

Editorial: Collective responsibility and the other

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*Life can be consciously comprehended only in concrete answerability.
A philosophy of life can be only a moral philosophy.
(Bakhtin, 1993, p. 56)*

This issue of CSSE brings together four articles all of which deal with themes that are central to the enterprise of science education. Sonya Martin articulates how she, as a practicing teacher, implemented cogenerative dialogues in her classes, that is, how she implemented a new form of praxis in which teacher and students are provided with opportunities to talk *about* science curriculum and classroom learning environments at a metalevel to bring about changes that enhance learning. Charles Hutchison and Lynne Bailey describe the cross-cultural assessment challenges that four international science teachers encountered after arriving and beginning to teach in the United States; here adaptation to the new culture meant modifying or hybridizing their assessment philosophies and practices. Stacy Olitsky theorizes the limited subject positions available to high school students in inner-city schools and the contradictions that arise with student interests, which constrain their vision of action possibilities and thereby exacerbate those disadvantages for participating in science that are grounded in race and class. Tali Tal and Yarden Kedmi describe a curriculum project in Israel that aimed at enhancing active participation of learners in the issues at hand and thereby encourage higher-order thinking.

All five articles, in more or less direct ways, articulate forms of participation and the possibilities that educational contexts provide for changing content and form of participating in the enterprise of science education. In recent years, it has become increasingly apparent to me that forms and contents of participation crucially hinge on the concept and praxis of *responsibility*, or more appropriately, *collective responsibility*. As the introductory quote shows, Mikhail Bakhtin holds that life in general, as cognition more specifically, cannot be comprehended other than in and

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through the concrete responsibility (answerability) for participating in life for which no-one ever can have an alibi. Without the concept of responsibility—which each person has to assume and therefore always is collective responsibility—we cannot understand agency and therefore cognition, learning, or identity, because “an abyss has formed between the motive of the actually performed act or deed and its product” (Bakhtin, 1993, p. 54). Without the motive, we come to think of cognition as being governed by its own immanent laws, disconnected from the other and culture. This is so because theory—in contrast to concrete, once-occurrent lived praxis—drains actions and agency of their ideality, assigning them to an autonomous self-contained (theoretical) domain that no longer has anything to do with the contingencies and exigencies of participation in everyday, once-occurrent practical life. In theory, actions can be repeated ad lib without consequences; this allows us to get away with disregarding responsibility from theory. But every moment of real life occurs only once, requiring us to take into account the real consequences of every action on others and ourselves. If I hurt someone with my actions or talk, I can apologize but never take the action back.

Collective responsibility turns out to be of special importance in recent studies of coteaching and cogenerative dialoguing, two forms of educational praxis in which students and teachers work together to improve learning specifically and their joint participation in educational endeavors more generally (Tobin & Roth, 2006). There is some confusion, however, about what (collective) responsibility means. Frequently one can read that teachers or students *have to take* responsibility or *are provided with opportunities to enact* collective responsibility. However, such articulations of responsibility appear to me insufficient and perhaps incompatible with recent ways of theorizing this phenomenon. The purpose of this editorial is to articulate a way of understanding collective responsibility as preceding any conscious form of being, that is, preceding humanity itself.

Conversation as paradigm of collective responsibility as such

Responsibility for the other can be pointed out in practical examples analyzed in terms of speech act theory (Austin, 1962). In speech act theory, each speech act is understood as comprising three components: performance (locutionary act), intent (illocutionary act), and effect (perlocutionary act). In producing an utterance, a speaker constitutes the performance. As with acts in general, the performance (locutionary act) realizes a particular intent (goal, illocutionary act). Finally, as all acts, the speech act has an outcome or effect (perlocutionary act); this effect *completes* the speech act. That is, participants in communication do not know what the outcome of an utterance is until it comes to be known through the response of another person in the situation. Because of its effect on other participants in the situation, any speech act therefore implies a responsibility that the speaker has with respect to the other, who has been affected in the action. Using the following episode, I exemplify how responsibility operates even though the participants may not think about their responsibility as they go about their business at hand.

The episode derives from an interview a graduate student research assistant conducted with Michelle and Jane, two eighth-grade students who had previously participated in an innovative curriculum that provided them with an opportunity to

learn while participating in environmentalism. Michelle and Jane had used photographs, recorded descriptions of the environment surrounding a creek, and interviews with village elders to articulate the sorry state of some parts of the watershed. They had reported their findings during an open-house event organized by the environmentalist group that also had facilitated the inquiries they and their peers had designed concerning the state of the environmental health of the watershed in which their village lies.

Interviewer: And did you see differences at the sites, like what kinds of things would you see at the sites?

Jane: [Cause some of the-]

Michelle: [Well the water was different,] like one of the sites had a farm with horses right beside it and so like the manure and stuff would go into the water and then other sites, by the road would have litter; like a couple of the sites were cleaner. A couple of the sites were just little, little streams; and the other was just the big creek.

Interviewer: And so did you sample all of the different sites that you went to?

Michelle: Yea that was pretty much our job, to sample the different sites.

Jane: Yea.

This episode begins with the interviewer's question about any differences that Michelle and Jane might have found at the different sites they researched along the main creek that defines the watershed. Jane and Michelle begin to speak simultaneously but Jane eventually stops allowing Michelle to provide an answer. Once Michelle has completed her account of the manure and litter as affecting the creek and its surroundings, the interviewer follows up by soliciting more information about the way in which the two girls had ascertained the differences in the different sites they researched. Again, both Michelle and Jane respond in the affirmative, the former explaining that sampling "was pretty much [their] job."

The episode begins with an utterance that the interviewer produces; in the next turn, as a direct consequence of the utterance, Jane and Michelle begin to speak simultaneously before Michelle completes the turn on her own. That is, in and with her utterance the interviewer sets up the two girls to speak. She does so in a particular way: the utterance is a resource that constrains the subsequent speech performance in a particular way. That is, the interviewer articulates differences between "the sites," which the preceding part of the conversation has clarified to be the sites where Michelle and Jane have done their environmental research. That is, "the sites" are constituted as the current topic of talk whatever the previous topics might have been. The utterance therefore articulates a topic, and the articulated topic therefore is a resource for continuing the conversation. That is, with the utterance, the interviewer shapes how she expects the conversation to be continued. This therefore constrains what the subsequent speakers can do, as they can expect what they say to be judged as to the level that what they do conforms to what can be expected.

When the interviewer completes the first utterance (locutionary act) in this episode, everybody else in the room—in particular Michelle and Jane—understands that she has asked a question (illocutionary act). That is, the participants hear the interviewer produce words that are intelligible—and therefore can be elaborated in and through further (chains of) utterances—rather than hear her produce sounds, the sense of which is constituted by the sounds themselves (like onomatopoeia or "non-sense" Deleuze, 1969/1990). Most importantly, Michelle and Jane hear the

interviewer *ask a question* rather than make a statement, promise something, or evaluate them. This can be seen from the fact that in their turns, they follow the interviewer's utterance by providing an answer to what the content of the question asks about. That is, although the interviewer has not talked about her intention—i.e., ask a question—what she says is heard as a question. That is, from the perspective of the conversation, the first utterance becomes a question and the second the answer because the episode is understood as a question–answer sequence. If the first utterance had been followed by something else, we would have had a different sequence such as insult–swearing or invitation–rejection. Other resources provided in the situation, such as the prosody by means of which the utterance is delivered, facilitate the hearing of the utterance as a question. Thus, because the pitch rises toward the end of the utterance, it is heard as a question rather than as a statement.

In their turns, Jane and Michelle provide what comes to be an answer to the question and therefore, respond in an expected and anticipated way. In fact, the conversation analysis literature has shown that the question–answer pair constitutes an *adjacency pair* of utterances (Sacks et al., 1974). Adjacency pairs—also including greeting–return greeting, summons–answer, and invitation–acceptance/rejection—are normative in the sense that interaction participants are accountable in the case that they do not behave accordingly. Thus, participants and witnesses will take not answering a question as rude unless the intended respondent somehow explains the absence of a response. That is, the addressee has a responsibility to respond to what can be heard as a question or to provide an account for the absence of a response. This therefore shows us that there is a double responsibility at work. First, the interviewer is responsible for her utterance, because it provides certain opportunities and constraints to what her own and the subsequent speech act can be. The next speaker is responsible, because her speech act completes both the previous speech act in making apparent its effect (perlocutionary aspect) and the adjacency pair. More so, there is an additional aspect to the responsibility of the next speaker—here Jane and Michelle—whose utterances not only complete the adjacency pair but also provide the resources for the next turn at talk. In the present situation, the interviewer asks the two girls whether they sampled “all of the sites that [they] went to.” That is, in questioning whether they actually sampled all these sites, the interviewer *also* indicates that there have been lacunae in the response given, as it has not clarified whether *sampling* has actually occurred or whether *all* sites have been sampled—where *what* it is that she asks about depends on the prosody and how the two girls hear the utterance.

All three participants in the situation featured here do not just produce utterances to make conversation. The interviewer has solicited the two girls to participate in an interview about their experiences during the innovative science curriculum that they have participated in during the preceding year. That is, the participants are oriented to the conversation and in the production of utterances in a particular way, shaped here by their previous experiences with interviews as form of societal activity, reproduce *this* event as something with which they are already familiar. There is therefore a collective responsibility for the reproduction and novel production of a specific form of culture—here, the interview. Their mutual turn talking is oriented such that they produce and reproduce the particular relations between an interviewer and interviewees, which sets up a particular division of labor—the interviewer asks questions and the interviewee(s) answer them. That is, in each turn, the participants are constrained not only by the particulars of their interaction but also by the societal form of

activity that they produce and reproduce in their actions—and if they do not reproduce it, they are expected to account for any deviation. All participants are responsible for their own performances and the performances of the Other (generalized other), which in fact constitute the completion of the Other’s performance into an act.

Collective responsibility precedes ontology

The practical demonstration in the previous section therefore shows that participating in societal forms of activity inherently comes with responsibility, not just the responsibility of some participants—such as the current political pressures on making teachers responsible for student learning appear to surmise—but the *collective* responsibility as something that inheres all human actions and interactions. Collective responsibility is both responsibility for the Self and responsibility for the Other independent of any particular intention of “*taking* responsibility.” That is, we are responsible whether we want it or not. Because this responsibility existed when the very first human being made an utterance, this responsibility is more ancient than memory, more ancient even than Being, thereby transcending both being and non-being: responsibility comes from beyond and precedes all essence (Levinas, 1978/1998).

In recent philosophical work, the emergence of human consciousness is theorized in terms of the unfolding of a threefold dialectic (Fig. 1): (a) self | other, (b) body | bodies, and (c) the dialectic between (a) and (b) (Roth, 2006). In each pair, the concepts presuppose each other. Thus, the *self* presupposes the *other*, but the *other* presupposes the *self*; in other words, the self and the other mutually constitute each other and therefore can only be thought together.

How can a simple dialectic emerge, let alone a triple? Philosophers suggest to us that in an originary moment, human beings discover their bodies as different from other material bodies, including those of other humans (e.g., Ricœur, 1992). They discover their selves as different from others and that they themselves or others for other people. For this first realization to occur, the other bodies, which are the source of other human selves, already have to exist prior to any form of conscious Being (Derrida, 2005). It is only in the community *with* the Other that consciousness can emerge. The Other is the *condition* for consciousness, Self, “I,” and anything else specifically human including language: “the Other, as structure, *is the expression of a possible world*; it is the expressed, grasped as not yet existing outside of that which expresses it” (Deleuze, 1969/1990, p. 308, original emphasis). This consciousness simultaneously is individual and collective. Without the Other, this unfolding of the threefold dialectic cannot occur. But for the Other—i.e., the other Being—being (human) therefore always means being singular plural (Nancy, 2000). I am part of the condition enabling the existence of the Other before me, who, in

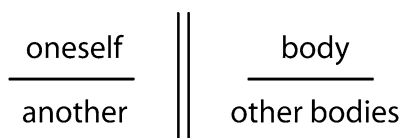


Fig. 1 The triple dialectic that underlies the very idea and existence of self and other, identity, and, central to the present text, responsibility

turn, is an aspect of the conditions enabling my own being. This then leads to the situation that real, concrete life as a whole is oriented toward and focused on the articulation of Self, Other, and the responsibility for the respective other: “All spatial-temporal values and all sense-content values are drawn toward and concentrated around these central emotional volitional moments: I, the other, and I-for-the-other” (Bakhtin, 1993, p. 54, my emphasis).

This way of thinking has the (serious) consequences that are immanent in this text from the beginning: Being singular plural means being responsible—being countable on, being accountable for—not only for one’s own doings but also for the doings of others. This responsibility is mutual so that responsibility always is *collective responsibility*. This collective responsibility reaches into our past, the beginning before all beginnings, and into the time before all consciousness. It is not surprising, therefore, that some cultures express this origin in terms such as *Dreamtime* or *La nuit du temps* (the night of time). Both in phylogenetic and ontogenetic development, humans participate with others in collective processes; and it is out of these processes that consciousness develops. First, on the level of anthropogenesis—the moment some person made the first human-like utterance, he or she already had to presuppose the Other as the possible recipient, whose actions would have to take into account the immediately preceding first utterance; and with the first conscious utterance, the participants in the first exchange already were responsible. Second, children are responsible prior to their first conscious thought on similar grounds. This is so because they participate in societal activity, “raising children,” shaping what their parents do before they are capable of anything similar to reflective thought, before having developed a sense of self, and before any idea about who they are separate from. In the sense of collective responsibility developed here, children are responsible prior to being capable of “taking on responsibility” and prior to “being responsible” (in social or legal senses). Thus, we are responsible before being conscious beings: responsibility for the Other, which inherently is responsibility for oneself.

Collective responsibility and science curriculum

Present-day discussions of accountability principally address science teachers. *They* are said to be responsible for what they do and what students achieve; others often pontificate how teachers are to teach better. Such conceptions generally appear in discussions of (a) teachers plans for their science curriculum, (b) their (subject matter, pedagogical content, general pedagogical) “knowledge” acquired during their professional training and at work, and (c) the practices they enact as part of everyday praxis. The model underlying such conceptions is causal such that science learning is supposed to be causally related to what teachers know and do: “good” science teaching brings about above-average student achievement on high-stakes examinations whereas “poor” teaching brings about low achievement. Seldom, if ever, considered in such discussion is that science lessons involve students too, and, that science lessons and their outcomes—and therefore student learning—are the result of actions on the part of teacher *and* students. More so, the outcomes are irreducible to *any* individual in the same way that the transcribed conversation used earlier is the outcome of the actions of any one individual or, for the same reasons, the result of the sum of actions. Rather, as my analysis shows, the turns are mutually

constitutive and therefore presuppose each other: any turn retrospectively takes into account previously produced, existing resources and prospectively becomes a potential resource for any future turn at talk.

This analysis therefore leads us to understand that enacted science curricula are the outcomes of individual | collective (speech) actions and therefore irreducible to any one or the sum total of all participants. Teacher and students therefore are individually | collectively responsible for the enacted science curricula, even though current administrative practices only hold science teachers accountable for the learning outcomes. Students generally are held accountable only in the sense that they are suspended or expelled from the course or school if their actions are felt to be seriously counterproductive to learning. Taking serious the issue of *collective* responsibility for science education means that not only students and teachers are held accountable for educational successes and failures but school and school board administrations as well; more so, parents and society at large are responsible, too, for the successes and failures of schooling generally and for the failures of learning in low achievement in inner-city schools especially.

In the community-based curriculum project from which the above excerpt was taken, I was able to observe a good example of collective responsibility for teaching and learning (Roth & Barton, 2004). Here, parents participated both in transporting the children to a creek that they had taken as the focus of their research; some parents also became involved as mentors and facilitators. Environmentalists, who had taken the local watershed as the object of their preservation and enhancement work, collected water quality samples together with the children. They then lent their equipment to the children so that the data the latter collected could subsequently enter a common database. The children later exhibited their results and thus informed the general public about aspect of the environmental health of the watershed.

The upshot of the *collective* nature of responsibility as a priori to Being is that all of us are inherently responsible for successes and failures of science in schools. In a positive approach, we can affirm collective responsibility in each and every action—a form of action that has been referred to as “affirm[ing] one’s compellent, actual non-alibi in Being” (Bakhtin, 1993, p. 49). We can understand *agency* and everything that springs forth from it—e.g., cognition, science learning, and identity in science—only by acknowledging our respectively unique position in life and the responsibility. Or we may choose to act like ostriches sticking our heads into the sand to avoid recognizing our part in collective responsibility—in which case, “the concrete uniqueness and compellent actuality of the world will inevitably begin to decompose; it will disintegrate into abstractly universal, merely possible moments and relations, which can be reduced to an equally abstract-universal, merely possible unity” (Bakhtin, 1993, p. 58). But without responsibility, we cannot understand sense or meaning, both of which are grounded in and irrevocably tied to concrete, once-occurrent practical everyday life. By both acknowledging and negating—avoiding, ignoring, abdicating—its acknowledgment we affirm collective responsibility as a constitutive feature of Being. It appears more ethical though to act in a way that that acknowledges our debt to the Other than to avert it.

Ultimately, then, we cannot understand knowing, learning, and teaching science unless we think these forms of activity from within these activities. In practical everyday life, each and every action has irrevocable consequences. Participation in once-occurrent life, from which there is no way out (we do not have the possibility of

an alibi), means that we—science teachers, students, administrators—continuously have to be aware of our inherent responsibility for everything that we do. This requires (science) educators to reorient their approach to understanding science classrooms, for “[a]ll attempts to force one’s way from inside the theoretical world and into actual Being . . . are quite hopeless” (Bakhtin, 1993, p. 12). Theorizing knowing, learning, and teaching (science) needs to begin with the actually occurring everyday life of the science classroom and the practical reasoning of science teachers and students, which “is answerably accomplished by everyone who cognizes, insofar as he accepts answerability for every integral act of his cognition” (p. 12).

References

- Austin, J. (1962). *How to do things with words*. Cambridge, MA: Harvard University Press.
- Bakhtin, M. M. (1993). *Toward a philosophy of the act* (V. Liapunov, & M. Holquist, Eds.; V. Liapunov, Trans.). Austin: University of Texas Press.
- Deleuze, G. 1990. *The logic of sense* (C. V. Boundas, Ed.; M. Lester, Trans.). New York: Columbia University Press. (First published in 1969.)
- Derrida, J. (2005). *On touching – Jean-Luc Nancy*. Stanford, CA: Stanford University Press.
- Levinas, E. 1998. *Otherwise than being or beyond essence* (A. Lingis, Trans.). Pittsburgh, PA: Duquesne University Press. (First published in 1978.)
- Nancy, J.-L. (2000). *Being singular plural*. Stanford, CA: Stanford University Press.
- Ricoeur, P. (1992). *Oneself as another*. Chicago: University of Chicago Press.
- Roth, W.-M. (2006). Identity as dialectic: Making and Re/making self in urban schooling. In J. L. Kincheloe, k. hayes, K. Rose, & P. M. Anderson (Eds.), *The Praeger handbook of urban education* (pp. 143–153). Westport, CT: Greenwood.
- Roth, W.-M., & Barton, A.C. (2004). *Rethinking scientific literacy*. New York: Routledge.
- Sacks, H., Schegloff, E., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking in conversation. *Language*, 50, 697–735.
- Tobin, K., & Roth, W.-M. (2006). *Teaching to learn: A view from the field*. Rotterdam: SensePublishers.