect of pro-social reasons. This proposition might be treated as a possibility, but it is not one for which currently there is direct research support.

Hypotheses Set 2: Members of a control group consisting of isolated non-discussants who are reminded of their citizenship will be more likely than members of a control group consisting of non-discussants who are *not* reminded of their citizenship to cite pro-social reasons as important reasons for their policy choices, and/or such reasons will have more of an impact on their actual policy choices. Specifically, there should be an interaction effect between being a non-discussant and being reminded of citizenship that results in pro-social outcomes.

The absence of reminders of individual identity allows reminders of citizenship to stimulate pro-social reasoning. People contemplating a social issue in isolation should, like those discussing the issue online, be less likely to be reminded of their individual identities because there are few environmental cues that draw attention to the self and so stimulate self-

awareness.¹² Thus, reminders of citizenship should have similar effects on isolated individuals as on online discussants. The promise of deliberation may remain important to this process by getting people to contemplate policy issues at all, as will be discussed in the conclusion.

Method

Participants. Pittsburgh is an ethnically and class diverse community with a city population, according to the 2000 Census, of 334,583. More than one million people live in the metropolitan area. Neighborhoods range from suburb-like residential areas to areas of urban poverty. Although Pittsburgh is known to have a moderately high quality of life for a city of its size, people intimately involved with public life in the city do not believe this leads to either an especially high level of political involvement or to a predominately non-contentious public discourse.

Knowledge Networks (KN), an outside firm noted for its sampling work on academic deliberation projects, recruited participants for this study.^{*} Of a sample of 6,935 Pittsburgh city residents (defined by zip code area) who could be reached via random digit dialing (RDD), 22 percent agreed to participate in this research and completed a phone survey. Of those who agreed to participate, 37 percent—568 people—showed up for the on-campus deliberation of Phase 1.

Despite a strict RDD sample and modest response rate,⁺ the participants in this project matched the Pittsburgh city population reasonably well on most demographic criteria. The

^{*} Sampling for the present project differed the methodology KN has employed in other deliberation projects. It did not utilise quota sampling in order to make demographic statistics more representative of the population as a whole. Thus, without demographic over-sampling, the sample accurately reflects the people who would be expected to participate in this type of deliberation. Because cost and legal requirements would likely rule out quota sampling, the method KN used in this instance generalises better to what the sample would look like if deliberation were in fact used more widely in the governmental policy-making process. Moreover, it avoids the concern that those who come to a deliberation after extensive over-sampling may be atypical of their demographic.

⁺ A modest response rate was expected because recruits faced scheduling and logistical difficulties. Also, recruits were asked to participate in a series of online deliberations that would take most participants eight-months to complete and that they could join only by coming to the initial on-campus, all-day deliberation. The final participation percentages are not, however, out of line with that of another substantial long-term deliberation study, Vincent Price's Electronic Dialogue Project at the Annenberg School of Communication [19, 20]. This project started with an effective sample of the population from which its 3,686 discussants were drawn [20]. The number of people who participated in any discussion over the course of the year is 543, and the average number of people who participated in a given discussion was 305 [19]. Ultimately, the response rates are modest. This is mitigated by several considerations: (1) A fair similarity to population demographics; (2) the fact that the sample represents people who might be expected to participate in longer-term deliberations; and (3) the fact that the aim of the present research is partly experimental and focused on psychological processes that should be universal.

sample was 77 percent Caucasian and 18 percent African-American, compared with Current Population Survey population benchmarks for the relevant zip codes of 75 percent and 20 percent, respectively. Female participants made up 56 percent of the sample, compared with 53 percent for the population. In terms of age, 12 percent were 18-29 years old, 22 percent 30-44 years old, 26 percent 45-59, and 27 percent 60 or older. This compares with population values of 26 percent, 20 percent, 26 percent, and 27 percent. The elderly and ‘thirty-somethings’ are accurately represented, the young are underrepresented, and mid-life adults are overrepresented. Average age, however, is the same as for the population.

Perhaps the greatest departure from population values is for education; as expected, the education levels of participants are higher than for the population. Median education is ‘Some College’ for both the sample and the population. Lower educational categories, however, are underrepresented, with 10 percent of the sample having less than a high school education and 14 percent having just a high school education, compared with 16 percent and 31 percent for the population. Nevertheless, the sample does contain the full range of educational levels.

Materials and Procedures

Knowledge Networks obtained phone numbers for households in the City of Pittsburgh from a random digit dial (RDD) sample. Where numbers appeared in a reverse directory, the household was sent an advance letter on Carnegie Mellon University stationery describing the study and indicating that the household would be contacted shortly. A Knowledge Networks phone center called households in the RDD sample and requested the household member with the most recent birth date. Both the letter and the call center indicated that in exchange for participation in the study, participants would have a four out of five chance of receiving a Windows computer and eight months of ISP service. The remainder would receive \$100. Those who received a computer would be expected to participate in a longer-term online deliberation from home that would require six hours of discussion over eight months. People who agreed to participate were given a short phone-based survey of their demographics and a few policy attitudes, and they were scheduled for a one-day, eight hour on-campus deliberation. Participants were asked to come to a randomly-chosen day from the deliberation schedule, which spanned three weeks in July, including many weekends and weekdays.

Deliberations were held daily with groups of up to 60 participants. After informed consent was obtained and a brief training session conducted, participants took a web-based pre-survey. Next, they were given a 40-minute ‘library session’ to learn more about the four policy topics; a break; a 90-minute period for ‘deliberation’ (face-to-face, online, or individual contemplation, depending on condition); and lunch. The library session, break, and deliberation (same condition as before) were repeated in the afternoon, followed by a second survey.

In addition to the experimental conditions relating to type of deliberation, another experimental condition involved receiving versus not receiving ‘reminders of citizenship’. In the ‘citizenship-reminder’ condition, participants were prompted to think and talk from the perspective of a (public-oriented) citizen. These participants were shown brief streaming video of the researcher in advance of their deliberation; their rooms contained an American flag; and they were given name tags with American flags and the word ‘Citizen’ preceding their names (e.g., ‘Citizen John Smith’ and ‘Citizen Jane Doe’). In the no-citizen-reminder condition, the streaming video asked people to use interpersonal discussion or private contemplation to inform themselves and to determine the best policy option. They were not exposed to an American flag, and their name-tags lacked the title of ‘Citizen’.

Measures

Deliberation question. The deliberation question was, ‘How strongly do you agree or disagree with this statement: “In coming years, the Pittsburgh Public School District should close schools in addition to the ones to be closed this year”.’ The response options for both the pre-deliberation phone survey and the post-deliberation web survey were presented as follows: ‘Please give me a number from 0 to 6, where 0 is strongly disagree, 3 is neither, and 6 is strongly agree’. Only the post-deliberation data is considered here.

Reasons. The wording of reasons for and against closing schools is provided in Tables 1 and 2. The introduction to the question told participants that, ‘Even if you are in favor of closing more public schools, you may have some worries about closing schools. Similarly, even if you are opposed to closing schools, you may nevertheless have some reasons in favor of closing schools. The next four questions are about worries and reasons you might have, regardless of your position on the issues’. Participants were given a close-ended list of possible reasons and asked to select their reasons in favor of closing schools or their concerns about closing them.

Political Values: Political values used as indicators of pro-social reasoning were composed of short versions of a variety of scales obtained from standard sources, including the National Election Survey (humanitarianism, egalitarianism, racial resentment, social cooperativeness) and the Monitoring the Future Project (materialism).

Perspective-taking Indicators of Pro-social Reasoning: Empathy was measured with questions from the perspective-taking component of the Interpersonal Reactivity Index (IRI).¹³ Political empathy was measured by rewriting IRI perspective-taking questions with an emphasis on politically pertinent empathy, particularly taking the perspective of people in other ethnic and class groups. A sample Likert self-placement question is: 'I sometimes try to understand people in other ethnic (racial) groups better by imagining how things look from their perspective'. 'Naive realism', a concept suggested by Ross, measures whether respondents believe that those who disagree with them politically are 'dumb, mad, or bad'.¹⁴ Naive realism captures a person's ability to take the point of view of people holding diverse political perspectives. A sample Likert self-placement question is: 'People who disagree with me politically seem to have an agenda'. Finally, respondents were asked to self-report the 'community-mindedness' or 'local-mindedness' of their policy decisions. An example of a community-mindedness question: 'The policy choices I made today would benefit all Pittsburghers'. An example of a local-mindedness question: 'The policy choices I made today would benefit me and my family'.

Parochial Citizen Mentality: A final and rather different indicator of pro-social reasoning is a composite variable indicating the 'parochial citizen' mentality. Elsewhere,¹⁵ I present results from confirmatory factor analysis to show that a single second-order factor—the parochial citizen mentality—explains the correlations between a multitude of variables, including authoritarianism, cognitive lethargy (low need for cognition, high need for structure), poor socio-political perspective taking, and fear of political conflict. I explain this syndrome of relationships as the product of low sophistication in reasoning about society and politics. Parochial citizens should be expected to be poor at identifying the real needs of the broader community and should therefore be likely to embrace policies for reasons that are not socially beneficial.

Demographic Variables: Standard questions tapping gender, ethnicity, age, education, and income.

Results

Which Reasons are Pro-social? Some of the reasons participants indicated for closing or keeping open the schools are clearly self-interested, while others are probably community-minded. Nevertheless, not all the reasons can be intuitively classified with confidence. Also, intuitions could be wrong. Thus, it will be helpful if the data could provide some indicators of which reasons are indeed pro-social and which are not pro-social but instead self-interested or narrowly parochial. Tables 1 and 2 provide information on two such indicators.

Tables 1 and 2 provide the author's intuitive classifications and other indicators of the pro-social or not-pro-social qualities of the reasons participants cited. Owing to decline in city population, a third of Pittsburgh public school classroom seats were empty. This decline is expected to continue indefinitely.

Table 1: Classification of Reasons for Closing Schools Based on Several Criteria

	Author's Intuitive Classification	Correlation with Parochial Citizen Mentality	Regression Relations w/ Political Values & Perspective-Taking	Final Consensus Classification
Reasons for Closing Schools				
(1) I have no reasons in favor of closing schools.	not pro-social	+ not pro-social**	not pro-social - social empathy* + empathy* + naïve*	not pro-social
(2) Student safety.	(unclear)	(not significant)	unclear + egalitarian* + racial resentment**	(unclear)
(3) School district is wasting money keeping under-used schools open.	pro-social	- pro-social***	(unclear) - naïve realism† + racial resentment*	pro-social
(4) Closing schools could be a great time to institute educational reforms.	pro-social	- pro-social***	pro-social + social cooperation*	pro-social
(5) Some schools are in disrepair, so it'd be better to send kids to newer schools.	pro-social	(not significant)	(unclear)	(unclear)

Notes: Asterisks in the 'Correlation with Parochial' column indicate level of significance for this correlation. Plus signs indicate a positive correlation and negative signs a negative correlation.

The 'Regression Relations' column depicts results of probit regressions with all political values and perspective taking variables. Significant or trend variables are shown with their sign and level of significance. *** is $p < .001$; ** is $p < .01$; * is $p < .05$; † is $p < .10$. All tests are two-sided.

While local communities carried out a prolonged battle to keep their schools open, the excess capacity cost the city millions of dollars at a time when the city was facing a serious budget crisis. These points were driven home in information provided to participants. Consequently, I classified ‘having no reasons in favor of closing schools’ as ‘not pro-social’. The reading material also discussed several educational reforms that could be adopted as schools were closed.

Table 2: Classification of Worries about Closing Schools Based on Several Criteria

	Author’s Intuitive Classification	Correlation with Parochial Citizen Mentality	Regression Relations w/ Political Values & Perspective-Taking	Final Consensus Classification
Worries about closing schools				
(1) My child may be affected.	not pro-social	+ not pro-social*	not pro-social - community-minded* + local-minded**	not pro-social
(2) Decreased land value in my neighborhood.	not pro-social	(not significant)	not pro-social + local-minded [†] + racial resentment**	not pro-social
(3) The mechanism to close schools is unclear or unfair.	pro-social	- pro-social***	pro-social + egalitarian* +social cooperation [†] - local-mindedness [†] - materialism*	pro-social
(4) Closing schools may not save as much money as proposed.	(unclear)	- pro-social [†]	pro-social - humanitarian [†] + social empathy*	pro-social
(5) Closing schools does not address educational concerns.	(unclear)	+ pro-social***	pro-social	pro-social
(6) It is important to keep schools in the neighborhoods.	(unclear)	not pro-social [†]	(unclear)	(unclear)
(7) I have no worry about closing public schools	not pro-social	+ not pro-social**	not pro-social	not pro-social

Notes: Asterisks in the ‘Correlation with Parochial’ column indicate level of significance for this correlation. Plus signs indicate a positive correlation and negative signs a negative correlation.

The ‘Regression Relations’ column depicts results of probit regressions with all political values and perspective taking variables. Significant or trend variables are shown with their sign and level of significance. *** is p<.001; ** is p<.01; * is p<.05; [†] is p<.10. All tests are two-sided.

The third column (second column of data) of Tables 1 and 2 shows the results of correlations between each reason and the parochial citizen mentality variable. As discussed in the Methods section, a positive relationship with this mentality may indicate a reason is not pro-social. Plus and minus signs indicate the sign of the correlation and entries also show the level of significance. Interestingly, in both Tables 1 and 2, the results implied by this correlation are often consistent with the intuitive classification and never suggest the intuitive classification should be fully reversed.

The fourth column shows probit regression results in which the reasons are explained by a variety of political values and perspectives. Probit regressions are designed to examine the effects of independent variables on dichotomous (two-value) dependent variables. Table entries show variables that proved significant or showed a trend relationship along with their coefficient sign and level of significance. Again, this column shows considerable agreement with the previous two columns and never completely reverses their conclusions. The final column shows a final consensus classification that best fits the results of the previous three columns.

Explanatory Power of the Reasons

The ‘reasons’ in Tables 1 and 2 did in fact appreciably affect participants’ inclination to close schools. A regression of closing schools on experimental conditions (deliberation and citizenship reminders) and standard demographic variables explains 9.6 percent of variance (R^2). Adding the reasons to this regression increases explained variance to 40.8 percent. Coefficients for the reasons are in the directions expected. Clearly, the participants reasons selected appear to explain their policy choices well—a reassuring indication that reasons played a key role in participant choices. Half of the coefficients for the effects of the reasons were not significant at the .05 level. This suggests that, although respondents might have considered these reasons, they did not ultimately affect their policy inclinations.

One concern is that perhaps the reasons measured are not exhaustive. If so, subsequent analyses may miss important reasons that affected participants’ decisions. Participants were allowed to enter their own ‘most important’ reason (or worry) if the list of close-ended options did not contain that reason or worry. Over 96 percent of respondents did not choose to add an option, however, which suggests that important considerations were not missed.

Experimental Condition Effects on Reasons Chosen

In three cases, experimental conditions did significantly influence the number of people who chose certain reasons. Probit analyses were conducted to explain the likelihood of citing each reason using demographics and variables capturing the effects of each experimental condition (dummy variables). Consistent with the hypotheses of this paper, participants in the online citizen condition (online deliberation with reminders of citizenship) and the control citizen condition (no deliberation but with citizenship reminders) were significantly less likely to cite school-closing Reason #1, a non-pro-social reason (see Table 1) with p-values of .04 and .01 respectively, one-sided. All p-values are robust and take into account possible co-variation of errors within discussion groups. One other p-value less than .05 (two-sided or one-sided but consistent with hypotheses) was found: the online no citizen condition (online deliberation with no reminders of citizenship) significantly increased the chances of citing school-closing Worry #7 (Table 2), a not pro-social reason ($p = .005$). This is loosely consistent with the SIDE model, because being online without reminders of citizenship should evoke a more self-interested, less pro-social frame of mind. What is less clear, however, is why deliberating online without a citizenship reminder should evoke self-interest *more* than the contrast condition: individual contemplation (no deliberation) without a citizenship reminder. No additional coefficients are significant at the .05 level, one-sided. *Consequently, results are not consistent with an 'all deliberation increases pro-social reasoning' hypothesis.*

A more sophisticated Analysis of Variance (ANOVA), which seeks to separate the main and interaction effects, suggests that, contrary to expectations, the above effects were not due to the interaction of type of deliberation with citizen reminders. The citizen reminder significantly reduces school-closing Reason #1 ($p = .02$, two-sided). The interaction of online deliberation and citizen reminder has no effect ($p = .92$). As for school-closing Worry #7, online discussion had a significant positive effect ($p = .01$, two-sided), which is counterbalanced by a negative effect for the interaction of online and citizen ($p = .16$), which causes the online, no citizen reminder condition to stand out.

Experimental Condition Impacts on the Effects of Reasons on Policy Choice

The experimental conditions (deliberation, citizen reminders) can affect the impact of reasons on policy choice in another way: by altering the strength of the effects of those reasons on the

policy preference. Here, the analysis takes final preferences regarding closing schools as the dependent variable (Close Schools Opinion). It then checks to see whether the effects of reasons on school-closings is enhanced or reduced depending on experimental condition. Table 3 depicts

Table 3: Experimental Condition Impacts on the Effects of Reasons on Close Schools Opinion
(Only significant or trend effects are shown.)

Coefficient : Pro-social / Non-Pro-social / Unclear	Coefficient : Robust Standard Error
1. Reason #1 x Citizen Reminders (NPS)	.91* (.73)
2. Reason #3 x Citizen Reminders (PS)	1.26** (.43)
3. Reason #4 x Citizen Reminders (PS)	.57* (.27)
4. Reason #1 x Face-to-face x Citizen Reminders (NPS)	-1.88 (1.07)
5. Worry #3 x Citizen Reminders (PS)	.73 (.38)
6. Worry #6 x Citizen Reminders (UNC)	-1.25* (.52)
7. Worry #1 x Online x Citizen (NPS)	-1.55* ^o (.83)
8. Worry #4 x Online x Citizen (PS)	-1.34 (.80)
9. Worry #4 x Face-to-face x Citizen (PS)	-1.34 (.77)
10. Worry #6 x Face-to-face x Citizen (UNC)	2.19** (.67)
Analysis contains all interaction terms, main effects (reasons, worries, experimental conditions), and demographics. Only significant or trend coefficients shown here.	
N = 559. F-statistic for all Reasons is 3.68 (d.f. 25, 67) or p = .0001. F for Worries is 5.61 (d.f. 35,67) or p = .0001	

Notes: This table presents significant or trend coefficients from a single OLS regression with Close School Opinion as the dependent variable and independent variables consisting of all main effects and interactions of reasons, worries, experimental conditions, and demographics. ‘F2F’ is face-to-face deliberation, ‘Online’ is online deliberation. ‘Citizen’ is citizen reminders. ** is p<.01; * is p<.05; † is p<.10, all tests two-sided except for the test marked by a ^o, which indicates a one-sided test for a coefficient consistent with hypotheses.

the results of an Analysis of Variance that tests for these effects. Because of the large number of coefficients—83—in the full regression, Table 3 shows only those effects that are significant or that show a trend toward a significance of p < .10, two-sided, and that demonstrate the impact of the experimental conditions on the strength of reasons or worries. The full regression includes main effect terms for demographics, for each experimental condition and their interactions, and for all of the reasons and worries. The terms of interest in this analysis are terms indicating

whether the effects (coefficients) of reasons are significantly different in different experimental conditions. The coefficients in Table 3 indicate by how much the effect of a reason is enhanced or reduced in the given condition relative to a neutral control condition: the no-deliberation, no-citizen-reminder condition. Thus, the 1.26 coefficient for Reason #3 x Citizen Reminders indicates that receiving a citizen reminder increased the effect of Reason #3 by 1.26 points over the effect this reason has in the neutral control condition. This is a dramatic effect because all variables are measured on a seven-point scale.

The bottom row of Table 3 shows F-tests for the joint hypothesis that all the experimental condition effects on reasons or on worries were zero. Each of these two null hypotheses can be rejected with high confidence ($p = 0001$)—the experimental conditions clearly altered the impact of reasons and of worries on Close School Opinion.

The first row of results in Table 3 is anomalous. It shows that citizenship reminders seemed to increase the effect of Reason #1, a not-pro-social reason, on Close Schools Opinion. If citizen reminders have a separate effect of their own, it should be to reduce the impact of not-pro-social reasons. Perhaps, however, this result is a consequence of the fact that, as the previous section revealed, fewer participants selected Reason #1 in the citizen reminder condition. If the respondents who continue to select it are those for whom this reason matters more, this would explain why the reason has more impact in this condition. The reduction in the number of people who select this reason helps to offset the effects of its increased effect on the policy opinion.

The second and third rows indicate that the citizen condition enhances the effect of pro-social reasons. While not quite the interaction effects expected, these results do not surprise. Two of the remaining significant effects are for worries that are not either clearly pro-social or not-pro-social. To the extent that these worries are mixed with respect to their effects on society, they could be affected in either direction by the experimental conditions.

A final significant effect is the effect of being in the online citizen condition with regard to Worry #1 (line 7, Table 3). Participants in this condition showed a significantly reduced effect of Worry #1, a not-pro-social worry, on the policy attitude. This finding is consistent with Hypotheses Set #1, which predicts that online discussants reminded of their citizenship should be more pro-social.

Line 8 of Table 3 raises a concern that the effect of the online citizen condition is not consistently pro-social. Here, the effect of a pro-social reason is reduced in the online citizen

condition. The result is not significant, but it is nearly as significant as the result for line 7. Perhaps this is a fluke resulting from an examination of a large number of coefficients. Results from F-tests of clusters of related variables support this explanation. Coefficients can be divided into related groups, such as all coefficients for the effects of citizen reminders or all coefficients for effects related to Reason #1. All significant coefficients in Table 3, including that for line 7, belong to a cluster for which the null hypothesis of jointly zero effect could be rejected. Line 8, however, is not part of a cluster that is remotely significant, which supports the view that it may be a chance aberration.

Discussion

Deliberative theorists and practitioners hold out the hope that deliberation itself, or aspects of the setting in which deliberation occurs, will lead people to adopt more pro-social reasons in their policy decisions. Psychological research on the SIDE model suggest that people will be more attuned to pro-social reasons when they are reminded of their identity as a citizen in a context, such as online deliberation or individual contemplation of a policy issue that, does not draw attention to their individual identity. Results from a one-day deliberation among 568 Pittsburgh residents concerning school closings do not support a broad pro-social impact of deliberation pure and simple (Table 3). Only 10 of 83 regression coefficients indicating pro-social impacts of experimental condition proved significant or showed trend effects. A host of joint F-tests establish firmly that the significant effects are not random aberrations—experimental conditions did affect policy views. In two cases, reminders of citizenship enhanced the effect of pro-social reasons (Table 3, Lines 2 and 3). In one case, citizen reminders enhanced a non-pro-social reason (Table 3, Line 1), but this may be due to a selection effect: citizen reminders significantly reduced the number of people who indicated that this reason mattered in their decision in the first place, perhaps leaving behind only those for whom it mattered greatly. Finally, one coefficient proved consistent with the SIDE model and indicated that a not-pro-social reason had less of an effect on participants who both deliberated online and were reminded of their citizenship (Line 7). No evidence was found for SIDE model predictions that citizen reminders would interact with non-social contemplation to promote pro-social reasoning.

These results are encouraging, and they suggest that additional research may reveal more. The measures of reasons used here were dichotomous—participants indicated either that a reason

mattered to them or that it did not matter. More-continuous measures of the importance of a reason may reveal more effects than were uncovered here. Also, deliberations in this experiment were lightly moderated—just enough to keep participants on topic and to keep conversations going. More-sophisticated deliberation techniques that seek to stimulate analysis and synthesis might yield stronger results. Given the importance of citizen reminders here and the possibility that they interact with deliberation, future tests should experimentally vary the exposure of participants to such reminders.

The importance of citizenship reminders in these results implies that *the moral reasoning of participants was oriented toward groups and could be affected by reminders of a person's group identity*. Thus, *citizenship is not fully integrated into the identities of participants*. Integrated identities, which are perpetually accessible to decision making, should not be affected by mere reminders. Perhaps holding many society-wide deliberations would be helpful in giving participants an opportunity to develop an understanding of what citizenship means and to integrate this understanding into a more consequential and permanent identity.

This paper also makes a contribution to the effort to develop procedures for classifying policy reasons into pro-social or not-pro-social. While there is no fool-proof method for making this classification, this paper tested three methods: intuition, relationships with a variety of political values and socio-political perspective-taking, and correlation with a measure of the parochial citizen mentality. Tables 2 and 3 show that these three methods are largely in agreement, which suggests that classifying reasons on their pro-social qualities is feasible.

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Notes

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