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# Beyond Binaries: A Three-Sided Pedagogical Model for Classroom Debate

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This study evaluates an innovative three-sided approach to classroom debate aimed at fostering critical thinking beyond adversarial argumentation. In an undergraduate Food Justice course, two teams presented arguments "for" and "against" pre-defined resolutions, while a third team explored areas of convergence and divergence at the "complex middle". Class members subsequently engaged in verbal and written reflections. Drawing on field notes, students' written reflections, and an evaluative student survey, the authors investigated the impacts of this approach. Most students found the three-team structure (80%) and post-debate verbal sharing sessions (72%) useful; almost two-thirds (64%) called for inclusion of a structured question/answer period. Many students actively embraced the complex middle as an interdisciplinary site for exploring real-world problems, noting flaws in their prior thinking, and becoming more alert to their socio-cultural positionalities. Additional research on similar pedagogies appears warranted.

Debates have long been employed in the academic sphere to encourage learners' critical appraisal of issues with contemporary relevance (Rogers, 2004), but the polarization that characterizes conventional debate pedagogy may threaten the same democratic ideals its advocates endorse (Hogan & Kurr, 2017). At their best, classroom debates may be enjoyable and motivating for students (Jerome & Algarra, 2005) and promote critical thinking, social accountability, cultural awareness, and curiosity to learn more about a given topic (Rogers, 2004). However, debates' binary argumentative structure may reduce complex questions to two-sided issues argued by "thinkers who are identified by their mutual oppositions" (Pearce & Pearce, 2000, p. 64). This model risks discouraging student engagement with a nuanced range of issues situated at what Tannen (1998) terms the "complex middle":

> Our determination to pursue truth by setting up a fight between two sides leads us to believe that every issue has two sides — no more, no less. If both sides are given a forum to confront each other, all the relevant information will emerge, and the best case will be made for each side. But opposition does not lead to truth when an issue is not composed of two opposing sides but is a crystal of many sides. Often the truth is in the complex middle, not the oversimplified extremes (p. 10).

Hyde and Bineham (2000) apply this concept in their analysis of classroom debate activities. They warn that traditional two-sided debate structures often foster polarized thinking, and fail to reveal the nuances of a complicated topic that exist in the "complex middle" (p. 212). The muddling of "truth" that occurs when students take on one of two extreme positions may remain unnoticed, as the focus is centered on which team will win (Tumposky, 2004). This competitive environment may, in turn, provoke verbal aggression (Rogers, 2004) and limit possibilities for problem-solving (Carcasson, Black, & Sink, 2010), compromising thoughtful and critical discussion.

Traditional adversarial debate models risk excluding marginalized students, such as women and ethnic minorities (Rogers, 2004). Academic institutions are embedded within colonial and patriarchal power structures that work to silence these voices (Eddy, Brownell, & Wenderoth, 2014; Schultz, 2003; White, 2011). Students belonging to minority groups may avoid participating due to a fear of revealing academic incompetence that has been wrongly assumed of them (White, 2011), or may be unable to participate in conversation due to exclusion by their classmates (Eddy, Brownell, Thummaphan, Lan, & Wenderoth, 2015). Further, the two-sided debate model may disregard non-Western collectivist cultural discourses that prioritize the maintenance of social harmony over winning (Durkin, 2008). The oppositional dialogue required may not align with the worldviews of students belonging to cultural groups that value silent reflection and listening (Schultz, 2009).

To better prepare young people to engage with issues in their community and broader sociopolitical sphere as informed citizens, classroom debate activities must be thoughtfully planned and facilitated (Hogan & Kurr, 2017). Drawing from Tannen's conceptualization of the "complex middle" (1998, p.10), there is a need for pedagogical activities that invoke a deeper consideration of an issue's complexities and contradictions between two polarized extremes. The non-binary notion that multiple perspectives or truths can occur simultaneously also exists in popular culture and educational theory (Boghossian, 2006). Lay expressions such as: "There are three sides to every story: Your side, my side, and the truth" (Burstein & Morgen, 2002) acknowledge that individuals on either side of an argument may hold oppositional views that distort the underlying reality. A publication from the

International Debate Education Association suggests the creation of a debate with three sides, in which one team "attempt[s] to create a middle ground," in order to allow for a "greater interplay" of ideas (Snider & Schnurer, 2006, p. 246). To our knowledge, this three-sided debate model has not been formally evaluated in a classroom setting.

The present study evaluates an innovative three-sided debate pedagogy that challenges undergraduate learners in a food justice-focused course to critically reflect upon an interdisciplinary range of perspectives while minimizing adversarial polarization. Our hybrid pedagogy draws its structure concurrently from traditional debate models and more broadly from strategies of deliberative education.

The wide range of deliberative educational strategies described in the literature over several decades (Fallace, 2016; McAvoy & Hess, 2013) tends to be strongly differentiated from the bifurcated, competitive debate model. On the whole, such approaches emphasize constructivist educational principles of student-centred, collaborative, and reflective learning. Increasingly, theory and practice in this field also apply an equity-informed lens that recognizes the historically-situated sociopolitical power differentials between groups (Knowles & Clark, 2018; Weasel, 2017).

Facilitated group discussions represent one time-tested approach within deliberative education (McAvoy & Hess, 2013); online discussion boards are increasingly common as well (Donlan, 2019). Educational talking circles, which originate in North American Indigenous governance models (Wolf & Rickard, 2003), invite participants to speak sequentially about a particular topic, with reference to their own lived experiences and their sociocultural positionalities. Feminist pedagogies of dialogue typically center open discussion and collective learning formats (Crawley, Willman, Clark, & Walsh, 2009). Dyadic models invite pairs of students to reflect together on contentious social issues, whether face-to-face (Hyde & Bineham, 2000) or using online platforms (Baker, 2009). As Hyde and Bineham (2000) note, such approaches aim to foster an interactive space for the discussion of complicated and nuanced topics in which the "dynamic is not oppositional but collaborative" (p. 212).

Notably, the aforementioned range of deliberative pedagogical modes permit discussion of complex issues, but substantially pivot away from conventional debate's adversarial dueling. However, as Jerome and Algarra observe, "the nature of our own democracy is neither absolutely adversarial nor deliberative" (2005, pp. 502-503). The authors suggest that deliberative dialogue is crucial to building democracy, as this inclusive communication style allows for citizens to actively participate in decisions and leaves space for differing opinions (Jerome & Algarra, 2005). Jerome and Algarra (2005) conceptualize an educational notion of "deliberative debate", in which open and exploratory conversations occur due to a lack of pre-defined roles or "sides" assigned; the integration of deliberation and debate may better inspire students to "develop and express their own opinions" (p. 497). The present research, filling an important gap, investigates the impacts of a novel debating pedagogy that itself lies in the complex middle: at once adversarial and deliberative.

## The Context

This project emerged out of dialogue between the two authors. Ijaz was the instructor of an upper-level, single-term undergraduate course entitled *Global Justice Inquiry* at McMaster University in Hamilton, Ontario; and Sergeant was a student in the university's Arts and Science program who had completed the aforementioned course the prior academic year. The Global Justice Inquiry course's primary aim is to engage students in interdisciplinary, self-directed explorations pertaining to issues of global inequality; *food justice* was the course theme during the 2017-19 academic years. While the majority of course students enroll from the host department, students from a diverse range of disciplines are also admitted.

In order to encourage students to grapple more deeply with contentious issues discussed in the course, Ijaz designed and implemented a series of debates for the Winter 2019 Global Justice course. We anticipated this assignment could act as an antidote to an observed tendency among some students to uncritically adopt or dismiss particular perspectives they presumed to be aligned or at odds with the values they shared with peers or classmates. However, the implementation of a conventional, two-sided debate model risked fostering oversimplified, adversarial thinking. Instead, we wanted to implement a model that sought a "fusion of all perspectives to enable a larger, more inclusive view… [that would] allow the tension of disagreement" (Hyde & Bineham, 2000, p. 212). Alert to the ethno-cultural and disciplinary diversity of course students, we wanted to ensure that a wide range of perspectives would be heard. We also hoped to create a model that encouraged all course students to reflect deeply on their own relationships with the issues under discussion.

We were clear from the outset that we wanted to develop a hybrid pedagogy that concurrently reflected the adversarial and deliberative character of our democracy. This work arises from our common commitment to a "political classroom" that "helps students to develop their ability to collectively make decisions about how we ought to live" (McAvoy & Hess, 2013, p. 16). As such, the pedagogical approach we describe in what follows represents a form of political action unto itself: an effort to work toward more inclusive, nuanced, civil discourse.

Table 1
*Debate Topics, Resolutions, and Corresponding Proposition Type*

| Group | Debate Topic | Resolution | Hybrid Proposition Type (may apply to multiple debate topics) |
|---|---|---|---|
| A | Conventional Agriculture vs. Agroecology | *Agro-ecological / small scale organic agriculture models, rather than large scale industrial / transgenic-inclusive agriculture models, represent the most effective and ethical approaches to resolving hunger and preventing ecological degradation on a global scale.* | Propositions of "fact" and "value":<br><br>Asks students to concurrently evaluate the *effectiveness* (drawing on facts) and the *ethics* (referring to values) of particular strategies. |
| B | Is Plant-Based Eating the Answer? | *Plant-based eating (in particular vegetarianism and veganism) represents the single most effective/important and ethical dietary approach for individuals pursuing food justice both locally and globally.* | |
| C | Grassroots vs. Policy Solutions | *Efforts to achieve food justice both globally and locally are best undertaken in the government/policy realm, rather than at the level of individual "choices" and/or grassroots initiatives.* | Proposition of "policy" and of "value":<br><br>Asks students to concurrently evaluate a particular action approach (policy) in light of a value-laden concept (*food justice*). |

**The Model**

The debate model presented in this work has multiple sub-components. It consists of: a) a research and argument preparation period; b) the sharing of written arguments with all course participants; c) a three-sided oral debate session, in which each of three teams has an opportunity to present its stance and cross-examine others; d) a period of reflective writing for non-debating participants; and finally, e) a modified talking circle exercise in which all course students briefly share their views and insights on the issues under discussion. Below, we provide a more detailed overview of our debate pedagogy.

The instructor assigned each of thirty-three course students to one of nine teams, to debate one of three resolutions pertaining to the course theme of food justice (see Table 1). The resolutions deliberately reflect a strongly polarized stance on a particular issue, to enable one team of students to argue pointedly "for", and another "against" this view. A third team, in addition, was assigned to take a complex middle position in relation to each resolution.

A three-fold typology theoretically characterizes debate resolutions as either propositions of fact, value, or policy (see Ryan, 2006, p. 389). Like the debate structure itself, all three resolutions employed in our three-sided debates are hybrid in character, each concurrently reflecting two of the aforementioned proposition types (see Table 1). The instructor intended that this hybrid design, which explicitly draws attention to the complexity of the issues under debate, would act as a counterpoint to the "extreme" positions articulated in the propositions.

Members of all teams (consisting of three or four students each) were instructed to research and prepare 1,000-word, well-referenced summaries of their respective positions, which they would post to the course's online platform in advance of the debates for transparency and review by all class members. Written instructions stipulated that supporting ("for") and opposing ("against") teams post their summaries one week in advance of their respective in-class debate sessions, whereas complex middle teams would post theirs the day prior to debates to permit them to shape their arguments in response to their counterparts' posted summaries. To encourage students to take an interdisciplinary, multifaceted approach to researching their positions, written instructions to all teams furthermore included the following parameters:

> Groups should give attention to diverse perspectives located *within* their general stance (i.e., not everyone holding a particular view comes to this view for the same reason -- there are variations on the details of *how* people may substantiate or understand this particular viewpoint).

In addition, complex middle teams were advised to ensure that their arguments would:

a) Point to inconsistencies / argumentative problematics on both 'sides' of the debate;
b) Look for common ground as well as irreconcilable positions in terms of values or identified priorities;
c) Point to the contextual appropriateness of particular viewpoints. These teams should ultimately aim to find a conciliatory stance which suggests ways in which the two viewpoints might productively and pragmatically co-exist / compromise.

The original assignment handout with instructions to students can be found in Appendix A.

Over a multi-week period, students worked together in their teams to research and co-author their respective position summaries and plan their debate strategies. On the appointed date, each group debate proceeded over a 100-minute period according to a strictly timed schedule, as detailed in Table 2. Supporting and opposing groups began by presenting their respective resolutions, after which they briefly cross-examined one another. Next, the complex middle team presented its own synthetic argumentation, and cross-examined the other teams.

Immediately after all three teams had completed their oral debating, debaters completed self- and peer-evaluations that constituted a portion of their final grade. The remaining class members undertook a period of reflective writing to explore their own views by answering a series of five questions (see Table 3) on the course's online platform. Overall, as made explicit in question one, these questions aimed to foster students' critical engagement with the range of perspectives they had heard, towards elaboration of their own views. Questions two and three were specifically informed by Shapiro and Takacs' pedagogical assertion that "to propose 'what *we* ought to do,' students must first think deeply about what '*I* ought to do'" in the context of their own lives (2004, p. 24). Questions four and five reflected a recognition that students might continue to be uncertain about their views, and that there may have been gaps in the arguments presented by debaters.

Next, using a talking circle format, the instructor invited each learner to comment on the issues under debate. Members of the debating teams were asked to hold their comments until all non-debating class members had spoken. No student was required to speak.

## Methods

This study, designed as a partnership between a university professor and an undergraduate researcher, aimed to investigate the impacts of a three-sided, reflective debate pedagogy. With a goal to produce recommendations for future educational explorations, we sought to answer the following questions:

1) What are the strengths and challenges of this model in terms of its execution in a classroom setting?
2) How does participation in the three-sided debate affect students' viewpoints with regards to the issues under analysis? How will this experience impact students' level of engagement and desire to learn more about the topics discussed?
3) Is the complex middle position successful in drawing out additional complexities from the topics studied? Could the incorporation of a middle ground weaken views to the point of indifference?

Table 2
*Three-Sided Reflective Debate Structure*

| Time Alloted | Activity |
|---|---|
| 12 minutes | Presentation by team supporting resolution |
| 4 minutes | Cross-examination by opposing teams |
| 12 minutes | Presentation by team opposing resolution |
| 4 minutes | Cross-examination by supporting team |
| 16 minutes | Presentation/Cross-examination by complex middle team (to be used at this team's discretion) |
| 16 minutes | Reflective writing period / Team self-evaluations |
| 36 minutes | Class go-around (1 minute per student) |

Table 3
*Post-Debate Written Reflection Questions*

| | Question |
|---|---|
| 1 | How, if at all, has this class debate added to or changed your perspective(s) on the issues being considered? |
| 2 | What do you think "you" ought to do in your own life, in relation to the issues being debated? |
| 3 | What do you think "we" ought to do as a society, in relation to the issues being debated? |
| 4 | What are you still not sure about? |
| 5 | What other information or insight do you still need in order to solidify your point of view about the issues under discussion? |

McMaster University's Research Ethics Board approved the conduct of this study. Data collection to meet the study's articulated aims proceeded in three parts, each accompanied by a distinct informed consent process: a) ethnographic field notes based on the undergraduate researcher's observations of in-class debate activities; b) collection of students' post-debate written reflections, submitted as a course requirement; and c) an anonymous online student survey after all three course debates were complete. The undergraduate researcher, who was primarily responsible for study recruitment, data collection, and preliminary analysis, was not a course student in the cohort where the research was conducted, and neither played an active role in the class debates nor contributed feedback in grading student work. The university professor was the instructor of the course in which the study took place and acted as academic supervisor to the undergraduate researcher on this project, but did not play a role in study recruitment or data collection.

Students were provided with informed consent forms on which they could elect to opt in or out of data collection types a) and b) above. No ethnographic field notes were made about non-consenting students. After the course was over and the instructor had finalized all course grades, the undergraduate researcher provided her with the names of students who had consented to have their written reflections included as data. The instructor anonymized these reflections, and shared them with the second researcher for analysis. Students who voluntarily participated in the anonymous online post-debate surveys, which included an informed consent stipulation, were understood to have consented to have their survey data included in the study. Of the thirty-three course students, twenty-six (78.7%) consented to participate in ethnographic observations, twenty-three (69.7%) consented to have their written reflections included as data, and twenty-five (75.7%) participated in the online survey.

The authors applied descriptive statistical analytic methods (Dillman, 2000) to analyse quantitative survey results. Following Braun and Clarke (2006), the authors used a thematic analytic process to manually categorize and code the ethnographic field notes and anonymized student written reflections in two primary phases. In the first phase, the student researcher coded the ethnographic field notes from all three class debate sessions, to identify salient themes. These themes were subsequently compared and contrasted with themes that had emerged within student survey responses, and subsequently integrated into this work's broader analytic account. In the second phase, both authors independently coded students' written reflections to thematically characterize their content inductively according to the study aims, and subsequently for additional emergent themes. This process included the extraction of illustrative quotes for each theme. Authors began by independently categorizing and coding ethnographic field notes and student written reflections, and subsequently corroborated their categories into a singular codebook with illustrative quotes for each theme. Together, the authors interpreted all analytic findings in light of the project's aims and theoretical goals. Results are presented below in two parts, reflecting the study's two primary aims.

## Results

### Part A: Evaluation of the debate structure

Survey-based data provide insight as to the structural strengths and weaknesses of our innovative debating pedagogy. As seen in Table 4, a significant majority of course students (80%) found the three-team debate structure, the cross-examination periods (76%), and the post-debate verbal sharing sessions (72%) helpful in exploring a nuanced range of views and developing their own perspectives on the issues under discussion. Many (60%) found the written reflection periods implemented post-debate to have been useful, though almost two-thirds (64%) would have appreciated an opportunity for a structured question-and-answer period between class members and debaters. While the majority (80%) would have preferred that cross-examination periods in the debates be longer, and about one-third (36%) felt that the time allotted for teams to present their resolutions was too short, most students otherwise endorsed the timeframes set out for the various parts of the debate exercise (Table 5).

Table 4
*Student Views on Debate Structure*

| n=25 | Agree |
|---|---|
| I found the three-team structure helpful in representing a wide range of perspectives in the debates. | 80% (20) |
| The cross-examinations drew out a greater degree of complexity/range of issues in the debates. | 76% (19) |
| The written reflection periods helped me to integrate and think through my own perspectives on the issues being debated. | 60% (15) |
| I gained additional insights by listening to student sharing in the post-debate go-around sessions. | 72% (18) |
| I would have preferred if the debates included a question and answer period for the audience to participate in. | 64% (16) |

Table 5
*Student Views on Debate Timeframes*

| n=25 | Too Short | Just Right | Too Long |
|---|---|---|---|
| Presenting resolutions | 36% (9) | 64% (16) | 0% (0) |
| Cross-examinations | 80% (20) | 16% (4) | 4% (1) |
| Written reflections | 24% (6) | 60% (15) | 16% (4) |
| Peer-group evaluations | 0% (0) | 68% (17) | 32% (8) |

Ethnographic field notes taken throughout the project contribute additional observations about the impacts of the debate's three-pronged format as well as its reflective structural components. Overall, the complex middle "experiment" generated some initial anxiety and confusion among students assigned to this unusual debating task, but students felt reassured in moving forward once their counterparts had posted their position summaries to the online course platform, as this provided a framework for the complex middle teams to shape a response.

Within the debates themselves, most teams decided to begin their arguments with a brief overview of their stance, after which individual group members would elaborate upon particular sets of issues. For instance, a team of four students might each address, in sequence, ecological, socioeconomic, cultural, and geopolitical considerations related to their topics. Most teams also delivered a summative conclusion within their allotted timeframes prior to engaging in cross-examinations. Complex middle teams consistently presented nuanced arguments that responded to but also built significantly upon the perspectives set out by the binary opposing teams, each electing to use brief periods of cross-examination to further substantiate their positions.

The reflective writing portion of the debate exercise proceeded smoothly, as did the verbal go-around sessions, each with high levels of student participation. All students participated thoughtfully in the post-debate verbal go-around. What was immediately notable in students' verbal comments (many of which reflected views similar to those expressed in written reflections, discussed further on) was the centrality of the complex middle principle.

Across all three debates, a significant number of students referred in their post-debate verbal comments to the complex middle team's presentation as formative in shifting their understanding of the issues under discussion. Notably, the term "complex middle" rapidly became part of the classroom vocabulary, with many students using this term to not only refer to a particular debating team but also ultimately to their own unfolding stances. Many students alluded to the complexity of the debate topics beyond what one called "opposite playing fields". Debaters themselves noted how the "flaws in [their] own ways of thinking", which had been fostered by "only researching the one side" had been interrupted by the complex middle team, whose presentations helped to "fill in the gaps" without trying to discount any particular stance. Debaters assigned to polarized groups expressed the challenges they encountered as they researched and prepared arguments to support oversimplified views not aligned with their own. A few students critiqued the binary character of the debate topics framed by the instructor as problematically reinforcing an oversimplified view on the issues at hand.

In what follows, we present a synthetic overview of the ways in which the debate experience helped to shape and shift many students' perspectives away from oversimplified polarities, as well as some students' critiques of their debate experiences. To provide a

coherent narrative, we present illustrative quotes from student reflections pertaining to just one of the three class debates, in which students interrogated the sustainability and ethics of meat consumption. That said, the presented findings represent a composite of themes analysed across student reflections pertaining to all three debates.

**Part B: Analysis of student perspectives**

Overall, students' post-debate written reflections, as well as content-focused survey data, make clear that in-class debate experiences had contributed greater nuance and complexity to many students' understandings of the topics being debated. Student reflections repeatedly emphasized the range of complex considerations concurrently at play with regards the issues under debate, whether with respect to environmental, health, socioeconomic, cultural, geopolitical, or other contextual factors. Grappling with these overlapping issues, many students noted that their debate experiences had actively shifted or further deepened their understandings of the debate topics. While some students critiqued their debating classmates' argumentation as insufficiently rigorous, and others raised questions about how to differentiate between contradictory research sources, most felt significantly more informed post-debate about the issues under discussion.

**Complicating initial viewpoints.** The overarching theme evident in students' written reflections was that the in-class debates had infused greater complexity into their thinking which in many cases shifting their views. Many students noted that prior to the debate, they had seen vegetarian eating, by definition, as more ecologically sustainable and thus more ethical than meat-inclusive diets. The debate introduced potential ecological advantages of pasture-based animal husbandry, as well as ways in which large-scale, industrialized plant-based agriculture might exert harm. This led some students to question whether plant-dominant diets are indeed better for the environment:

> I thought that veganism was more beneficial for the environment compared to a meat inclusive diet, but after this debate, I'm no longer convinced (A6).

Most students continued to believe post-debate that a reduction of meat in the diet represents an environmentally sound approach. However, it was evident that many students' views had been significantly nuanced by the range of perspectives shared by the debating teams.

Reflecting on the range of health-related data presented by debaters, several students for instance indicated that their views about the nutritional aspects of plant-based vs. meat-inclusive eating had shifted. One student who had initially seen meat as inherently unhealthy writes:

> The studies about the negative health outcomes of vegans and vegetarians was surprising. I thought a plant-based diet was healthier than a traditional Western diet (A12).

Conversely, a student who had initially believed that plant-based diets lacked nutrients left the debates with an altered view:

> This class debate really changed my perspective on plant-based eating as it made me realize that eating a vegan/vegetarian would still be adequate in providing a complete nutritional meal (A13).

**Recognition of privilege and sociocultural positionalities.** Students repeatedly noted how their understandings of health-related and environmental aspects of the debate topics discussed were further complicated by questions of social justice, cultural appropriateness, and socioeconomic privilege. As one student writes:

> If anything, [the debate] made me consider more of the socio-economic implications of a strictly plant based [*sic*] diet when it comes to food justice and sustainability. I approached this subject knowledgeable of the environmental impact meat consumption has on the environment, however I did not account for the other social justice issues at stake [such as] the expense of plant-based dieting [for] low income [*sic*] families (A3).

Many students noted that prior to the debate, they had not considered the cultural dimensions of meat consumption; for instance:

> Due to my views being so drastically swayed on the side of plant-based diets, I never took the time to consider that in some places, eating meat is part of the [cultural identity] (A8).

Written submissions further showed many students' newfound awareness, post-debate, of the socio-politically privileged, and thus limited, lens from which they had previously viewed the issues under discussion. For example:

> [The debate] significantly expanded my world view. The middle ground team made me aware that this debate very much is a privileged one and that the people I engage with in such conversations are always privileged. I would like to engage with people who have more direct contact with this issue, and are affected by it (A27).

> I think the idea of 'Westernized ways of thinking' or the idea that 'West knows best' made me think and contemplate… both sides [more deeply] (A22).

**Affirmed or disengaged: Static stances.** Importantly, not all students appeared to have taken on a significantly different set of views post-debate. Rather, some students noted that the arguments and research presented by the debaters had strengthened rather than altered their initial perspectives:

> This class, rather than changing my perspective on the issue, has reiterated and further solidified my standing on the issue (A40).

> Through this debate, and also extensive research on the topic in my own time, I feel confident in my opinion that people who have the resources to eat a plant-based diet should do so (E8).

A small number of students, however, did not appear to feel compelled towards a strong stance of their own, continuing post-debate to view the issues under discussion as binary:

> I have always respected and been interested in both diets. However, this debate has only added to my knowledge base and [has] not [swayed] me to one side or another on the issue (A16).

A few students contributed critical comments in their written reflections regarding the debate performance of their classmates. One student, for example, felt that the debate content presented by her classmates itself had been too binary in character, lacking nuance, despite the implemented three-pronged debating format:

> The class debate honestly made me frustrated overall, because I don't believe any of the teams touched on the importance of eating less meat in general. The concept of eating meat or not eating meat should not be treated as a black or white issue - that is, the conversation should instead be centered around lowering overall meat consumption, wherever and whenever possible, instead of eliminating it entirely, which is incredibly unrealistic, and I agree, unethical (A4).

Another student similarly expressed disappointment with debaters' depth of engagement with the various issues at hand:

> I have done extensive research on this subject over the years and thus have heard all the arguments presented already. The main thing which I wish that all teams, especially the complex middle, had spoken more about privilege and its intersections with these increasingly complex calculations of ethics, environmental effects, cultural significance, and sustainability (A14).

**Context matters**. On the whole, most students appeared to be newly engaging with multiple areas of considerations related to the debate subject. As seen in the following excerpts, their debate experiences helped to foster greater complexity and nuance in their outlook and beliefs, alongside a heightened appreciation for contextual factors:

> I did not realize how much of a role meat plays in cultural, social, and economic dimensions in terms of the global context and I found the arguments extremely persuasive. This debate has changed my perspective to the complex middle which is to use both plant and meat based diets depending on the [situation] (A17).

> [Prior to the debate,] I did not consider the socioeconomic factors for developing countries, which rely on animal based [*sic*] products for their livelihood. I also did not fully grapple with the cultural connections of eating meat (A5).

> Meat can be ethical, and plant-based diets can be unethical. This debate has reinforced my view that the ethics of eating extends beyond the realm of animals and animal products (A15).

**Taking action.** Many students' written reflections showed a significant pre-occupation with how they would put their newly-nuanced views into practice, both at the personal level and on a larger societal scale:

> A large part of my diet will continue to leave meat off my plate due to my disdain for the cruel treatment of animals in the meat industry, but maybe I will leave animal by-products on my plate if it serves a purpose to the environment. If I remain vegetarian, I need to remove products that harvest vegetables and oils in harmful ways to nature (B6).

> We need to increase the price of meat through carbon pricing and reduce the price of fruits and vegetables. We need to make plant based [sic] recipes more accessible. We need to use labelling to limit meat consumption - perhaps similar to cigarettes we could make it mandatory that all meat products are labelled indicating how many resources it took to produce or how much greenhouse gas was produced (C7).

**Ongoing struggle for clarity.** Despite students' repeated assertions that the debate experience had enriched their

Table 6
*Student Perspectives on Debate Impacts*

| | Agree |
|---|---|
| I feel more informed about the issues being debated. | |
| Plant Based Eating vs. Meat (n=25) | 84% (21) |
| Genetic Engineering vs. Agroecology (n=24) | 96% (23) |
| Grassroots vs. Policy Solutions (n=22) | 77% (17) |
| As a result of the debate, I am more confused or unsure about my own views. | |
| Plant Based Eating vs. Meat (n=25) | 16% (4) |
| Genetic Engineering vs. Agroecology (n=24) | 25% (6) |
| Grassroots vs. Policy Solutions (n=22) | 18% (4) |

understanding of the debated subjects, a minority of students continued to express uncertainty or confusion in relation to their own views. In some cases, students' lack of full understanding of their own position appeared connected to specific gaps in knowledge, or topics not explicitly addressed within the debate:

> I am unsure of the health implications of turning towards a plant-based diet and the way in which supplementing vitamins such as lacking B vitamins may have health impacts. I question whether or not it matters if we get our nutrients from a "natural" source or if supplements are okay (D3).

> I am questioning whether or not it is better for the environment to eat locally sourced meat rather than tofu which is sourced from across the world… I would like to do more research on the carbon footprints of different kinds of diets (D15).

Several students expressed difficulty discerning credible or accurate information, in particular because the different debating teams appeared to rely on competing or contradictory information sources:

> I'm not sure of a lot of facts and figures myself. I want to eat in a way that benefits the planet first and foremost, but so much of the research and data contradicts and conflicts with one another (E4).

While some students wanted to do their own research to fill in the gaps, others lacked confidence in their own research skills and ability to make informed choices about what they eat:

> I wish that both teams addressed the [environmental and social impacts] of eggs and chickens. I struggle to find time to research this in detail myself and am worried that I am not making the most informed choices with my diet (D14).

These qualitative findings appear significantly consistent with survey-based data shown in Table 6, in which most students (across all three class debates) agreed that they were more informed about the issues being debated, while a minority remained uncertain about their views.

## Discussion

This work details the impacts of a substantially successful pedagogical and research collaboration between a course instructor and an undergraduate researcher, who co-designed an innovative hybrid debate pedagogy that concurrently reflects adversarial and deliberative debating principles. By approaching this project as a partnership, Ijaz and Sergeant actively worked to transform traditional hierarchical relationships in academia that risk diminishing student voices. Our research approach paralleled the pedagogical aims of the project: we emphasized deliberative dialogue as an alternative to dualistic, top-down relations. This relational working model contributed to the success of the in-class debate model, as the co-authors, a student and a professor, openly shared ideas and critiques throughout the design, research, and written analysis process.

Post-debate survey data show that most course students agreed that the implemented debate structure, which included a three-sided period of prepared argumentation and cross-examination, an timed interval of subsequent reflective writing for non-debating students, and finally a talking circle session for class members, supported their critical evaluation of the issues under discussion. Qualitative textual and ethnographic observations from reflective writings and talking circle comments furthermore demonstrate how the debate design engendered many students' active engagement with a nuanced range of interdisciplinary and contextual considerations and perspectives. Many students also indicated that their experiences within this novel pedagogy had alerted them to their relatively privileged vantage points and helped to expose flaws in their prior thinking.

The addition of a complex middle team to an otherwise-adversarial debate format proved formative in relation to student learning. Complex middle teams not only pointed to areas of consonance as well as dissonance within and between their polarized counterparts' argumentation, but often reframed the debated issues in ways to which their classmates were notably receptive. This was evident both within the debates proper as well as in the verbal comments and written reflections of class members post-debate. As they were being cross-examined by the complex middle team, some oral debaters on the "for" and "against" teams subtly shifted their discourses away from oversimplified extremes while retaining their basic positions. Many students' written reflections furthermore referred directly to the frameworks and arguments presented by the complex middle team as more cogent positions than those presented by the more polarized groups. Notably, the notion of a "complex middle" came to represent a viable position unto itself within the classroom culture, wherein some students identified themselves as "believing in" a complex middle viewpoint in relation to a particular subject.

On the whole, students made clear that the perspectives presented by the complex middle teams, combined with those argued by the more polarized debate teams, significantly enriched and brought greater nuance to learners' pre-existing views on the controversial debated subjects. Notably, students' views did not change consistently in the same direction, as exemplified by two students who came to believe that vegetarian and meat-inclusive diets respectively were more advantageous than they had previously believed. Despite two of the three debate topics (genetic engineering and vegetarianism) being relatively controversial, the tone of students' verbal comments in the post-debate go-around was respectful and reflective, with virtually no adversarial polarization evident. We suggest in this light that the complex middle team's presence produced a moderating influence on a classroom discourse that could have otherwise been far more aggressive and binary in character.

In addition, many students actively reflected on the ways in which the debate disrupted and de-neutralized their privileged positionalities. They talked about how perspectives that arise from the affluent "West" are not necessarily "best", and noted how they had not previously considered the ways in which a "West knows best" premise had previously, if invisibly, underpinned their conceptualization of the issues they were assigned to debate in the context of our Global Justice Inquiry course.

That said, our complex middle-inclusive approach is not without risks or drawbacks. For example, a few course students appeared to make themselves comfortable in a relativistic version of the complex middle stance in which all viewpoints are seen as equally valid. In our view, such an uncritical approach reflects a low degree of personal engagement with the presented perspectives and is significantly at odds with our aims in implementing this debate pedagogy. To be clear, it is not our position that a complex middle perspective is correct or desirable on any or all of the debated issues. Indeed, there are many issues in civil society that require that actors take a strong and principled stance in order to implement effective interventions. Our aim in including the complex middle team was not to dilute any such strong stance, but rather to encourage students to move beyond oversimplified binary thinking as they developed and contextualized their own nuanced viewpoints. While we believe our approach achieved its aims for most students, some modifications to the pedagogy's design (discussed further on) may counter its potential shortcomings as well.

While lower than the numbers of students who endorsed the three-teamed debate structure (80%) and cross-examination periods (76%) as valuable, a majority of course students agreed that the post-debate reflective writing periods (60%) and verbal go-arounds (72%) were useful to their learning. We see the post-debate exercises as central aspects of our pedagogy's success. In a conventional debate format, participants who are not actively involved in performative argumentation have neither a structured context nor an accountability mechanism that encourages their active integration of the range of debated perspectives. Although some students may have been self-motivated to think deeply about the debated issues even without these exercises, we believe our use of guided writing and verbal sharing exercises created a more inclusive participatory environment that engaged all learners. Most students "gained additional insights" by hearing their peers' views during the verbal sharing session, and written reflections showed a great deal of nuance and reflexivity in student thinking. However, some design improvements, discussed below, may yield yet more advantageous outcomes.

80% of surveyed course students characterized the time allotted for cross-examination of other teams as too short. Having observed rich interrogations being cut short during the four brief minutes allotted to cross-examination periods (in contrast to the twelve minutes scheduled for presentation of teams' arguments), we would certainly wish to extend cross-examination, perhaps by a factor of two, in future iterations of this debate approach. Moreover, 64% of learners "would have preferred if the debates included a question and answer [*sic*] period". We had certainly considered an open period of post-debate questioning when we created our model, but given the limited in-class time available for the entire exercise, opted for the combination of reflective writing and group sharing.

That said, a question-and-answer period (perhaps as an alternative to one of our other post-debate exercises) would certainly have the potential to draw out greater complexity with respect to the debated issues, give debaters an opportunity to further showcase the depth of their preparatory research, and concurrently involve more students actively in the debating process.

Other modifications we might consider moving forward would involve alternate post-debate activities. A take-home writing exercise, such as a position paper assignment, might fruitfully replace the in-class writing activity, enabling students to more formally explore and articulate their viewpoints on the debated issues, with reference to the researched stances presented in the debaters' argumentation as well as to their life experiences. We suspect that such an assignment might deter (though perhaps not entirely root out) the adoption of weak or extreme relativist positions by some students. It might also support the minority of students who felt "more confused or unsure" about their views post-debate to further consider the issues at play.

That said, several students raised an important issue that may be more challenging to resolve within the context of the debate exercise itself: the question of what constitutes valid information. Students rightly observed that even within a single body of academic literature (for example, biomedical nutrition), competing or even contradictory views may appear substantiated by rigorous science. The complex, interdisciplinary character of the types of issues that lend themselves to formal debate raises additional questions and makes this issue yet more difficult to resolve. Are some types of knowledge, whether lay or academic, quantitative or qualitative, sociological or anthropological or political scientific or religious, inherently more "valid" than others? If we accept that context is important, how does personal experience fit in?

What about Indigenous knowledges? More than one student in the debate pertaining to agricultural food production methods observed that scientific research had strongly supported the usage of various Indigenous agricultural methods (such as poly-cropping and the use of crop rotation). But why should such Indigenous ways of knowing and doing be considered valid only when validated within colonizing discourses (see Harding, 1998)? Transdisciplinary debates will inevitably raise these types of questions.

Such vital debates over the nature of knowledge continue within the academy as within civil society more broadly, but are perhaps rarely addressed in academic courses delivered from within a single disciplinary affiliation. The Global Justice Inquiry course in which this debate pedagogy was introduced is meant to provide students with an interdisciplinary experience. Despite the instructor's efforts outside of the debate framework to lecture about and engage students in critical discussion around questions of epistemology as well as competing evidentiary claims, such issues cannot be easily resolved. That said, in an era where the concepts of "alternative facts" and "fake news" have become commonplace in public discourse, neither can educators ignore these issues. While our debate pedagogy will certainly not provide learners with easy answers on complex political and ethical issues, it may serve as a springboard to further coursework in which students might fruitfully explore such questions.

Overall, students' reflections demonstrate a significant preoccupation with how they would transfer their newfound knowledge and nuanced stances about the debated issues into their own lives and into the world more generally. All students felt that there were tangible things in their lives that they could change in order to align more closely with their developing environmental and ethical beliefs. Most students also reflected more broadly about larger-scale in-the-world actions, whether at the level of advocacy or policy; many expressed a clear sense, beyond the "I", of what "we" ought to do about the debated issues. Tracking our debates' ultimate impacts on students' actions is beyond this work's scope, but we are certainly optimistic that this pedagogical exercise has heightened students' propensity toward greater socio-ecological responsibility. We also hope that in future, the experience of our class debates may encourage students to superimpose a complex middle lens upon the range of issues they negotiate in their lives ahead.

## Conclusion

The innovative pedagogical project discussed in this work shows clear promise as a model for engaging students in nuanced reflection and critical dialogue that moves beyond the adversarial, binary discourse of conventional debates. The project's overall success calls for additional research in hybrid pedagogical methods that contest the dualistic premises that underpin the widespread theorizing of educational methodologies as either objectivist or constructivist, instructional or experiential, content-focused or student-centered. Ultimately, it is imperative that educators help prepare students to negotiate a pluralistic world in which binary thinking is unlikely to engender viable responses to complex sociocultural, political, and ecological problems. Innovative pedagogies may prove vital in this pursuit.

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Appendix
*Debate Assignment Sheet*

**Collaborative Class Debate Assignment (30%)**

This assignment, involving an unconventional approach to in-class debate, provides us with an opportunity to respectfully explore a wide range of perspectives on complex, controversial issues related to our course theme. Rather than having only two teams arguing for opposing sides of an issue, a third team will present arguments for a hybrid stance between the two polarities ('the complex middle').
You will be assigned to one of nine groups, to debate the following positions in class:

**WEEK 5 (February 4): Genetic Engineering vs. Agroecology**

Group Assignments: Group E (for), F (against), EF (complex middle)
The Resolution: *Agro-ecological / small scale organic agriculture models, rather than large scale industrial / transgenic-inclusive agriculture models, represent the most effective and ethical approaches to resolving hunger and preventing ecological degradation on a global scale.*

**WEEK 6 (February 11): Is Plant-Based Eating the Answer?**

Group Assignments: Group A (for), B (against) and AB (complex middle)
The Resolution: *Plant-based eating (in particular vegetarianism and veganism) represents the single most effective/important and ethical dietary approach for individuals pursuing food justice both locally and globally.*

**WEEK 8 (February 25): Grassroots vs. Policy Solutions**

Group C (for), D (against), CD (complex middle)
The Resolution: *Efforts to achieve food justice both globally and locally are best undertaken in the government/policy realm, rather than at the level of individual 'choices' and/or grassroots initiatives.*

***DEBATE STRUCTURE***

| Time Allotted | Activity |
|---|---|
| 12 minutes | Presentation by team supporting resolution |
| 4 minutes | Cross-examination by opposing team |
| 12 minutes | Presentation by team opposing resolution |
| 4 minutes | Cross-examination by supporting team |
| 16 minutes | Presentation/Cross-X by complex middle team (to be used at this team's discretion) |
| 16 minutes | Reflective writing period / Team self-evaluations |
| 36 minutes | Class go-around (1 minute per student) |

**Written Submissions (10%, group grade)**

*All teams should familiarize themselves with the range of arguments made on all sides of a particular debate. This will involve a review of scholarly as well as credible 'grey' literature materials.*

Each **supporting/opposing team** must post a well-referenced, 1000-word written summary of its arguments on Avenue to Learn one week prior to the live debate (see deadlines on course outline). Arguments should be formulated in full sentences, using thematic subheadings, but need not be in 'essay' form. Groups should give attention to diverse perspectives located *within* their general stance (i.e., not everyone holding a particular view comes to this view for the same reason -- there are variations on the details of *how* people may substantiate or understand this particular viewpoint). Groups should also make *explicit* the specific (and perhaps diverse) worldviews, priorities and evidentiary types emphasized and/or dismissed by people who hold the view they are presenting.

Each **'complex middle' team** will post its well-referenced 1000-word argument summary (see format above) on Avenue to Learn by the day before its debate session. This will give this team an opportunity to respond to the arguments made by the supporting/opposing teams, in addition to its own literature review. Complex middle arguments should: a) point to inconsistencies / argumentative problematics on both 'sides' of the debate; b) look for common ground as well as irreconcilable positions in terms of values or identified priorities; c) point to the contextual appropriateness of particular viewpoints (i.e., a particular stance might be useful in some situations but less so in others). These teams should ultimately aim to find a conciliatory stance which, instead of polarizing the debate, suggests ways in which the two viewpoints might productively and pragmatically co-exist / compromise.
*Evaluation of written submissions (Group grade, 10%):* Each submission will be evaluated on the degree to which it meets the requirements articulated above. Completeness of argumentation (7%); Appropriate citations (3%).

**Debate Presentations (10%, group grade)**

Each team is to present its arguments in a verbal format. No visuals are to be used in this presentation – but find a way to keep it interesting and dynamic! While the content is left to each team's discretion, all team members should contribute explicitly. Teams should prepare up to 3 cross-examination questions to ask other teams as per the debate outline above.
*Evaluation of debate presentations (Group grade, 10%):* Each group's debate presentation will be evaluated on their argumentative rigour (4%), dynamism/ability to keep class interest (3%), cross examination questions (1.5%), and involvement of all team members (1.5%).

**Written Reflections (5% - individual grade) / Peer Evaluations (5% - individual grade)**

Those class members who are not actively involved in the debate on a given day will undertake a period of reflective writing after each debate, which will submitted and evaluated for completion (2.5% each).
Those class members who are actively involved in debate on a given day will individually complete written team evaluations, including individual evaluations of each group member's active participation in group work. Peer evaluations will be pooled and comprise 5% of each student's grade.