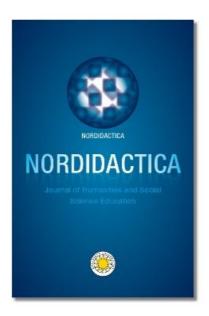
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Chasing deliberation in the Social Science classroom. A study of deliberative quality in factual and controversial issues discussions

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Abstract: From the perspective of deliberative democracy, the normative appeal of classroom discussions hinges on the deliberative quality of the discussion process. To better understand in which circumstances discussion might approximate the ideals of deliberation, the present study investigated the deliberative quality of classroom discussion in three conditions: a factual issue condition, a controversial issue condition, and a scaffolded controversial issue condition. Video observations from a classroom intervention were used to assess how each condition affected the deliberative quality of discussion. To this end, 202 student utterances were identified and coded by use of the Stromer-Galley manual for measuring aspects of deliberation. Though the scaffolded controversial issue condition produced more argumentation, contestation, and engagement than the factual issue condition, the controversial issue conditions also opened the door to more inequality, exclusion, and chitchat. Further research is needed on how teachers can tackle these issues, when they ask their students to engage in the democratic practice of discussing controversial issues.

KEYWORDS: SOCIAL SCIENCE, DELIBERATION, CONTROVERSIAL ISSUES

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Introduction

The present article investigates the deliberative quality of factual and controversial issues discussions in Social Science teaching. The introduction section provides an overview of the study's backdrop and is organized into three subsections. The first subsection reviews the empirical literature. On the basis of this review, it identifies low quality discussion as an empirical problem in need of more research and articulates it as the problem to be investigated by the present study. The second subsection provides a brief sketch of the theoretical literature on quality discussion, which situates the deliberative perspective on quality within the broader field. It then zooms in on deliberative quality as the quality concept used as point of departure for the present study. Finally, the third subsection surveys the literature for possible solutions to the problem of low quality and, based on this, presents the study's two hypotheses for how the quality of classroom discussion can be improved. The remainder of the article explains how the two hypotheses were investigated empirically (method section); presents the results (analysis section); and discusses possible interpretations of the results and potential implications for Social Science teaching and research (discussion section).

Empirical review: quality as the missing piece in the puzzle about classroom discussion

In curricula and research pertaining to Social Science education, classroom discussion is often thought to be an appropriate and effective means of educating students for their role as citizens in a democracy (e.g., Audigier, 2002; Campbell, 2012; Christensen, T. S., 2022; Christensen, T. S., 2015; Christensen, A. S., 2021, p. 21; Christensen A. S., 2015; Englund, 2006; Jerome & Algarra, 2005; Peterson, 2009; Samuelsson, 2016; Tväråna, 2018). While classroom discussion is believed to engender many desirable outcomes, empirical studies of the effects of classroom discussion show mixed results (e.g., Almgren, 2006; Andersson, K., 2012, p. 192-193; Avery, Levy & Simmons, 2013; Forsberg, 2011; Gastil, 2004; Hess, 2009, p. 28; Latimer & Hempson, 2012; Luskin, Fishkin, Malhotra & Siu, 2007; McDevitt & Kiousis, 2006; Persson, Andersson, Zetterberg, Ekman & Lundin, 2020). A compelling reason for the lack of consistent positive findings across studies is that not all kinds of student discussion foster desirable educational outcomes (Gastil, 2004). It seems reasonable to assume that classroom discussions must be of a certain quality for them to have any bearing on educational outcomes related to democratic citizenship (Schuitema, Radstake, Van De Pol, & Veugelers, 2018) - such as tolerance of opposing views, political knowledge, informed opinions, future electoral participation, or the ability to engage in legitimate processes of collective decision-making. This assumption has been supported by Hess and McAvoy (2015, p. 59), who found that exposure to high-quality "best-practice classroom discussion" significantly affected seven out of eighteen investigated educational outcomes pertaining to democratic citizenship, while exposure to lowquality "classroom discussion" significantly affected only three of the eighteen educational outcomes investigated. Hess and McAvoy (2015, p. 68) describe "bestpractice discussion" as high-quality discussions involving student preparation, a student-centered atmosphere, and activities structured with an eye to make students learn how to talk to each other. Students in best-practice discussions were reportedly seeing themselves (rather than the teacher) as the driving force of classroom discussion and were better able to recognize the multiple perspectives of their classmates.

Hess and McAvoy's (2015, p. 68) findings suggest that the desirable educational outcomes thought to stem from student discussions might very well be partially conditional upon the quality of such discussions. Although this is itself a legitimate reason to open up the black box of quality for further investigation, investigating the quality of classroom discussions is also important, because deliberative quality can reasonably be thought of as an end in itself rather than merely a means to cultivate future educational outcomes (McAvoy & Hess, 2013; Roth, 2003). Deliberative quality can function as a marker of the extent to which the interactions and idea exchanges taking place during classroom discussions are characterized by thoughtfulness, equality, openness, inclusiveness, mutual recognition, and fairness. Some evidence also suggests that discussion is an important part of what motivates students for Social Science education (e.g., Audigier, 2002; Børhaug & Borgund, 2018), and deliberatively arranged teaching has been found to generate higher levels of satisfaction among students than traditional teaching formats (Forsberg, 2011). In sum, the deliberative quality of classroom discussions might both (A) be a precondition for "successful teaching" understood as teaching that fulfills its intended goals, and (B) constitute an element of "good teaching" understood as contents and methods of teaching that are morally defensible, motivating, and comply with shared standards of appropriateness (Fenstermacher & Richardson, 2005).

Whereas the quality of classroom discussions seems to be both an important end in itself as well as a means to other ends, the quality of naturally occurring classroom discussions is often found to be low (e.g., Crocco, Segall, Halvorsen, Jacobsen, 2018; Elf & Kaspersen, 2012 cited in Beck, Kaspersen & Paulsen, 2014, p. 364) - though exceptions do exist (e.g., Samuelsson, 2016; Tammi & Rajala, 2018). Contrary to the ideals of deliberation, classroom discussions are often characterized by unequal opportunities for student participation. Discussions are often dominated by highperforming students (Howe & Abedin, 2013; Nishiyama, Russell, & Chalaye, 2020), male students (Baxter, 1999; Howe & Abedin, 2013; Michaels, O'Connor & Resnick, 2008; Nishiyama, Russell, & Chalaye, 2020), and students belonging to ethnic or cultural majority groups (Howe & Abedin, 2013). Discussions, moreover, tend to favor extrovert students, who are confident and comfortable with the public expression of their beliefs (McMillan & Harriger, 2002; Nishiyama, Russell, & Chalaye, 2020). During classroom discussions, students also often display an aversion towards overtly disagreeing with their peers, as they tend to be very concerned with peer approval (Howe & Abedin, 2013; King, 2009; McMillan & Harriger, 2002; Nishiyama, Russell, & Chalaye, 2020; Parker, 2010; Savin-Williams & Berndt (1990) cited in Avery Levy and Simmons 2013). This aversion to disagreement and conflict, then, stems from a desire to fit in with the group, and is indicative of the operation of conformity dynamics known in the social-psychological literature as normative social influence (Deutsch &

Gerard, 1955). Furthermore, classroom discussions have been found to lack argumentative sophistication. In one study, students tended to focus extensively on a single argument during discussions, and hence, the scope of argument scrutiny was severely limited (Gronostay, 2016). Lastly, classroom discussions are often criticized for being "mere talk" that is insufficiently based on the facts of the matter or for impeding teaching about facts and concepts (Elf & Kaspersen, 2012 cited in Beck, Kaspersen & Paulsen, 2014, p. 364; Solhaug, 2013). The present article seeks to address the above shortcomings by investigating what Social Science teachers can do to improve the deliberative quality of classroom discussions. An important first step in this endeavour is to specify what is meant by a high-quality process of classroom discussion.

Theory: conceptualizing quality through the ideal procedure of deliberation

Before turning to the task of specifying what is meant by high-quality classroom discussion, it is important to emphasize that different widely recognized conceptions of high-quality classroom discussion exist. Within some strands of Social Science subject education, for example, quality discussion is understood as discussion that integrates different knowledge forms and promotes students' learning and use of Social Science disciplinary knowledge in the formation of arguments (e.g., Christensen, 2015). Within the Bakhtin-inspired research program on dialogic teaching, quality discussion is understood as an open-ended collaborative construction of meaning where the students and the teacher share control over key aspects of classroom communication (e.g., Reznitskaya & Glina, 2013). According to the notion of Exploratory Talk, quality discussion involves explicit and visible reasoning and requires participants to engage critically and constructively with each other's ideas (Mercer, Wegerif & Dawes, 1999). Still, the idea of Exploratory Talk and its emphasis on explicit reasoning has been criticized for constraining students' verbal creativity (Wegerif, 2005). In the field of education for deliberative democracy, quality discussion is conceptualized as deliberation, and deliberation is itself often understood as comprising various elements, including e.g., argumentation, inclusion, contestation, attempts at reaching understanding, and a lack of coercion (Englund, 2006; Samuelsson, 2016; Tammi & Rajala, 2018). Lastly, alternatives to the deliberative approach, which are associated with radical democratic citizenship education, argue that appropriate forms of discussion need to include not only reason-giving but equally greeting, rhetoric, and storytelling as well as a focus on the education of emotions (Ruitenberg, 2009; Samuelsson, 2016; Young, 1996). The notion of radical democratic citizenship education emerged as a reaction to the deliberative approach and was driven partly by a concern that attempts at institutionalizing deliberative democracy in the classroom would fail and lead to suppression of deep-rooted value conflicts and de facto exclusion of students being less versed in traditional forms of reason-giving (Ruitenberg, 2009; Young, 2001). The radical critiques of deliberation are not new but were already articulated, reflected upon, and evaluated in the early 90'ies (see Benhabib, 1992).

Though the present study conceptualizes quality as deliberative quality to narrow the empirical scope of the analysis, its aim was neither to argue that the deliberative perspective is a priori preferable to other perspectives on quality discussion nor to provide guidelines on how to conduct classroom discussions. Rather, the aim was to empirically investigate (1) in which circumstances, if any, classroom discussion might approximate deliberative ideals as envisaged by deliberative theorists, and (2) in which circumstances classroom discussion ceases to be deliberative and instead degenerates into an interaction characterized by coercion and exclusion as feared by the critics of deliberation. Though the deliberative perspective adopted here may help shed light on the extent to which and the circumstances in which discussion works as intended by deliberative theorists, it cannot shed light on quality aspects that are left unarticulated by the deliberative ideal (such as the use of verbal creativity or the education of emotions). While these quality aspects are important in their own right and also merit closer empirical investigation, such investigations were beyond the analytical scope of the present study.

For the purposes of the present study, deliberative quality was, furthermore, conceptualized theoretically because empirical deliberation research has been criticized for being out of touch with the theoretical underpinnings of deliberation formulated by deliberative theorists (Bächtiger, 2018; Samuelsson & Bøyum, 2015). The multitude of practice-based definitions of deliberation, moreover, implies that the field of deliberative teaching as a whole fails to be cumulative (Samuelsson & Bøyum, 2015). The deliberative quality of classroom discussion was conceptualized as the ideal procedure of deliberation formulated by Joshua Cohen (1997) and Jürgen Habermas (1996, p. 305-306). The ideal procedure is a particularly well-suited conceptualization of deliberative quality discussion because it offers normative quality criteria that pertain to the entirety of the discussion process. While Gutmann and Thompson's (2004, p. 3-7) renowned theory of deliberative democracy for example offers valuable normative suggestions for the kind of reasons citizens and elected representatives owe each other, the theory does not rely on a notion of ideal discussion and does not explicitly formulate normative criteria for processes of discussion. By contrast, deliberative criteria pertaining to the discussion process as such are clearly spelled out in the ideal procedure of deliberation. Put briefly, the ideal procedure stipulates that deliberative political discussions should be (A) argumentative in form, (B) unconstrained by received norms and values, (C) characterized by inclusion and equality, (D) aimed at reaching understanding (rationally motivated consensus), (E) focused on a publicly relevant topic, and (F) free from any kind of coercion (Cohen, 1997; Habermas, 1996, p. 305-306). Within the realm of education, these criteria have been modified and proposed as a suitable ideal for classroom communication (Englund, 2006). Contrary to Englund (2006), however, the original ideal procedure explicitly requires discussion to be about a publicly relevant topic (i.e., about societal content). For this reason, the ideal procedure might be said to be particularly well-suited as an ideal for classroom discussion in the social science subject. Put briefly, this is because the concepts of "society" and "social analytical thinking" are often considered to comprise the core content of the social science subject (Blanck & Lödén, 2017; Sandahl, 2013; Sandahl, 2015).

In the context of the present study, the term "deliberation" refers to the ideal procedure of deliberation outlined above. The ideal procedure is meant to represent an ideal community and, as such, constitutes a normative ideal-type against which social reality can be compared (Lefrançois & Ethier, 2010; Rostbøll, 2009). The term, "discussion", on the other hand, refers to "the act of talking about something with other people and telling them your ideas or opinions" (Cambridge Dictionary, 2023). The term "discussion", hence, refers to a social practice rather than an ideal-type and was chosen because it was less ambiguous than alternatives with similar meanings, such as "dialogue" or "talk".

Hypotheses: how can the Social Science teacher promote quality?

If one adopts a deliberative perspective, there is a need for research that investigates how Social Science teachers can promote the deliberative quality of classroom discussions since classroom discussions are often found to be of low quality. While teachers might help stimulate the development of deliberative conditions in the classroom, they cannot directly or completely control them. This is, crudely put, because classroom interaction is also influenced by factors unrelated to the actions of the teacher (Fenstermacher & Richardson, 2005). Teacher authority can be more or less withdrawn but some form of authority is always exercised, since teachers are responsible for setting the stage and conditions for classroom discussion. The teacher's exercise of authority might be said to exist of two components (Nishiyama, Russell, & Chalaye, 2020).

The first component is the capacity to directly intervene in classroom discussions by employing facilitation techniques (Nishiyama, Russell, & Chalaye, 2020; Reich, 2007). Facilitation techniques include modelling of deliberative norms (e.g. listening, reflection, questioning, and responding), (Gastil, 2004; Nishiyama, Russell, & Chalaye, 2020), encouraging and scaffolding deliberative engagement (e.g. asking students to justify their claims) (Andersson, K., 2012, p. 39; McAvoy & Hess, 2013; Nishiyama, Russell, & Chalaye, 2020), assessing group dynamics, mediating conflicts, provoking engagement, connecting the arguments of different participants, highlighting areas of agreement and disagreement, and, when appropriate, merely standing back and letting students take charge of conflict resolution themselves (Nishiyama, Russell, & Chalaye, 2020; Reich, 2007; Reinhardt, 2015, p. 31; Petrik, 2010a).

The second component is the more indirect power to design and vary the contexts and conditions for classroom discussion. This power to set the stage is exercised when teachers choose and structure the activities, tools, and processes involved in classroom discussions (Nishiyama, Russell, & Chalaye, 2020; Reich, 2007). These choices are assumed to impact the quality of classroom discussion, but the authors, cited below, disagree on whether specific contexts and conditions promote or obstruct quality. Setting the stage for classroom discussion involves choosing the size and composition of discussion groups (e.g. Reich, 2007), choosing between teacher- and student-led discussion formats (e.g. Anderson, K., 2012, p. 37-38; Reich, 2007; Schuitema et al.,

2018; Weasel, 2017), choosing between on-site and online discussion formats (e.g. Andersson, E., 2016; Larson, 2003), setting the time frame of discussions (e.g. Reich, 2007), specifying the formal and practical rules of discussion (including rules for turntaking) (e.g. Lefrançois & Ethier, 2010; Reich, 2007; Tammi & Rajala, 2018), clarifying rules for whether and how to arrive at a collective decision (e.g. Levine, 2018; Reich, 2007; Samuelsson, 2018), assigning a topic for discussion (e.g. Hess, 2009, p. 41; McAvoy & Hess, 2013), posing a question that opens up the assigned topic for discussion (e.g. Samuelsson, 2016; Weasel, 2017), deciding on appropriate preparation materials and exercises (e.g. Bickmore & Parker, 2014; Hess, 2009, p. 166-167; McAvoy & Hess, 2013; McMillan & Harriger, 2002; Petrik, 2010b), and assigning differential roles to students with the aim of levelling out existing power and status asymmetries between them (e.g. Reich, 2007; Tammi & Rajala, 2018). While researchers and educators often suggest one or more of the above design elements as promoters of high-quality classroom discussion, such suggestions are seldomly accompanied by systematic empirical research on how and to what extent these elements condition the deliberative quality of classroom discussions. To contribute to fill this gap in the literature, the present article investigated how two design elements conditioned the deliberative quality of a discussion about the state of democracy in an 8th grade Social Science classroom from Denmark.

First, it was investigated how posing an open controversial question as opposed to a closed factual question as impetus for discussion affected the deliberative quality of the discussion process. The open controversial question "Are Western democracies in crisis and, if so, how can they be improved?" was not a controversial political issue as defined by Diana Hess but rather belonged to the broader class of controversial issues or academic controversies (Hess, 2009, p. 38). Following suggestions in the literature (e.g., Avery, Levy and Simmons, 2013; Hess, 2009, p. 37-39; McAvoy & Hess, 2013), it was hoped that posing an open controversial question would improve the deliberative quality of the discussion. While most educational scholars emphasize the need to pose open and authentic questions, Samuelsson (2016) writes about the importance of striking a balance between open and closed questioning. According to him, questions should be open enough to allow for real disagreement yet closed enough to keep the possibility of arriving at a consensus within reach. Samuelsson (2016) investigates the effect of questioning on the discussion process and finds support for the importance of posing questions that balance between openness and closedness. Though educational scholars often emphasize the value of discussing controversial or divisive issues (e.g., Arnold, 2019; McAvoy & Hess, 2013), it is worth mentioning that controversial issues discussion is not valued equally in all research fields. In the political psychology literature and within the research field of empirical political deliberation, discussion of uncontroversial (depoliticized), non-salient topics is in fact regarded as more conducive to deliberation than discussion of highly salient controversial or entrenched issues (such as the death penalty) (Farrar, Fishkin, Green, List, Luskin & Paluck, 2010; Mendelberg, 2002; Myers & Mendelberg, 2013). This is because people who discuss highly controversial and politically salient topics are likely to have encountered moderate or large amounts of information about the topic prior to discussion. Consequently, they are likely to have formed strong prior beliefs about the matter at hand and less likely to sincerely listen to each other or to change their existing opinions as a result of new arguments discovered during discussion (Vinokur & Burnstein, 1978). The question of whether closed factual "cold" issues or open controversial "hot" issues constitute the most fertile ground for deliberative discussion is, hence, an unresolved puzzle that merits further empirical investigation.

Second, the present study examined how reminding students of a conceptual toolbox, containing three different models of democracy, affected the deliberative quality of the discussion process. This examination was also motivated by recommendations in the literature suggesting that maps of the ideological and theoretical landscape can improve students' capacity for critically reflecting upon and discussing political and theoretical matters (Bickmore & Parker, 2014; Hess & McAvoy, 2015, p. 79; McAvoy & Hess, 2013; Petrik, 2010b). McAvoy and Hess (2013) and Hess and McAvoy (2015, p. 79) explicitly emphasize the need to introduce students to different notions of democracy – such as the aggregative and the deliberative notions of democracy – before asking them to engage in classroom discussion about political issues. Bickmore and Parker (2014) argue that contrasting ideologies, perspectives and problems are at the heart of any subject matter and that these intellectual conflicts are well-suited as the bases of contention in classroom discussions. If this is the case, the introduction of different models of democracy might be said to provide students with a map of the intellectual conflict surrounding the contested concept of democracy. Such a map may help scaffold discussions about democracy since it constitutes a simplified and stylized representation of existing positions within the field of contention (Petrik, 2010b), and since Social Science students' understandings of democracy have in at least one context been shown to relate strongly to the liberal (aggregative) conception of democracy (Mathé, 2016). As suggested by Hess & McAvoy (2015, p. 79) and Petrik (2010b), a map of this kind supports students' political literacy because it can help them make sense of the arguments they encounter during discussion. It therefore functions heuristically as a point of reference that promotes students' understanding and interpretation as well as their ability to position and reposition themselves and others within, between or beyond the existing categories sketched out by the map (Petrik, 2010b). While descriptive and explanatory theories seek to depict aspects of reality in a truthful and simplified manner, normative theories also have transformative ambitions and carry prescriptive content. Normative theories, therefore, also include ideals, which students can use as deliberative tools for criticizing, contesting, and subsequently improving current social conditions (Lefrançois & Ethier, 2010; Parker., 2010). To make students aware of the multiplicity of legitimate standards for exercising critique, however, students participating in the present study were introduced to multiple normative theories of democracy with different and opposing ideals (see e.g., Benner, 2005, p. 157-158; Benner, 2005, p. 145 cited in Krogh, Qvortrup & Graf, 2022, p. 182-183 for a thorough discussion of this matter). To recap, the literature on classroom discussion suggests that the quality of discussions might improve if (A) students are asked to discuss open controversial issues rather than closed factual issues, and (B) discussion is scaffolded by the introduction of

an appropriate theoretical toolbox prior to discussion. The present study set out to investigate these two hypotheses empirically.

Method

Research design: the single case experiment as intervention design

The results reported in this paper build on data from an intervention study. In an intervention study, the intervention (i.e., treatment) is artificially introduced at a specific moment in time to see how its introduction impacts a variable of interest (e.g., the deliberative quality of classroom discussion). Interventions and experiments are recognized as useful methodological tools for gaining empirical insight into the dynamics of classroom interaction (e.g., Klafki, 2016, p. 130) and are specifically recommended for studying the determinants of deliberative discussion (Esterling, 2018). The intervention design used for the present study was a quasi-experimental single-case design. In single case experimental designs (SCED) a target action of an individual or group is repeatedly measured in the absence as well as in the presence of a treatment condition (Krasny-Pacini & Evans, 2018). If the target action increases when the treatment is introduced and drops back to baseline level when the treatment is withdrawn, the results suggest that the treatment has a positive impact on the target action (Richards, 2019, p. 84,155). Making this inference, however, requires some degree of experimental control. When students are exposed to the treatment condition, other factors should be held as constant as possible. In the quasi-experiment carried out as part of this study, the time, place, and participants were all constant across experimental conditions. Moreover, the differently framed questions used as impetus for discussion (the different experimental conditions) were all about the same overall theme, namely the state of democracy in the West following the Brexit referendum and the election of Donald Trump as US president.

Though experimental control is important in classical experiments (Druckman & Kam, 2011), and the topic of democracy is an important topic to discuss according to deliberative theory (Habermas, 1996, p. 384; Habermas, 1997; Koch, 1945, p. 12-13; Lefrançois & Ethier, 2010), the students and teacher participating in this study were not forced to stay on the topic of democracy. Forcing the participants to stay on a specific topic would have contradicted the ideal procedure, which emphasizes that deliberative discussion is essentially unconstrained and must be free to touch upon any topic of public relevance (Habermas, 1996, p. 306,313). Since the topic was permitted to drift away from the assigned topic, the students and the teacher could reformulate the treatment conditions according to their own prior understandings, practice, and the flow of discussion. Such reformulations are commonplace in quasi-experimental research on deliberation and recognized as an integral part of deliberative interaction (Esterling, 2018). Still, they were not subjected to explicit analysis as in Christensen and Hobel (2021). It is worth noticing that allowing participants (and specifically the teacher) to

shift the topic along the way compromised experimental control and meant that the study was turned into a quasi-experiment.

The type of single case experimental design employed was a changing conditions design of the A-B-A-C form. The form represents the chronological ordering of experimental conditions, and each letter represents a specific experimental condition to which all participants were exposed (Richards, 2019, p. 11,152-158). The As represent the baseline (control) condition in which the students were asked to discuss the closed factual question "Can Trump postpone the US presidential election?". The B represents the first treatment condition in which students were asked to discuss the open controversial question "Are Western democracies in crisis, and, if so, how can they be improved?". The C represents the second treatment condition in which students were asked to discuss the open controversial question with the aid of a theoretical scaffold. The scaffold consisted in reminding (cuing) the students of the distinction between representative, deliberative, and direct democracy – a distinction they had encountered earlier in their Social Science textbook. To recap, the students were first asked to discuss the factual question; then the controversial question without prior scaffolding; then the factual question once more; and finally, the controversial question with prior scaffolding.

Case and data gathering process

The intervention took place in the autumn of 2020 and was part of a larger study, which was conducted at a Danish lower-secondary school located in a prosperous middle-class neighborhood in a small town with a population of roughly five thousand inhabitants. The intervention study was, hence, carried out in the context of the Danish Social Science school subject called "Samfundsfag", and this context should be kept in mind when interpreting the results of the study. Today, the Danish "Samfundsfag" is constructed around the core elements of actuality, thematical planning, and the social sciences (including Sociology, Political Science, and Economy) (Christensen, T. S., 2023), yet excludes the disciplines of History, Religion, and Geography (Ledman, 2019). As opposed to the Swedish and Finnish Social Science subjects, the Danish "Samfundsfag", almost completely eschews themes related to the discipline of Law (Christensen, T. S., 2023). Since the Danish Social Science curriculum encourages student discussion of democratic institutions (Christensen, A. S., 2021, p. 21), the topic discussed as part of the intervention was in line with the ambitions of the curriculum. A class of 8th graders (on average 14 years of age) and their Social Science teacher participated in the discussion. The teacher was invited to participate in the study because she often engaged in teaching involving classroom discussion and had many wellgrounded views about why and how to carry out such discussion (Teacher 1, personal communication, 17.06.20). The teacher's views on the purposes of the discussion were, moreover, generally in line with the ideals of deliberation. The teacher wanted her students to become versed in the skills of deliberation, and in that sense, deliberation constituted not only the method but also the purpose of the intervention (as suggested by Parker, 2010). The class consisted primarily of independent and motivated students,

who were judged by the teacher to be skilled enough to discuss the complex topic of democracy. At the time of the intervention, the class was in the middle of a unit on politics and democracy, and the students were expected to have prior knowledge about the circulation of power, democratic institutions (including the separation of powers), and the conceptual distinction between representative, direct, and deliberative democracy (Teacher 1 & Teacher 2, personal communication, 06.08.2020). On the day of the intervention, the discussion session, which lasted for a total of 75.15 minutes, was attended by 23 students, the teacher, a videographer, and the author.

Prior to conducting the quasi-experiment, the study was approved by the Research Ethics Committee at the University of Southern Denmark. The first step of the research process was to interview the teacher in order to gain knowledge about her teaching practices and views on classroom discussion as a teaching method. This contextual indepth knowledge served to further qualify the subsequent research process including the detailed planning of the quasi-experiment which was carried out in collaboration with the teacher. The teacher interview took place on June 17th, 2020, and was followed by a joint planning meeting (as recommended by e.g. Hopkins, 2008, p. 76) seven weeks later on August 6th, 2020. During the planning meeting, the author, the participating teacher, and another teacher taking part in the larger study decided how to implement the discussion session in practice. For example, the teachers and the author decided to prepare students for the discussion by asking them to read four preparatory texts.

The planning of the intervention was followed by the intervention itself, which took place on September 24th, 2020, and was accompanied by on-site video observations. Though the intrusive video equipment might have depressed mundane realism (i.e., authenticity) (McLean & Connor, 2018; Raudaskoski, 2010), it might also have increased experimental realism, which is often judged to be more important for external validity in experimental research (Druckman & Kam, 2011). Experimental realism concerns the extent to which participants are motivated to take the task seriously and perceive the situation as involving and important to them. In any case, it is worth emphasizing that observed differences in deliberative quality between the experiment's treatment conditions cannot be due to effects of the equipment since identical equipment was used in all three conditions.

Measuring deliberative quality: coders as participants in absentia

The ideal procedure of deliberation sketched out in the introduction can function as a regulative ideal towards which discussion should strive, but cannot be fully achieved in practice (Bächtiger, Dryzek, Mansbridge & Warren, 2018). Since deliberation is apply characterized as a regulative ideal, the best researchers can do is to measure the extent to which real-world discussions approximate the ideal and particularly whether discussions situated in one context tend to be more or less deliberative than discussions situated in other contexts (Esterling, 2018). To measure the extent to which the investigated classroom discussions approximated the ideal of deliberation, the present study made use of the Stromer-Galley coding manual (Stromer-Galley, 2007), which is widely recognized as an observation tool that captures key empirical indicators of

deliberation (Bächtiger, 2018; Esterling, 2018). The Stromer-Galley manual is used to discretize empirical aspects of deliberation (Bächtiger, 2018), and coders using the manual are required to think of themselves as participants in the discussion because they, in their capacity as human beings, interpret meaning in interaction (Stromer-Galley, 2007). By instructing coders to imagine themselves as participants in the discussion, Stromer-Galley hoped to encourage coders to become "native" with the participants and, so, get a better understanding for what was being expressed in the specific context (Stromer-Galley, 2007). Due to their acknowledgement of the important role of interpretation in coding discussion, the Stromer-Galley manual is not only recognized as a useful tool for studying deliberation among quantitatively inclined researchers but equally among researchers strongly committed to qualitative ways of analyzing the deliberativeness of real-world discussions (Bächtiger, 2018). The Stromer-Galley manual is, moreover, a flexible coding scheme that allows for adaptation to particular research aims and contexts (Stromer-Galley, 2007). To adequately capture the empirical aspects of the ideal procedure, the manual was, therefore, supplemented by a number of additional empirical indicators. These indicators came from the Discourse Quality Index (DQI), which is another renowned manual designed to measure empirical aspects of deliberation (Steenbergen, Bächtiger, Spörndli & Steiner, 2003) and from Argumentation Theory (Fisher, 2004, p. 16-19,24-28).

First, the ideal procedure requires deliberative discussion to be argumentative in form (Cohen, 1997; Habermas, 1996, p. 305-306). Since the Stromer-Galley manual does not include codes for argumentation, the presence of student argumentation was captured by indicators developed within argumentation theory. Hence, the coding of arguments relied on standard procedures and interpretative rules for identifying arguments employed in argumentation analysis (for details see Fisher, 2004, p. 16-19;24-28). To exclude rhetoric from the analytical category of argumentation, arguments with nonsensical reasons (reasons being obviously false) or nonsensical warrants (no connection between reason and conclusion) were not counted as instances of argumentation. Making such a distinction between rhetoric (where participants misuse hollow argumentative language to sound convincing when they lack relevant reasons) and genuine argumentation is in line with both Habermas (1984, p. 332) and standard procedures for argument identification within argumentation theory (Fisher, 2004, p. 16-19;24-28). To distinguish original arguments from reformulations of previously voiced arguments, the analysis of argumentation was, moreover, supplemented with an indicator capturing original arguments.

Second, the ideal procedure requires deliberative discussion to be critical in the sense of being unconstrained by received norms and values (Cohen, 1997; Habermas, 1996, p. 305-306). One central indicator of unconstrained and critical discussion is the practice of contestation, which can occur either as cross-examination (critical questioning) or disputation (offering counter-claims) (Bächtiger, 2011). When participants contest previously voiced claims or deep-rooted beliefs (such as values) during discussion, the discussion shows signs of being unconstrained by these claims and values. Disputation was captured by the Stromer-Galley element of disagreement with other participants

(Stromer-Galley, 2007), and cross-examination was captured by an indicator that coded for instances of critical questioning. Moreover, contestations backed by arguments (rebuttals) and contestations of values and other ingrained beliefs were discerned as instances of thorough contestation.

Third, the ideal procedure requires deliberative discussion to be characterized by inclusion and equality, and Habermas further specifies that participants should have equal chances to make contributions as well as equal opportunities to be heard by others (Cohen, 1997; Habermas, 1996, p. 305-306). Equality with respect to making contributions was captured by equality in speaking time, which is one of the measures of equality suggested by Stromer-Galley (2007). Equality with respect to being heard was measured as equality in received responses, i.e., the extent to which participants' comments were equally responded to during the discussion. Participants, who say a lot but receive a small proportion of total responses are frequently ignored by the other participants. Codes for the frequency and recipient of responses were also part of the Stromer-Galley manual (J. Stromer-Galley, personal communication, May 2022). Inclusion was captured by the proportion of participants who spoke at least once during discussion (the proportion of speakers) and by the proportion of participants who received at least one response from others (the proportion of addressees). The former measure was also used by Stromer-Galley (2007) but as a measure of equality rather than a measure of inclusion.

Fourth, the ideal procedure requires deliberative discussion to be aimed at reaching understanding (rationally motivated consensus) (Cohen, 1997; Habermas, 1996, p. 305-306). It is worth noticing that this criterion only requires participants to strive for rational consensus and is not meant as a decision rule that requires deliberations to conclude with unanimously forged collective decisions (Habermas, 1996, p. 306; Samuelsson, 2018). Aiming for rational consensus should be interpreted as adopting an attitude oriented to reaching intersubjective understanding (Habermas, 1984, p. 286-287). When interpreted in this way, it makes sense to use participants' engagement with others as a central indicator of the extent to which discussion is aimed at reaching rational consensus. Engagement with others was captured by three sub-indicators. The first is from the Stromer-Galley manual and measures the extent to which participants respond to each other's' comments rather than talk past each other during discussion. The second is also from the Stromer-Galley manual and measures the extent to which participants pose genuine questions to each other or engage in meta-talk that seeks to explicitly clarify the meaning of prior talk (e.g., "I think you misunderstood me. What I meant was ...") (Stromer-Galley, 2007). The third is from argumentation analysis and captures participants' use of rebuttals – i.e., arguments that engage with the semantic content of a prior argument by challenging either its premise, warrant, or conclusion (Walton, 2013, p. 28).

Fifth, the ideal procedure requires deliberative discussion to be focused on a publicly relevant topic. Publicly relevant topics are defined broadly by the ideal procedure as any matter that can be regulated in the equal interest of all and include topics that are not themselves of direct public relevance but connected to other topics that are of public relevance (Cohen, 1997; Habermas, 1996, p. 305-306;312-313). The public relevance

of the discussion topic was captured by two indicators from the Stromer-Galley manual. The first indicator divides utterances into four categories (1) problem talk, which is talk about (or somehow related to) the publicly relevant problem constituting the substance of the discussion, (2) metatalk, which is talk about the talk, (3) process talk, which is talk related to the task facing participants, and (4) social talk, which is talk that only aims at maintaining or damaging social bonds (e.g. greetings, salutations, and blame) (J. Stromer-Galley, personal communication, May 2022). The indicator treats the first two categories as publicly relevant talk. The second indicator used was the number of opinion statements made within the broader category of publicly relevant talk. Opinion statements are in Habermas' theory regarded as a pre-stage to full-fledged deliberation (Habermas, 1984, p. 329; Eriksen & Weigård, 2003, p. 71), and they are in practice a necessary condition for argumentation to occur. If no opinion is expressed, there is nothing to argue for or against.

Finally, the ideal procedure requires deliberative discussion to be free from any kind of coercion. The absence of coercion is not explicitly thematized by Stromer-Galley (2007), but the manual nonetheless includes the element of harmful social talk, which captures some aspects of coercion. Harmful social talk is designed to damage social ties (J. Stromer-Galley, personal communication, May 2022), and the present study specifically coded for the presence of blame, insults, imperatives, and threats. The indicator of harmful social talk was supplemented with two indicators of coercion which drew on the DQI: (1) interruptions of the current speaker, and (2) interruptions of the speaking order (Steenbergen et al., 2003).

Intra-rater reliability was calculated for each of the different indicators by use of Cohen's Kappa. The Kappa scores were all statistically significant (p < 0.05). They ranged from 0.720 (indicating satisfactory reliability) to 1 (indicating perfect reliability).

Analytical procedure

The analysis proceeded in three steps. First, the video data were analyzed qualitatively and descriptively to get an understanding of how the discussion unfolded and to what extent the experimental conditions were delivered as planned (Esterling, 2018; Richards, 2019, p. 93). The descriptive analysis also identified common themes and judgement types to get an understanding of the discussion's content. It is presented in the subsection "How did the discussion unfold". Second, the data were subjected to a context-sensitive qualitative process of coding using the indicators described above. This process is illustrated in the subsection "Illustrating the coding process", and technical details about how it was carried out can be obtained from the corresponding author. Third, the codes for deliberation and coercion were compared quantitatively across experimental conditions to see if some experimental conditions were systematically more conducive to some aspects of deliberation or coercion than others. This final and main analysis is presented in the last two subsections of the analysis section.

Analysis

How did the discussion unfold?

At the beginning of the intervention, the teacher told students (who were seated in a horseshoe formation) that participation was voluntary and reminded them of a set of guidelines for good discussion practice. A student volunteered to moderate the discussion, and the teacher then encouraged students to discuss the factual question. The factual issue discussion centered on the question of whether Donald Trump could postpone the 2020 US presidential election. Since factual questions are usually regarded as being too closed to spark the disagreement necessary for a sustained discussion (Samuelsson, 2016), one might wonder what kept the factual issue discussion going in the first place. First, the factual question contained a semantic ambiguity that helped generate some disagreement among the students. While some students interpreted the question as referring strictly to Trump's legal (de jure) capacity to postpone the election, others interpreted it as referring to his political (de facto) capacity. These two differing interpretations are illustrated respectively by quote 5 and 6 in the next subsection. Second, students generally seemed to acknowledge the factual question as important and engaging. This might have been because the question was intertwined with an epochal key problem (the state of democracy) which students might have perceived as fundamentally and existentially relevant – not only to US citizens – but to themselves as well (Klafki, 2016, p. 79).

During the non-scaffolded controversial issues discussion, the students touched on a variety of different themes, which were in one way or another related to the question of whether western democracies are in crisis, and if so, how they might be improved. Though the discussion remained linked to the question of democratic crisis, a considerable part of the controversial issues discussion, drifted somewhat away from the assigned topic; a drift which might in part have been due to the very openness of the controversial question. One instance of drift occurred at a key moment in the discussion, when student 22 tied the concept of democracy to the notions of community and collective agency. This move, which was supported by the teacher, altered the trajectory of the discussion and made students discuss 'the crisis of democracy' in terms of a 'crisis of community spirit in relation to action against climate change'. The move is illustrated below.

Quote 1 (Student 22): "I don't know if you can say it, but in some way, this also underlines this; that it is the community. For example, as [student 10] says, this, that you can go out in groups and rally against something, like climate change and things like that; and then, like, change something. And it is the community that contributes to change things. So, I also believe that community is an important part of democracy." (Student 22, Condition B, Video 10 [0:12:06 - 0:12:25])ⁱ

Quote 2 (Teacher): "But do we have the community, and can we rally, as [NAME of student 15] says around a common cause? [...] Because that is also an expression of whether we are in a democratic crisis in the West or not" (Teacher, Condition B, Video 10 [0:12:28 – 0:12:48])ⁱⁱ

Quote 3 (Student 23): "We can't make everyone agree, but one can find a balance between the different things, so both that it becomes good for the countries but also that there are many, who are satisfied with it" (Student 23, Condition B, Video $10 \ [0:12:49-0:13:05]$)ⁱⁱⁱ

At a later point in the discussion student 23 unexpectedly and spontaneously (without being prompted by the teacher) took up the question of how to understand democracy again.

Quote 4 (Student 23): "We came from this thing about the community. And in democracy, there is, sure, not one big community, because there you follow the majority. And, so, if there is. There can easily be someone who has an opinion, and then have a small community there, but it, sure, isn't all one big community." (Student 23, Condition B, Video 10 [0:27:47 - 0:28:06])^{iv}

Though the communitarian conception of democracy was challenged twice by student 23, who advanced a more pluralist alternative, it was not questioned by other students until the introduction of the theoretical scaffold, which marked the beginning of the scaffolded controversial issue condition (condition C) and made a clear distinction between representative, direct, and deliberative democracy, which seemed to make it easier for students to articulate other conceptions of democracy and use them to construct their own positions.

Table 1 gives an overview of how the discussion unfolded and deviated from the intervention plan. After excluding utterances deemed to be at odds with the intervention plan (table 1), the total sample of data comprised 202 student utterances. The 202 utterances were unequally distributed across the four experimental conditions (table 2).

TABLE 1

An overview of experimental conditions and major discussion events.

Experimental condition	Events	Deviation from intervention plan?	Event excluded from further analysis?	
Factual issue condition (A1). Baseline. Students asked to discuss the factual question "Can Trump postpone the US presidential election?"	Students discussed the factual question ¹ (7 min. and 55 sec.)	No	No	
	Teacher dissolved the plenary session and asked students to discuss in small groups instead. These discussions lasted for 7 min.	Yes (large). An example of what can happen in quasiexperiments.	Yes. But the deviation might have impacted the subsequent discussion in other ways, which cannot be accounted for.	
	Students engaged in a factual issue discussion centering on the UK's exit from the EU (6 min. and 26 sec.)	Yes (small)	No	
	Students discussed the factual question ¹ (6 min.)	No	No	
	Break (5 min.)	No	Yes	

Non-scaffolded controversial issue condition (B). First	Students engaged in a factual issue discussion about the separation of powers in Denmark (2 min. and 52 sec.)	Yes (large)	Yes
treatment.	Students discussed the controversial questions ² (10 min. and 10 sec.)	No	No
Students asked to discuss the open controversial question "Are Western democracies in crisis, and, if so, how can they be improved?"	Students discussed whether there is enough community spirit (with respect to action against climate change) for there not to be a crisis of democracy (25 min. and 16 sec.)	Yes (small)	No
	Break (7 min.)	No	Yes
Factual issue condition (A2). Baseline. Students asked to discuss the factual question "Can Trump postpone the US presidential election?"	Students discussed the factual question ¹ (4 min. and 20 sec.)	No	No
Scaffolded controversial issue condition (C). Second treatment.	Two accessible videos about direct, representative, and deliberative democracy were shown (9 min. and 19 sec.)	No	Yes
Students asked to discuss the open controversial question with the aid of a theoretical scaffold.	Students discussed the controversial questions again (10 min. and 28 sec.)	No	No

TABLE 2

Descriptive statistics. N=202 student utterances.

	Factual	Controversial	Factual	Scaffolded	Total
	issue	issues	issue	controversial	
	discussion	discussion	discussion	issues	
	(A1)	(B)	(A2)	discussion (C)	
Student	44 (21.8)	106 (52.5)	20 (9.9)	32 (15.8)	202
utterances n (%)					(100)
Total duration	00:20:20	00:35:26	00:04:20	00:10:47	01:10:53
(hh:mm:sss)					

Of the 202 student utterances, 145 (71.8%) were opinions understood as expressed judgements on e.g., an event, a social problem, a crisis, or a state of affairs. Of these 145 opinions, 84 (57.9%) were judgements about factual or empirical matters (see quote 5 and 6 below for illustrations), and 24 (16.6%) were pragmatic judgements about what to do politically (see quote 7 below for an illustration). Moreover, 20 (13.8%) were value judgements about how things ought to be or how people ought to act (see quote 3 above for an illustration); 16 (11%) were theoretical or analogical judgments about how

to define or understand specific concepts (see quote 1 and 4 above for illustrations); and 1 (0.7%) was an inner worldly judgement about the speaker's own wants.

Illustrating the coding process

The main analysis consisted in giving each of the student utterances a score on each of the indicators of deliberation introduced in the method section. This coding process had a qualitative character for two reasons. First, it was sensitive to the context surrounding the verbal interaction (including gestural cues) and interpreted the meaning of utterances from an involved participant perspective as recommended by Stromer-Galley (2007) and Fisher (2004, p. 17-18). For this reason, the assigned binary scores (for the presence or absence of a particular indicator of deliberation) relied on a thorough qualitative assessment. Second, all indicators were iteratively refined and adjusted to the empirical material at hand. This abductive process resulted in an additional set of guidelines that were used to assign scores to each utterance in the final round of coding. The coding process is illustrated here by use of student quotes (presented in this and the previous subsection), which were chosen for their exemplary character. Quote 5 is from the beginning of the discussion session, when student 10 answers the teacher's question "Can Donald Trump postpone the US presidential election"?

Quote 5 (Student 10): "It says here that the answer is no, because since 1845 it has been a law that the election must be held on the first Tuesday after the first Monday of November" (Student 10, Condition A1, Video 8 [0:00:17 - 0:00:26])^v

This quote contains argumentation, because student 10's conclusion "Trump cannot postpone the election" is backed up by a reason "the law forbids the postponement of the presidential election" (Fisher, 2004, p. 16-19;24-28). (Other illustrative examples of argumentation can be found in quotes 1, 4, and 6). Yet, quote 5 contains no contestation of prior viewpoints and only a weak type of engagement, since it responds to the teacher's prompt but does not try to reach an understanding with the participating students. The utterance contains publicly relevant talk on the problem at hand, and there are no overt signs of coercion. Quote 6 transpires when student 22 responds to student 15's view that Trump might be unable to postpone the US presidential election, because he is currently unpopular among the US populace at large.

Quote 6 (Student 22): "But he [Trump] doesn't need the people to like him. That is, like, they don't need to like him for him to postpone it [the US presidential election]. That is, he is the President after all, so he doesn't after all need to have the entire USA to support him to postpone this election. And there are, after all still many of his supporters, who wants to help him and make him win. And get him on top of corona again." (Student 22, Condition A1, Video 8 [0:03:23 - 0:03:43])^{vi}

This utterance illustrates what contestation looks like in practice. Student 22 rejects student 15's conclusion and offers several supporting reasons for her rejection. Since the contestation is backed by argumentation, it constitutes a rebuttal of student 15's

argument. (Other illustrative examples of contestation can be found in quotes 3 and 4). The utterance also displays a high level of engagement with student 15's prior argument, which is actively taken up and modified. Again, the topic is publicly relevant, and no signs of coercion are present. Quote 7 is from the end of the discussion when student 5 responds to the teacher's question "Can democracies be improved?" by focusing on the case of US democracy taken up earlier by student 10.

Quote 7 (Student 5): "Well, yes it [US democracy] can be improved. I agree with [NAME of student 10] that there should be a parliament, so that there are these support parties." (Student 5, Condition C, Video 13 [0:03:03 - 0:03:09])^{vii}

This utterance exemplifies the absence of argumentation. Student 5 states an opinion but does not back it up by a reason. The utterance explicitly takes up student 10's view and, hence, contains clear engagement. (Other examples of engagement between students can be found in quotes 1, 4, and 6). Still, quote 7 lacks contestation since student 10's view is not disputed. Again, the utterance contains publicly relevant talk on the problem at hand, and there are no signs of coercion. Quote 8 is also from the end of the discussion when student 12 interrupts student 22 who is making a point related to the importance of avoiding electoral abstention.

Quote 8 (Student 12): "You are off [from school] [NAME of student 22]" (Student 12, Condition C, Video 13 [0:10:11 - 0:10:12])^{viii}

This last example illustrates an instance of coercion. There are two reasons for this. First, student 12's tone and non-verbal gesticulations (the context of interaction) make it clear that student 12 wants the utterance to be understood as an insult connoting something like "you are way too engaged in school, student 22 - get a life!" Second, the utterance effectively cuts student 22 off in the middle of a sentence and, hence, constitutes an interruption that makes it harder for student 22 to speak. The utterance also lacks public relevance. This is because it constitutes an instance of "social talk", which only aims at managing particular social bonds and differs from problem talk, which is about a publicly relevant problem accessible to everyone. Since the utterance lacks public relevance, it was (in line with the Stromer-Galley manual) not coded for the other aspects of deliberation. Having illustrated the coding process, the analysis now turns to a presentation of the quantitative results.

Aspects of deliberation across conditions

Table 3 illustrates how each empirical element of deliberation evolved from the first phase of the discussion session (condition A1) to the last phase (condition C). The last column of table 3 sums up the presence of the different elements across phases. Argumentation was pronounced throughout the discussion session, though the scaffolded controversial issue condition (the last phase of the discussion) contained a higher proportion of original arguments (50.0%) than the other conditions.

TABLE 3 Aspects of deliberative quality across conditions. N=202 student utterances.

	Factual issue discussion (A1)	Controversial issues discussion (B)	Factual issue discussion (A2)	Scaffolded controversial issues discussion (C)	Entire session
Argumentation					
Arguments $n(\%)^1$	25 (56.8)	40 (37.7)	8 (40.0)	18 (56.3)	91 (45.0)
Original arguments $n(\%)^1$	17 (38.6)	35 (33.0)	5 (25.0)	16 (50.0)	73 (36.1)
Contestation ⁹					
Statements of disagreement $n(\%)^1$	12 (27.3)	21 (19.8)	3 (15.0)	10 (31.3)	46 (22.8)
Critical questions $n(\%)^1$	1 (2.3)	3 (2.8)	0 (0.0)	0 (0.0)	4 (2.0)
Contestations of deep-rooted beliefs (values or needs) $n(\%)^1$	0 (0.0)	8 (7.5)	0 (0.0)	0 (0.0)	8 (4.0)
Equality and inclusion					
Speakers $n(\%)^{2,7}$	5 (21.7)	5 (21.7)	13 (56.5)	8 (34.8)	17 (73.9)
Share of speaking time among speakers $M(SD)^3$	7.7 (9.6)	6.7 (6.8)	7.7 (5.0)	11.1 (9.2)	5.9 (6.6)
Addressees $n(\%)^{4,7}$	4 (17.4)	3 (13.0)	8 (34.8)	3 (13.0)	14 (60.7)
Share of received responses among addressees M $(SD)^5$	14.3 (7.1)	9.1 (8.6)	14.3 (5.4)	14.3 (11.3)	7.7 (4.8)
Engagement					
Responses $n(\%)^6$	29 (67.4)	64 (73.6)	9 (52.9)	17 (68.0)	119 (69.2)
Responses to other students $n(\%)^6$	16 (37.2)	42 (48.3)	9 (52.9)	17 (68.0)	84 (48.8)
Genuine questions or Metatalk $n(\%)^{1,8}$	4 (9.1)	12 (11.3)	2 (10.0)	1 (3.1)	19 (9.4)
Rebuttals $n(\%)^{1,9}$	8 (18.2)	20 (18.9)	4 (20.0)	11 (34.4)	43 (21.3)
Original rebuttals $n(\%)^{1,9}$	7 (15.9)	16 (15.1)	3 (15.0)	9 (28.1)	35 (17.3)
Public relevance					
Publicly relevant utterances $n(\%)^1$	43 (97.7)	87 (82.1)	17 (85.0)	25 (78.1)	172 (85.1)
Opinion statements $n(\%)^1$	36 (81.8)	71 (67.0)	14 (70.0)	24 (75.0)	145 (71.8)

Notes to Table 3. ¹As percent of total number of all utterances in a particular condition and overall.

²Number and percent of the 23 present students who spoke at least once during the first 4 minutes and 20 seconds of each condition. Except the last column's cell, which displays number and percent of present students who spoke at least once during the entire session.

³The higher the standard deviation (SD) of *share of speaking time among speakers*, the more *un*equal the distribution of the shares of speaking time among speakers.

⁴Number and percent of the 23 present students who were addressed at least once during the first 4 minutes and 20 seconds of each condition. Except the last column's cell, which displays number and percent of present students addressed at least once during the entire session.

⁵The higher the standard deviation (SD) of *share of received responses among addressees*, the more *un*equal the distribution of the shares of responses among addressees.

⁶As percent of total number of publicly relevant utterances in a particular condition and overall. ⁷The numbers of speakers and addressees were only based on the first 4 minutes and 20 seconds of each condition to ensure comparability between conditions.

⁸Genuine questions and critical questions are not mutually exclusive categories.

This was especially remarkable since the condition occurred at the end of the discussion session (as well as at the end of the school day) and interrupted a downward trend in the level of original argumentation. Since one might otherwise have expected students to be tired and lack new ideas, it seems reasonable to ascribe the increase in original argumentation to the scaffolded controversial issue condition - including the theoretical framework presented through video. For the purposes of this analysis, it was decided to emphasize original argumentation, which excludes restatements of previous arguments. This decision was made for two reasons. First, students who merely repeat a prior argument do not attempt to make a standpoint more appealing by engaging in the deliberative struggle for the (qualitatively) better argument (Cohen, 1997; Habermas, 1996, p. 305-306). Rather they promote a standpoint by increasing the total quantity of information supporting it – an influence strategy often referred to as informational social influence (Deutsch & Gerard, 1955). Second, presenting original arguments requires students to engage in a process of independent reasoning, whereas repeating prior arguments does not require students to reason at all.

Overall, students also often contested each other's views. This suggests that discussion was at least somewhat unconstrained by suppressive norms of group cohesion that might otherwise require students to fall in line and refrain from uttering statements against the majority view of the peer group. Simple statements of disagreement (disputations) were most pronounced in the scaffolded issue condition where 31.3% of student utterances displayed explicit disagreement with another participant's viewpoint. As with original argumentation, the introduction of the scaffolded issue condition interrupted a downward trend in disagreement, and it, hence, seems reasonable to assume that the higher level of disagreement in the scaffolded issue condition was not due to a time trend. Original rebuttals, defined as contestations backed by original arguments, were also most widespread in the scaffolded controversial issue condition, which again interrupted a downward trend (see third last row of table 3). Critical questions (cross-examination) and contestation of deep-rooted beliefs occurred much less frequently overall. Most contestations challenged factual beliefs or pragmatic beliefs about how to act; and only a small fraction of publicly relevant utterances (4.7%)

⁹Rebuttals are indicators of *both* engagement and contestation.

challenged deep-rooted beliefs understood as expressed values or need interpretations. Critical questions and contestations of deep-rooted occurred more frequently in the non-scaffolded issue condition than in any other condition. The non-scaffolded controversial issues discussion seemed to promote a more lively and wild kind of discussion, which might have made room for the contestation of deep-rooted beliefs usually thought to be 'private affairs' and, hence, inappropriate objects of contestation.

When analyzing equality and inclusion, however, a different, less rosy, picture emerges. Though 17 (73.9%) of the present students spoke at some point during the discussion session, shares of speaking time were distributed very unequally among the speakers (see figure 1), and shares of received responses were distributed unequally among addressees (see figure 2). The most talkative student spoke for 27.64% of total student speaking time, and this student also received the largest share of responses (19.79%).

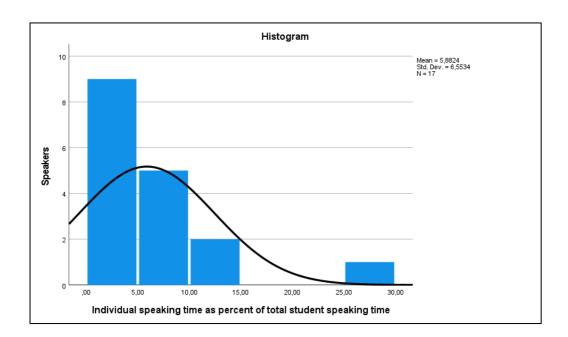


FIGURE 1.

Distribution of shares of speaking time among speakers (entire session). The height of each bar represents the number of speakers whose share of total speaking time fell within the bar's width. E.g., One speaker occupied between 25 and 30 percent of total speaking time. Five speakers occupied between 5 and 10 percent of total speaking time.

It is worth noting, however, that inequality in speaking time was more pronounced than inequality in received responses. Some students spoke much more frequently than others, but the class moderated their influence on the discussion somewhat by not giving them a proportionate share of total responses. While inequality and exclusion are especially troublesome if they happen along, and hence reinscribe, existing patterns of societal exclusion (see e.g., Vakil & de Royston, 2019), the investigated class was culturally and ethnically homogeneous and, consequently, did not allow for an investigation of inequality and exclusion with respect to students from marginalized

cultural or ethnic groups. Nonetheless, for proponents of controversial issues discussion, the findings regarding equality and inclusion are worrisome. The introduction of the scaffolded controversial issue condition seems to have depressed the proportion of speakers and increased the inequality in speaking time among speakers. Moreover, the proportion of addressees (i.e., students receiving a response) was lower in both controversial issue conditions than in the factual issue conditions, and the distribution of responses among addressees was also more dispersed and, hence, more unequal. The scaffolded controversial issues discussion, which seemed to promote both original argumentation and contestation, displayed the highest level of inequality in speaking time and in received responses. This might be because it centered mostly on the question of whether democracy can be improved – a question which some students might have perceived as far-fetched, abstract, and perhaps irrelevant to their everyday lives.

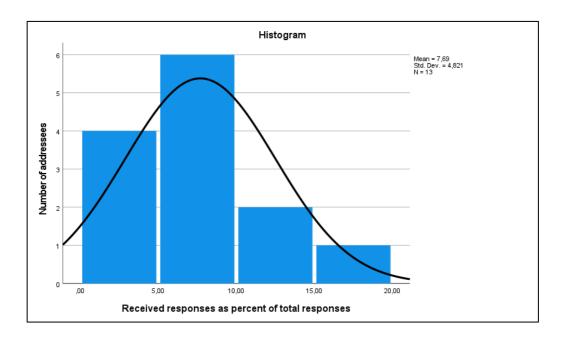


FIGURE 2.

Distribution of shares of received responses among addressees (entire session). The height of each bar represents the number of addressees whose share of received responses fell within the bar's width. E.g., One addressee received between 15 and 20 percent of total responses. Six addressees received between 5 and 10 percent of total responses.

Overall, the discussion session was characterized by a considerable amount of engagement, since 69.2% of publicly relevant utterances were responses to previous utterances, and 48.8% of publicly relevant utterances were responses to other students. The remaining 20.3% were responses to the teacher. Moreover, 17.3% of all student utterances were original rebuttals, which require a high level of reflexive engagement with the semantic content of previously voiced utterances. Explicit attempts at clarifying positions through questions or metatalk, however, only appeared in 9.4% of student utterances. Responding was more pronounced in the controversial issue conditions than

in the factual issue conditions. Responses to other students, and hence student-student interaction, was most pronounced in the scaffolded controversial issue condition but this might have been due to a time trend, since the proportion of responses to other students increased steadily from the beginning till the end of the discussion session. The scaffolded controversial issue condition also displayed the highest proportion of original rebuttals. The increase in original rebuttals following the introduction of the scaffolded controversial issue condition interrupted a steady downward trend and, hence, did probably not occur simply due to the passage of time. Explicit attempts at clarifying positions through genuine questions or metatalk occurred more often in the non-scaffolded controversial issue condition than in the other conditions. This might, however, have been because the non-scaffolded controversial issues discussion was rather disorderly, and, hence, might have required more clarifying talk to clear up the confusion it produced.

The entire discussion session was characterized by a large proportion of publicly relevant utterances (85.1%). Overall, students discussed publicly relevant problems and only seldomly engaged in social chitchat or talk about how to complete the task. Moreover, 87.9% of the publicly relevant utterances were opinion statements expressing a judgement on e.g., an event, a social problem, a crisis, or a state of affairs (J. Stromer-Galley, personal communication, May 2022). Most of the opinions expressed by students were supported by arguments (62.8%) and more than half (50.3%) were backed by original arguments. Publicly relevant talk, however, occurred more frequently in the factual issue conditions than in both controversial issue conditions. Since factual and controversial issue conditions were interchanged during the quasi-experiment, these systematic differences were probably not due to the passage of time. Since the controversial issues discussions were more heated than the factual issue discussions, they might have required and made room for more social chitchat aimed at managing and manipulating peer bonds.

Aspects of coercion across conditions

When studying the deliberativeness of classroom discussions, it might be helpful to include an analysis of elements of coercion, because the principles stated in the ideal procedure of deliberation are to some extent framed negatively as the absence of coercion. The elements of coercion presented in table 4 are by no means an exhaustive list of what coercion can look like in classroom discussions. Still, they were included to give some sense of "the opposite side of the coin" of deliberative quality in the investigated discussion session. Interruptions of the current speaker, which Steenbergen et al. (2003) also consider a sign of coercion, were not frequent overall (9.2% of student turns) but occurred more often in the non-scaffolded controversial issue condition (12.2% of student turns) than in the other conditions. Interruptions of the speaking order were considerably more frequent overall (19.8% of student turns) and, also, occurred more frequently in the non-scaffolded controversial issue condition (28.8% of student turns) than in the other conditions. A similar pattern was found for harmful social talk. While harmful social talk, including either blame, insults imperatives, or threats,

occurred seldomly overall (4.5% of student utterances), it occurred somewhat more often in the non-scaffolded controversial issue condition (6.6% of student utterances) than in the other conditions. In total, the non-scaffolded controversial issue condition included 7 attempts by some participants to coerce, silence or denigrate other participants. It is worth mentioning, however, that the majority of these attempts were made by a single student, and that the student towards whom they were primarily directed did not seem to be adversely affected by them. In sum, all aspects of coercion were more prevalent in the non-scaffolded controversial issue condition than in the other conditions. Probably, the heated and disorderly character of the non-scaffolded controversial issues discussion also allowed coercion to become more widespread than it was in the rest of the discussion session.

TABLE 4. Aspects of coercion across conditions. N=202 student utterances.

	Factual issue discussion (A1)	Controversial issues discussion (B)	Factual issue discussion (A2)	Scaffolded controversial issues discussion (C)	Entire session
Interruptions of the current speaker $n(\%)^{1,2}$	2 (5.9)	9 (12.2)	1 (7.1)	1 (5.0)	13 (9.2)
Interruptions of the speaking order $n(\%)^2$	1 (2.6)	30 (28.8)	4 (20.0)	5 (19.2)	40 (21.2)
Harmful social talk (blame, insults, imperatives, or threats) $n(\%)^3$	0 (0.0)	7 (6.6)	1 (5.0)	1 (3.1)	9 (4.5)

Note. ¹Excluding interruptions of speakers engaging in social talk or process talk ²As percent of the total number of turns in a particular condition and overall (i.e. excluding secondary utterances). ³As percent of the total number of utterances in a particular condition and overall.

Despite the nominally large mean differences reported in table 3 and 4, it should be noted that the magnitudes of the changes were generally small when estimated by use of NAP (Non-overlap of All Pairs), which is a so-called non-overlap technique designed specifically for the calculation of effect sizes from single case experiments. NAP-values fall between 0.5-1 and express the probability that a randomly selected score from one condition will exceed that from a second condition (Parker Vannest & Davis, 2011; Vannest, Parker, Gonen, & Adiguzel, 2016). Though the magnitude of the treatment effects found by this study were generally small (ranging from NAP=0.503 to NAP=0.674), it was often reasonable to attribute these effects to the alternation of experimental conditions. Details regarding the effect size calculations can be obtained from the corresponding author.

Discussion

Overall, the results of the analysis showed that the participating 8th graders were able to engage in a high-quality classroom discussion characterized by some of the empirical correlates of deliberation (including argumentation, shallow contestation, engagement, and public relevance). The largest deliberative deficit was the presence of exclusion and inequality, which meant that some students were speaking very often and received a large share of responses, while others remained completely silent or were not addressed by their classmates. The present study showed that the investigated classroom discussion displayed some but not all aspects of deliberation. Still, it is worth noting that other studies have found pre-planned classroom discussions to be either more clearly deliberative (e.g., Samuelsson, 2016; Tammi & Rajala, 2018) or coercive in character (e.g. Crocco et al., 2018; McMillan & Harriger, 2002). The present study, also shed some light on the relationship between the "teaching of facts and concepts" on one hand and the "teaching of discussion" on the other. This relationship is often debated within the Social Science literature (Solhaug, 2013), and the study contributed to this debate by showing that discussion is not always divorced from facts and concepts. The investigated students managed to stay engaged in the factual issue discussion and often made factual, empirical, and conceptual judgements during the discussion session.

Interpreting the findings

Compared to the factual issue condition, the scaffolded controversial issue condition seemed to promote original argumentation, statements of disagreement, and engagement measured as the occurrence of responses and original rebuttals. On the downside, it might have decreased the proportion of active participants and increased the inequality in speaking time among participants. While the presentation of the open controversial question (whether Western democracies are in crisis and, if so, how they can be improved) might have created a necessary room for reflection and original argumentation to occur, the results suggest that original argumentation was further promoted by the theoretical framework. Perhaps, the framework provided students with a point of reference and a concrete source of inspiration for formulating original arguments (Petrik, 2010b). Open controversial questions might, hence, be a necessary but not always sufficient condition for original argumentation to occur. Since controversial questions are conceptualized as questions that generate disagreement (Hess, 2009, p. 38), it is not surprising that the proportion of statements displaying disagreement increased following the introduction of the scaffolded controversial issue condition. Since disagreement requires resolution among participants, the increase in engagement following the introduction of scaffolded controversial issue condition also makes intuitively sense. One explanation for the increase in non-participating students and inequality in speaking time among participants might be that open controversial questions are challenging to discuss compared to factual questions and might be more challenging to discuss for some students than for others. Discussion of open-ended questions might disproportionately privilege independent learners from academic homes (e.g., Bernstein, 2001), and adding theoretically grounded scaffolds to the discussion might not be the best way to overcome this skewness.

Compared to the factual issue condition, the non-scaffolded controversial issue condition likely promoted contestation of deep-rooted beliefs and to a lesser extent critical questioning (cross-examination) and clarifying talk (in the form of metatalk and genuine questions). Disturbingly, however, the results suggest that it also made room for the emergence of different forms of coercion among students. The non-scaffolded controversial issue condition seemed to make way for a vivid, lively, and unruly kind of discussion touching not only upon facts but also upon values and definitions. The vivid and unruly character of the discussion might have promoted profound contestation, increased the need for clarifying talk, and simultaneously opened the door to some forms of coercion - including interruptions and harmful social talk. Since both profound contestation and coercion challenge established norms, it is, moreover, sometimes hard to tell the difference between them in practice, though they are neatly distinguished from each other in deliberative theory (Habermas, 1996, p. 305-306). The increase in coercion following the introduction of the non-scaffolded controversial issue condition is consistent with findings from social psychology, which show that discussions centering on value-laden controversial issues tend to be more prone to coercion and conformity dynamics than discussions centering on factual or intellective issues (Mendelberg, 2002). Since the non-scaffolded controversial issue condition presented students with the highest degree of openness and the lowest degree of organization, it makes intuitively sense that it might at times promote vivid and unruly discussion.

Compared to the controversial issue conditions, the factual issue condition contained the highest proportion of publicly relevant statements and the least chitchat. It also contained the highest proportion of addressees and the highest level of equality in received responses among addressees. The factual issue conditions made room for a sober and orderly kind of discussion, which was detached from value questions entangled with students' identity and focused on the issues at hand. The sober character of the discussion might have reduced the need for social talk (e.g., chitchat) aimed at managing social relationships and peer bonds. The orderly character of the discussion, moreover, might have reduced the need for process talk about the task to be completed and the formal procedures regulating the discussion. The factual issue conditions were also characterized by higher levels of inclusion and equality than the controversial issue conditions. Perhaps factual issue discussion can reduce (though not remove) the dominance of extrovert and self-confident students with strong opinions. Students with high self-esteem might be especially eager to participate in controversial issues discussions because they view them as welcome opportunities to perform their identity, including their opinions and values, for their classmates (the general issue of identity "performance" in classroom discussion has been analyzed by Crocco et al., 2018). Conversely, less confident students might be especially reluctant to participate in discussions requiring them to expose or defend part of their identity, such as their political opinions or values, to others. In the context of the present study, a clear example of such a discussion was the controversial issues discussion that drifted towards climate change. While controversial issues discussion might, hence, disproportionally favor those who are already most likely to dominate classroom discussions, factual issue discussions might moderate existing inequality and exclusion by providing the more insecure and less confident students with a safe space, where they can experiment with their public voice without having to expose part of their identity to their peers. Though avoiding questions related to students' identity might benefit equality and inclusion, it is worth noting that such avoidance also undermines a discussion's potential for thorough contestation of deep-rooted beliefs. Factual issue discussion is, hence, by no means a panacea for deliberative quality.

Since factual questions are usually regarded as being too closed to spark the disagreement necessary for a sustained discussion (Samuelsson, 2016), one might wonder what kept the factual issue discussion going in the first place. Two possible answers are given below. First, the factual question "Can Donald Trump postpone the US presidential election?" contained a semantic ambiguity that helped generate some disagreement among the students. While some students interpreted the question as referring strictly to Trump's legal (de jure) capacity to postpone the election, others interpreted it as referring to his political (de facto) capacity. Second, students generally seemed to acknowledge the factual question as important and engaging. This might have been because the question was intertwined with an epochal key problem (the state of democracy) which students might have perceived as fundamentally and existentially relevant – not only to US citizens – but to themselves as well (Klafki, 2016, p. 79).

Limitations of the study

While a single case experiment has some benefits when it comes to internal validity it remains, in important respects, a case study, which lacks external validity and the representativeness required for external validity. The class was not representative of the Danish student population since it was culturally and ethnically homogeneous and consisted almost exclusively of students from upper-middle class homes. The lack of external validity implies that teachers cannot use the results as a ready-made package in their own teaching but need to consider the particular context of their own classroom (including e.g., the student group, the learning goals, the content and purpose of the specific lesson) when pondering which discussion designs to use in their own teaching. While the results might inform teachers' professional judgements about the appropriateness of specific designs in specific contexts, they cannot and are not meant to replace such independent judgements.

Conclusion

The results of this study suggest that reasoned classroom discussion might co-exist with problems related to inequality and exclusion, and that different conditions of discussion might promote different aspects of deliberation. In the present study, the controversial issue condition, which otherwise seemed most favorable to thoughtful and critical classroom discussion, also opened the door to higher levels of exclusion and

inequality. This points to the need for more research on how existing classroom settings condition the quality of classroom discussion as well as exploratory research and practice designed to uncover even better ways of organizing and conducting student discussions.

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Endnotes

ⁱ Translated from Danish: "Jeg ved ikke om man kan sige det, men på en eller anden måde sætter det også streg under det her med, at det er fællesskabet. For eksempel, som [NAVN på elev 10] siger, det der med, du kan gå ud i nogle grupper og demonstrere mod noget, som klimaforandringerne og sådan noget, og ligesom så lave om på noget. Og det er jo også fællesskabet, der er med til at lave om på noget. Så jeg tror også fællesskab er en vigtig del af demokrati." (Student 22, Condition B, Video 10 [0:12:06 - 0:12:25])

ii Translated from Danish: "Men har vi fællesskabet og kan vi samles, som [NAVN på elev 15] siger, til at stå sammen om en sag? [...] Fordi det er også et udtryk for om vi er i en demokratisk krise i Vesten eller ej" (Teacher, Condition B, Video 10 [0:12:28 – 0:12:48])

iii Translated from Danish: "Men vi kan jo ikke gøre så alle bliver enige, men man kan finde en balance mellem de forskellige ting, så både at det bliver godt for landene, men også at der er mange, der er tilfredse med det" (Student 23, Condition B, Video 10 [0:12:49 – 0:13:05])

iv Translated from Danish: "Vi kom jo fra det her med fællesskabet. Og i demokrati, der er jo ikke et stort fællesskab, fordi, der er det jo flertallet man går efter. Og, så hvis der er. Der kan jo sagtens være nogen, der har en holdning og så have et lille fællesskab der, men det hele er jo ikke et stort fællesskab." (Student 23, Condition B, Video 10 [0:27:47 - 0:28:06])

^v Translated from Danish: "Der står her, at svaret er nej, fordi siden 1845, der har det været en lov, at valget skal holdes den første tirsdag efter den første mandag i november." (Student 10, Condition A1, Video 8 [0:00:17 - 0:00:26])

vi Translated from Danish: "Men han behøves jo ikke have folkene til at kunne lide ham; altså sådan de behøves jo ikke at kunne lide ham for at han kan udskyde det. Altså, han er jo præsident, så han behøves jo ikke have, altså hele USA til at støtte ham til at udskyde det her valg. Og der er jo stadig en masse af hans støtter, der gerne vil hjælpe ham og få ham til at vinde. Og få ham ovenpå corona igen." (Student 22, Condition A1, Video 8 [0:03:23 - 0:03:43])

vii Translated from Danish: "Altså, ja det [USA's demokrati] kan forbedres. Jeg er enig med [NAVN på elev 10] i, at der skal være et parlament, så der er de der støttepartier." (Student 5, Condition C, Video 13 [0:03:03 - 0:03:09])

viii Translated from Danish: "Du har fri [NAVN på elev 22]" (Student 12, Condition C, Video 13 [0:10:11 - 0:10:12])

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