Working with Students as Researchers:
Ethical Issues of a Participatory Process

Stacy Olitsky & John Weathers

Abstract: In this paper, we explore the implications of the use of academic discourse and social theory in a collaborative research process with African-American youth focused on urban science education. While involving students as co-researchers can be a more ethical approach than traditional approaches because of the greater potential for mutual understanding and for empowering participants to work together toward positive change, ethical issues may become even more salient. Specifically, the academic discourse used in the research process can be perceived by youth participants as establishing and reaffirming social boundaries rather than as a language of an open community in which they can participate. Drawing on several incidents from this research project, we argue for a continually reflexive research process in order to insure that research methods do not undermine political and ethical research goals by perpetuating exclusion similar to the kind that students may experience in science classrooms, and we suggest the use of cogenerative dialogues surrounding academic discourse in order to make explicit issues of power, knowledge, and exclusivity. We also discuss the importance of facilitating student researchers' agency to achieve their own goals within the research process and to use self-chosen forms of representation.

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1. Introduction

Recently, some education researchers have promoted a collaborative research model that involves teachers as research partners (e.g., COCHRAN-SMITH & LYTLE, 1993). Part of what is driving this collaborative approach is the search for a research process that is more ethical, in that it is empowering rather than exploitative and meets the needs of the researched rather than the interests of the researcher. This concern for ethical research methods emerges out of broader political aims to understand and improve the social and economic disparities to which schooling may contribute. With this as an ultimate goal, there is naturally a concern for means that may be consistent with the desired end. While a collaborative model involving teachers may empower these teachers to make changes in their classrooms as part of the research process, it does not necessarily empower students in the same way, as it may continue to relegate them to roles as informants. In line with the methodological innovations of ELMESKY and TOBIN (in press), SEILER (2002), and TOBIN, SEILER and WALLS (1999), which have included research in science education that is transformative for both schools and participants, we[1] strove to take on the challenge of collaboratively involving students as part of a research team in our ethnographic study of an urban magnet school science classroom. Toward this end, our research group consisted of a university-researcher (Stacy—first author of this paper) a teacher-researcher (Linda) and four student researchers (Ashley, Brianna, Nadine and Lisa).[2] Our intention was to involve students in all aspects of the study, including formulating research questions and applying social theory to analyzing data. The project was also designed to improve teaching and learning through a research process that increased communication between teachers and students by incorporating student voice through the use of cogenerative dialogue, where classroom participants reflect together on classroom events in the interest of enacting positive change (ROTH & TOBIN, 2004). [1]

Although not typically focused upon in discussions of research ethics, how collaborative ethnographic research is conducted on the interpersonal level and how the results of the research are discussed with participants and/or presented to a wider audience have ethical implications that go above and beyond having ethically driven political goals and research methods. On the surface a method that involves student participants in the entire research process seems to be more ethical. However, we argue that though this method does address some ethical problems that can emerge in ethnographic research, as it gives students greater voice, is catalytic, and increases mutual understanding, such an approach does not put ethical concerns to rest. In fact, we argue that it is just the opposite.

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1 This research project started out in the beginning of the school year as a collaboration with the teacher. "We" at times refers to Stacy and Linda and at other times refers to Stacy and the co-author, John.

2 The coauthor of this paper (John) was not involved in the ethnographic study, but is another researcher in the same university who provided a valuable "outsider" perspective on the ethical issues discussed in the paper. We advocate the value of continual reflexivity, and believe that one cannot solely rely on one's own perspective—collaboration with colleagues similarly concerned with research ethics can help to build theory and develop approaches toward more ethical practice.

Ethical issues become even more salient and pervasive as a result of this increased participation on the part of youth. Drawing on several incidents from this research project, we make the following arguments:

1. While power relations can be altered in a research process by increased communication and collaboration, these types of methods cannot eliminate power differentials altogether. Such a view is at best naive. Instead a more realistic goal should be ethical conduct in the methods and the dissemination of research.

2. In terms of ethical conduct, we believe it is important to recognize that publications may not have as direct or as large of an effect on society as a whole as our research does on the individuals who are directly involved either as subjects or more actively as participants or co-researchers. Therefore, it is especially important to focus on both the possible negative and positive outcomes of interpersonal interactions over which we as the university-based researchers have some control. While issues of representation of others is certainly important, given that socially progressive literature may be unlikely to be read outside the academy, a significant amount of attention to ethics/politics needs to be in the interpersonal sphere.

3. Following this idea, in participatory research involving youth, a concern is not only the reporting of the research and whether it effectively achieves particular ends involving social justice, or even particular results in the classroom, but on how the process facilitates youth participants' agency to represent themselves in ways that they would like. When students are in the role of informants, they are not always given the opportunity to reflect and edit continuously. However, as co-researchers, they have this opportunity, and university researchers, therefore, need to attend to how their actions impact the students' abilities to represent themselves.

4. There is a need for continual reflexivity and responsibility on ethical issues such as whether aspects of carrying out the research methods could potentially undermine the political/ethical aims of the study. [2]

Collaboration does seem to be a considerably more ethical approach than conducting research in isolation from the feedback, interests, and participation of the researched. However, there are still important ethical considerations around presentation and re-presentation in collaborative ethnographic research, specifically regarding language use differences between urban youth and the scholarly discourse of education researchers. This is a particularly salient issue given the importance of discourse in the construction of identities (e.g. WORTHAM, 2001) and subjectivities (e.g. WEEDON, 1997), that exclusion based on language is prevalent in science education (e.g. LEMKE, 1990), and that understanding how to reduce the consequent alienation of students in classrooms was one of the goals of this research. [3]

Despite the potential problems, we found that consciously using scholarly discourse in the form of social theory to facilitate student researchers' participation in the research and in classroom improvements was productive. The

issue with which we grapple in this paper is not whether or not to use scholarly discourse or to teach student researchers social theory, as we found the language to be an important structure that students could access and appropriate to communicate about the research and to gain understandings of their own social worlds. Rather, we are concerned with how to involve students in roles as co-researchers in a project that seeks to alter the hierarchies between teacher and students without the process serving as another mode of oppression by exacerbating the hierarchies between classroom participants and scholars. The exclusion that students can face in science classrooms due to boundary-reinforcing language use should not be mirrored in the very collaborative research process of cogenerative dialogue that is aimed at subverting or changing the situation to be more conducive to student agency. [4]

It is also not our intention to say that we have generated any comprehensive solutions to these issues regarding discourse and ethical research methods. Instead, we describe our experience and our reflections upon it in an attempt to generate a more critical understanding of as yet unaddressed ethical issues in the collaborative research process. In the end we believe that there are no simple answers, but rather that questions must be continually asked and explored of one's own collaborative research with a concern for the ethical engagement of research partners that does not accept uncritically the participation and representation of the research participants. [5]

2. Theoretical Background

2.1 The emergence of collaborative ethnographic research as a methodological and ethical standard

Social science research as a whole has undergone considerable rethinking and criticism from feminist theorists (e.g. HILL COLLINS, 1991) and post-modernists/post-structuralists (e.g., FOUCAULT, 1988) for its connection to the modernist project of the search for Truth and for the reduction of subjects through positivist methods. These criticisms emerge from the foundational work of the Frankfurt School that originally hypothesized a link between modernist thought and the rise of fascism (ADORNO, FRENKEL-BRUNSWICK, LEVINSON, & SANFORD, 1950). These intellectual movements and their attending critiques of research steeped in modernist epistemologies have arisen in the context of political and social struggles concerned with creating more just and equitable societies. These political struggles are intimately tied to ethical concerns—what is the "good" or in the words of Plato, the "virtuous" life, and perhaps more importantly for the practical aims of many of these researchers, how this good can be achieved. [6]

This concern for conducting research in an ethical manner involves both individual conduct and larger social goals. There is the desire to live one's life and to conduct one's work ethically, which entails cultivating interpersonal relationships characterized by highly ethical behavior, and there is also the desire for the results of one's research to help promote a more ethical and just social sphere. It is also the hope that the two should be aligned, or in more familiar

terms, the means (method) of a research project will be in agreement with the ends, although definitions of ends such as social justice, equality, freedom, and community empowerment are not always clearly specified or agreed upon. Nor are the most ethical means agreed upon, although there is a tendency for researchers concerned with ethical ends to work towards employing means that are as ethical as possible. Whether these ethical means lead to larger ethical ends is an empirical question, and unfortunately one that may reach beyond the research community's ability to address. Regardless, in research projects that are aimed at wider social change and improving the lives of research participants, ethical issues become pronounced in all facets of the research, constituting the very basis of research that has political aims (BIRCH, MILLER, MAUTHER & JESSOP, 2002). At its core, such research is an ethical endeavor, a fundamental concern with the doing what is right by and for society. The ethical researcher inevitably makes political decisions (GILLIES & ALLDRED, 2002) and the political researcher (one whose political project is informed by a desire to understand and interrupt social inequities) inevitably makes ethical decisions. [7]

One means of research that has become generally agreed upon as more ethically oriented than survey or quantitative methods informed by modernist paradigms is qualitative research. Qualitative research can avoid truth claims, can privilege participants' views, and can recognize the situated nature of meaning and of the construction of understanding between researcher and research participants (PATTON, 1987). Part of this turn to qualitative approaches has been methodological in terms of recognizing the situated nature and complexity of human behavior and the need for methods that can adjust to this new understanding. However, this move is also clearly bound up with concern over the ethics of research methods. Within qualitative research, there is a hierarchy not only of rigor of research methods, but also of its ethical implications, and the two hierarchies typically overlap. Ethnographic research, which entails intensive, long-term participant observation, is widely accepted by feminist and post-modern scholars as more rigorous and ethical, in that it better recognizes and respects the humanity of participants.[3] [8]

Consistent with the reflexive approach adopted by many ethnographers who are concerned with how their work on both the micro and macro levels may contribute to social justice or injustice, some researchers (e.g., GUBA & LINCOLN, 1989) have argued that simply conducting qualitative or ethnographic research is not enough. As GILLIES and ALLDRED contend, "the political role of a researcher is more complex than simply accepting and representing participants' perspectives" (2002, p.44). Although ethnographic research may avoid some of the ethical problems associated with positivist methodologies, it can still be exploitative. For example, a researcher could come into a community, disrupt members by the research, yet conduct a study that is of no benefit to the community and could actually be harmful to them as individuals or as a group. [9]

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3   We purposefully avoid the term research "subjects" as many ethically concerned qualitative researchers do, as word choice is understood to be an important ethical matter as well. It plays a role in constituting the position of those with whom a researcher works—an issue to which will devote some attention later in the paper.

GUBA and LINCOLN's (1989) influential criteria for "authentic" research have provided a model for conducting research that draws on an ethical perspective and hopes to counteract the potentially negative impacts on communities involved in research studies. Their criteria for authenticity include: fairness; an emphasis on increasing understandings of each others' perspectives; ontological authenticity which "refers to the extent to which individual 'respondents' own emic constructions are improved, matured, expanded and elaborated, in that they now possess more information and have become more sophisticated in its use" (p.248); and catalytic authenticity, which requires working with participants toward positive change in local settings. A much greater level of involvement with the researched is needed to meet these criteria, and a greater level of reflexivity is required to continually evaluate the research with regards to these goals. Following GUBA and LINCOLN's ethically based criteria, researchers concerned with this intersection of ethics, means, and outcomes have attempted to be authentic and catalytic by employing such methods as collaborative/action research with research participants (e.g., ELMESKY, 2001; SEILER, 2002). [10]

2.2 Ethics in representation

GILLIES and ALLDRED (2002) propose that for researchers working toward positive social change, ethics needs to move from the traditional focus on how well participants are treated, to the broader questions of the ethics of knowledge, such as the relations set up by knowledge claims and the power relationship implied by who is claiming to know. They draw on FOUCAULT's (1988) discussion of the ways that the language of describing others can serve as a way of exercising power. They explain that FOUCAULT's work "has been central in showing how discourses and practices function to constitute subjectivities in historically specific ways and how power operates through processes that produce subjectivity" (p.149). This is of concern particularly because of the multiple imbalances in power that can occur between researcher and researched in any qualitative research setting, but particularly in the work that serves as the focus of this paper—a university-based researcher and youth in urban classrooms. For a researcher in an urban school, there may be cultural differences between the researcher and the youth even if they are from the same ethnic background, which arise from disparities in education, income, and experience in and with the culture(s) of power. These differences contribute to a power imbalance between them. In this particular case, three of the four student researchers are African American, one is multiracial, and all are from the city. Though their individual circumstances vary, three of the students are of working class backgrounds and all four live in areas of the city where they contend with poverty in their neighborhoods. The first author and primary researcher is White and from a middle-class suburban background. In addition, she is an adult who has been through college, while they are youth who have not. Certainly all of this contributes to power differences that impact the research and have ethical implications involving issues such as how the students are represented in publications about the research and how they experience participation in the study. [11]

MARKS (1996) describes how the subject is both fragmented and constituted within language, particularly within the methods used in the modernist research paradigm. Language can constitute in ways that are unfair and dehumanizing, even in ethnographic research. The writing of ethnographic studies can also be thought of as subjecting the informants to the experience of being portrayed as the "Other" relative to the researcher (YOUNG, 1997). Including participants' quotes and analyzing them through the perspective of a disinterested scholarly observer can reduce the complexity of individuals to what they say and how they appear, without acknowledging their internal life. Such portrayal risks constructing the Other as authentic and the ethnographer as authoritative (YOUNG, 1997). One can say this way of reporting is unethical in itself even if the subjects are unaware of it, as it is dehumanizing and reminiscent of the colonial project to document and "understand" the behavior of the Other for the purposes of greater control and exploitation. [12]

Power relations and reduction of subjects become salient in the choices of discourse in conducting and reporting on research. YOUNG (1997) describes how in ethnographic research about medical practice, the objective discourse of the researcher is more in line with the medical discourse of the doctor, and so by adopting a removed, objective stance the researcher aligns his/herself with the doctors rather than the patient who is having a more embodied experience. In this way, the discourses of both researcher and researched are located hierarchically, with the language of reporting serving to reinforce rather than subvert existing societal inequalities, which one can argue favor doctors over patients. Doctors' "scientific" explanations are often privileged over patients' subjective experiences. The language of research in itself can be seen as supporting inequality. [13]

A parallel can be drawn in the study of science education, as the objective discourse of the researcher may be more aligned with the science teacher than with students. Similarly, the discourse may be more aligned with administrators than teachers. When in this case, the research participants are African-American urban youth, scholarly discourse can be seen as not only favoring teachers but as favoring the mainstream White-dominated society. This can harm the participants indirectly, by representing them as "authentic" with the researcher as "authoritative," and directly, if students experience their language and ways of knowing as not valued—or as valued only for their authenticity. Both of these possible results can be seen as perpetuating inequalities in a racist society. Intentions of the ethnographer to report results and conduct research in ways that benefit the people and the setting do not overcome the bias of language, as all our verbal and written acts are encapsulated in discourse. While these theoretical perspectives are concerned with representation, we will describe how these same issues work their way into the conduct of research when participants are involved as co-researchers. [14]

3. The Collaborative Research Project

In guiding our approach to research, we drew on GUBA and LINCOLN's (1989) criteria for authenticity and incorporated critical ethnographic approaches (e.g. ANDERSON, 1989; BARTON, 2001) in our methodology, aimed at interrogating power relations through the process of research. We were influenced by other projects that have worked with students as researchers, such as ELMESKY and TOBIN'S (in press) study, where students made significant contributions by providing insider perspectives, conducting interviews of peers, and serving as teacher educators. Our overall goal for the research was to not only benefit a distant readership, but to also help participants develop a greater understanding of their social situation and to work toward freeing themselves from structures that limit them. With this aim in mind, we wanted to conduct a study where the researched would be involved with formulating its goals, evaluating data, and discussing results. [15]

On one level, it can be argued that involving youth in ethnographic research in roles that extend beyond informants is problematic because youth are not trained to be researchers, they may not have an interest in improving science education, they are not trained in educational theory, and do not speak a common language with teachers or university researchers. At the same time, they may feel compelled to participate due to power differentials and the teacher's ability to award grades. In addition, teachers may be reluctant to be placed in the vulnerable position of being open to the criticisms of the students. However, we felt that addressing any problems, if they were to arise, would be an educative and valuable aspect of designing a research process that would include students and be oriented toward positive change in classrooms. [16]

LEMKE's (1990) insights into how school is characterized by divisions of power between teachers and students, where teachers get to decide what counts as knowledge and can direct the flow of the classroom based on their own agenda influenced the research approach. The unequal power relations lead to a division of labor that generally restricts students' opportunities to provide feedback to the teacher. In order to examine the contradictions within the classroom, we found it essential to have a more open dialogue between teacher and students. We employed cogenerative dialogues (ROTH & TOBIN, 2004) in which we informally discussed issues that were of concern to both the students and Linda, reviewed videotapes of class, and identified and examined salient incidents involving teaching and learning. [17]

Part of the theoretical foundation for the use of cogenerative dialogues is the dialectical relationship between structure and agency, in that structures both afford and constrain action and that people can act agentically in transforming structures as they mobilize resources in creative ways or reinterpret schemas in order to further their own goals (SEWELL, 1999). Agency is not an individual characteristic, but can be thought of as field-dependent, meaning that an individual's agency will vary depending on the social setting. TOBIN (in press) draws on SEWELL (1992) in conceptualizing fields as settings where culture is

enacted and which are structured by human and material resources. In their work on coteaching, ROTH, TOBIN, CARAMBO and DALLAND (2004) describe coteaching as a particular field in which the culture is enacted in particular ways that allow for expanded agency of all participants by increasing access and ability to appropriate resources within the classroom for teaching and learning. Similarly, cogenerative dialogue is also intended to serve as a field that expands agency not only within the dialogues but also within the classroom by generating resources that can be transferred between fields. LaVAN (2004) found that the cogenerative dialogues employed in her study of an urban charter school provided a field for important communication across the barriers of age, race, and class, and that the culture that was produced in such dialogues became a valuable resource that participants were able to access and appropriate to meet their goals within the classroom. For MARTIN (2004) a chemistry teacher in an urban magnet school, cogenerative dialogues served to increase her understanding of students' lives and enabled her to teach in ways that incorporated this new knowledge. [18]

In a similar manner, we strove for a situation where participants could work together through reflection, criticism, and action in order to afford understanding and improvement in the teaching and learning of science in this classroom. While we recognize that divisions in power between teachers and students persist regardless of our use of cogenerative dialogue, this separate field allowed for criticism and disclosure, which do not often occur in classrooms. Students did not need to fear that their grades would be affected, and Linda had the freedom to ask questions that normally she would not ask because of the need to maintain authority in the classroom. Linda and Stacy found that the process of cogenerative dialogue as a whole empowered students to be reflective and critical of teaching and learning, and gave Linda information about student perceptions of the class and social constraints that would not have been obvious to her. Yet Linda did not feel in any way that her authority was undermined. A limitation is that only these four students participated in the dialogues, whereas there were other classroom participants who were not heard in this format. [19]

Teaching students and the teacher social theory relevant to framing and understanding the research, and exposing them to some of the language of research, positioned both teacher and students as learners. This seemed to have a significant impact on breaking down barriers to traditional hierarchical roles and facilitated some interesting and productive conversations regarding how to make science class less exclusive and more conducive to students being able to earn rather than lose social capital (see OLITSKY, in press). This process also led to both the teacher and university researcher questioning some of their assumptions about science learning, such as that a teacher's being out of field has predominantly negative effects on students. "Good teaching" and other constructs became open to interpretation and negotiation by participants relative to their various goals. Over time, the conversations that emerged induced the teacher to improve her practices, and increased students' comfort communicating their questions, ideas, and needs regarding science learning. Overall, we found that the collaborative research model contributed to findings that incorporated the

diverse perspectives of participants, facilitated collective responsibility and classroom change, and served as a resource that could increase teacher and student agency in the classroom. [20]

After the school year ended, the student-researchers and teacher-researcher continued assisting with the research by analyzing videotapes and audiotape transcriptions. The students kept journals of their thoughts on the project, and at various points in time were interviewed by the first author and by each other about their perceptions of research, the project, their role, and the impact that being a researcher had on their lives. Data were collected in the form of field notes, student work, and video and audiotapes of classes, interviews, and peer guidance sessions. [21]

Despite some of our achievements in understanding and improving science teaching and learning in this classroom, we argue these efforts toward collaboration in the research process did not eliminate issues of power or the potential for ethical violations. In some ways, contract-like views of ethical concerns, such as informed consent, become even more problematic because the participants are consenting to more involvement. To serve as an informant or to be observed in a less invasive and participatory study, a student may run the risk of their views or actions being publicly exposed. Yet if anonymity is preserved, the study is likely to affect students in minimal ways. However, in asking students and teachers to serve as researchers, and participate in cogenerative dialogues, they are suddenly put into a position of responsibility. Though we can say that we are only asking students to speak for themselves, in a paper where their voices are highlighted while others are muted, students may (and in this case did) feel a sense of obligation as a representative of urban youth. Also, catalytic and ontological authenticity entails participants' becoming more knowledgeable about the social world and others' perspectives in order to work toward positive changes in the research settings, which may seem more ethical as the goal is empowering participants, but it can also be argued that it is not predictable whether these changes will necessarily be for the better. For example, a student who is empowered in the research setting to be open with a teacher may encounter problems in other classes where s/he tries to do so. Or, a greater awareness of injustice in schools could lead to pessimism rather than empowerment. The project of involving students in collaborative research can even undermine student voice, as the language of the social research could replace their voices. [22]

In this study, students' views and ideas were not replaced by social theory, as demonstrated by our analysis of the transcripts and their own reporting. They were encouraged to question or oppose the theories themselves or the uses they encountered. In addition, students themselves believe that these theories helped them to understand the research questions much better, to be more critical and to become better researchers. Overall the use of social theory became a valuable resource that increased student agency, not only within the research project, but within other settings as well. The point here is that a unitary view that projects modeled on GUBA and LINCOLN's criteria and that include participants as co-

researchers are necessarily more ethical is problematic, as ethical issues are ongoing, situated, and complex. [23]

4. Using Social Theory in the Collaborative Research Process in Science Education

4.1 Discomfort with the language of social theory

In working with students as researchers, we believed it was important that they read a few papers on research studies in urban science education and learn some of the social theory used in these papers. Students had been working with some of the social theory ideas during the school year, introduced by Stacy in cogenerative dialogues. However, it was not until the summer that they were introduced to the task of reading the papers. Students had mixed reactions to this activity. While all of them described how the articles were "boring," they also said they helped them to understand what some of the final products of research look like, who reads them, and how they could become better researchers. Ashley said that she would have liked to see them in the beginning in of the project. [24]

One particular issue that arose for the students was the complicated language that was used in these articles, both in terms of the unfamiliar words and the complex wording and structure of the sentences. The use of the unfamiliar words may be a necessary component of expanding the boundaries of explanation and understanding, although this is still debatable, as some of the students pointed out. However, the sometimes overly complex sentence structure is not essential in this same way and may be a remnant of poor writing/editing, but perhaps more problematic, it is a function of setting scholarly discourse apart from what is viewed as more pedestrian writing. In the first article we gave them in the beginning of the summer, we told them that the article was written for graduate students and professors, and that we believed there would be many words in there that they had never encountered. We told them to underline them and we could come back to those sentences later and rephrase in more familiar language. We thought that this would reduce the aggravation that the students may have felt realizing that they were not expected to know them. Nadine later described how this was an effective approach, because it made the process a bit less difficult for them. [25]

However, the students still became frustrated with this first article. At one point, Brianna said, "There were too many words I did not understand." Her comments clearly indicated frustration, through her tone of voice and the slumping of her shoulders. Nadine said, "I don't get all these big words." The students seemed frustrated not only by the words, but also by the fact that the authors were using them when they could have stated them in simpler ways. Brianna said. "Why say things in a way with words people do not know if you can just say it the other way?" Interestingly, and importantly for one of the central arguments of this paper, her comment about scholarly language, as well as some others that the students made, mirrored comments made in cogenerative dialogues during the school year about science language in the classroom. Brianna once said about

science teachers, "They are just trying to make it confusing with all those big words." Nadine also once said about science, "I think they don't want people to understand it." [26]

Over time, the students became more comfortable with the language of social theory and would use it on their own in speaking and writing about classroom events. However, even once they had become more familiar with the language, the issue of exclusion still arose occasionally. Part of the students' summer research work involved creating ethnographies of their home lives and developing a PowerPoint presentation on aspects of Linda's teaching. At the end of the summer, we invited other researchers in science education at the university to come to a seminar where they could present their work. In attendance were university researchers, teacher researchers, and some student researchers from different schools. After the presentation, Linda, held a co-generative dialogue with the students about how the presentations went. Overall, the students described that they liked the experience. However, one of the Brianna's comments was that she would answer a question, but was told, "no that's not what we mean." She describes her response, "I was like ... ha ... um oh. Hum hum okay, well then I got lost. I got lost." They continued to discuss this issue, their talk suggesting a view of the language of the university and teacher researchers as unnecessarily complicated.

> Ashley: And then like the questions ... I didn't know what they were talking about.
>
> Brianna: yea
>
> Ashley: And then when they would rephrase the question it sound so simple you like ,,, why didn't /you just say /that the first time.
>
> Brianna: /exactly/ cause they be like 'so the quantum theory' blah blah blah and it be like what it means is ... is school fun. [27]

In this conversation, Brianna made a direct link between scholarly language and science language, describing one of the adults as saying, "the quantum theory. . .." During that part of her utterance, she completely changed her tone, voicing a scientist-type character. WORTHAM (2001) draws on BAKHTIN (1935/1981) to discuss the concept of "double-voicing," the process by which writers represent voices in ways that positions themselves and others through a dialogic relationship with others' speech. In voicing the adult researchers as like scientists, and speaking in a tone and manner distinct from her own, Brianna portrays scientists and scholars as similarly positioned, but as positioned in a very different social place from herself. The link between the exclusiveness of science discourse and the exclusiveness of scholarly discourse is not just a theoretical one, but seems to be an analogy that the students themselves make. [28]

The adult researchers who asked the questions were certainly not intending to confuse the students. Also, when the students spoke with these same adults in other settings such as small meetings, the students did not have a negative reaction to their language use, sometimes described how they appreciated the opportunity to share their ideas with and learn from these other adult researchers,

and considered access to these adults as a helpful resource. What is important to consider here is not only the students' reaction to the scholarly language overall, but why doing these particular presentations induced a negative response long after the students had been accustomed to working with the language of academic research. [29]

Several of the students also experienced some discomfort during the presentations because the language in which they most often speak differs from the language in which they believed they should conduct their presentations. Ashley described how it was a struggle for her to speak in a way that avoided the dialect that she uses with family and friends—what the students refer to as Ebonics or street language. She remarked, "I want people around me to understand." At a later time she described in more detail her feelings when presenting: "I don't really care what people think about me personally—but the problem is that people stereotype. I don't want people to think that because one black person speaks Ebonics, that also everyone would. They (the researcher group) are just going off first impressions and might think that no black people know how to speak. If they don't get to know me the first impression is last impression and you have to prove yourself." She related her explanation of why she felt pressure to avoid Ebonics to her experiences with negative stereotype threat (STEELE, 1997) and the pressure that she feels to represent her race. [30]

While Nadine does not specifically mention Ebonics or the issue of representing her race, her reflections bear some similarities to Ashley's and support the idea that the structure of this symposium put unnecessary pressure on the students to represent themselves in particular ways.

> "I mean I've presented things to teachers and to students but to a room full of adults that was kinda hard to do because I didn't want to give a bad impression. With the students and the teachers I saw pretty much everyday so no matter what they would always get different impressions of me. I always had the chance to redeem myself. But with the presentation that was a one time only thing. I wasn't going to see those people again or enough for them to get to know me." [31]

The potential exclusivity of scholarly language seems to be particularly problematic in this case because these students are not only unfamiliar with the language and the format of formal academic presentations, but they are urban African-American youth presenting to an audience that is mostly White, adult, and college-educated. Ashley later described that one reason she was concerned is that she did not want to speak in Ebonics in front of the people were "you know ... higher ..." which highlights how the connection of language use to the unequal power relations in research can be directly experienced by participants even in an apparently collaborative process. A related ethical issue to consider is putting youth in the tremendous position of feeling they have to represent their race, which can increase vulnerability for negative stereotype threat and therefore negative consequences on academic performance and self-esteem (STEELE, 1997). [32]

It would not be correct to say that students in this particular situation were completely excluded in this event by the language used by the adults and that they felt they were expected to use. The use of social theory overall had given them new tools to discuss Linda's teaching and the science class environment in ways that could lead to positive change, could help them develop as researchers, and could give them a set of tools that they could use to understand other aspects of their lives in different ways. For example, Brianna has described how she sometimes draws on the social theory ideas in helping her to interpret events in classrooms other than Linda's, and Ashley has described how she has learned to think more critically, which helps her in her schoolwork. The students did not just learn new words as they learned social theory, but they added to their ways of viewing the world, important to the goals of ontological and catalytic authenticity. [33]

Also, presenting research was not just problematic, but an experience that they described as giving them more confidence. The students described many aspects of the experience that they liked and found helpful and/or empowering. They enjoyed having the opportunity to create and present their home ethnographies and to choose topics regarding teaching and learning in their science classroom that they found important. Brianna discussed how she enjoyed making and showing her ethnography. Ashley similarly wrote:

> "I had fun taping my ethnography because I enjoy messing with my family. I also love to fool around with video cameras. . . I never had a problem showing my ethnography to other people. If I could, I would show it to everyone so people could know the real me. Oftentimes people make assumptions about people and their lives based on certain characteristic the person shows. Sometimes these assumptions are right but the majority of the time they are wrong. My ethnography gave me the chance to show how my life really was and squash all the assumptions people may have made about my life or lifestyle. I was delighted to share my life with other people and I was delighted for them to share their life with me. Showing each other how we live brings about diversity and understanding. The more we understand about each other's lives the more we can accept the differences in our lives." [34]

Many of their responses affirm that this was a good opportunity to represent themselves, their lives, and their views of teaching and learning science in their classroom. These types of presentations can be thought of as a more ethical form of research, as the students had the freedom to film what they chose, edit their ethnographies, and present their own lives in ways that they felt represented them effectively. They were also able to select issues regarding teaching and learning that they found salient in Linda's classroom, rather than a university researcher or a teacher making all the choices. [35]

Just as it is limiting to say the presentations completely excluded students, it would also be limiting to say that the students were not actually excluded and instead the event served as an opportunity for communication and learning, as clearly aspects of the presentation, particularly the question and answer session, were uncomfortable for the students. While overall it was empowering to be able

to accomplish what they wanted to show in their ethnographies and presentations, and it was a unique experience for them, the format of the presentations put the students in a position that was at least awkward if not ethically problematic. Specifically, the language used by the adults was unfamiliar, perceived as unnecessarily complicated, and impacted students' confidence in their ability to provide acceptable answers. [36]

The language barrier highlighted the power/knowledge differences between themselves and the adult researchers, positioning the researchers as somehow better, more powerful, having superior language, and being more authoritative. Just as students' agency is truncated if a teacher always corrects them when they speak, this presentation in some ways truncated their agency in that the move from overly complex language to overly simplistic language was perceived as a lack of respect, thereby turning them somewhat against the research process. They also felt afraid to speak in their familiar dialect and to ask an adult to rephrase the questions so that they would understand. Ashley's description of her struggle to offer a common language reflects how the event highlighted some of the stark class, race, and educational differences between those present. [37]

A view of the use of scholarly language as either helpful or harmful, or ethical or unethical, masks the complexity of social life, where any situation may involve a variety of interpretations, emotions, responses and outcomes. In general, we found that the use of social theory was a vital part of a participatory research process. However, there were also contradictions, when the power/knowledge differences between the context of university research and the context of the students became more salient. In this particular occurrence, the exclusiveness of academic language was highlighted more than it usually had been, and potentially conflicted with one goal of the research of working toward classroom environments where the language of science was less exclusive. Viewing the use of scholarly language and social theory as entirely participatory and therefore ethical, or entirely exclusive and therefore unethical, seems naive or misguided. Instead, we argue that continual reflexivity on the part of the whole research team, in particular the university researcher, can serve as a productive approach to addressing such complexity. The students' reflections in this post-presentation cogenerative dialogue served as an invitation to introspection and greater attention to the impacts of research procedures, which we used toward increasing the coherence between the methods and the goals of the research. [38]

4.2 The language of research and the language of science

In this section, we will explore in greater detail some of the negative implications of the exclusiveness of academic language when students are involved as researchers. We recognize that slight discomfort during a presentation is not a particularly egregious ethical violation. However, because of larger inequities involving language, power and knowledge in urban science education and the political/ethical goals of this research study, we argue that special attention needs to be given to avoiding these types of discomfort and to setting up presentation opportunities that are conducive to students' agency. [39]

In science classrooms, students' agency is sometimes truncated, in that they will be reluctant to speak, if the language used by teachers is perceived as intentionally exclusionary rather than as a new set of meaning making tools that they are invited to use with others in a science-related community. For example, Brianna and Nadine have described how people actually want to participate in science class, but do not because they feel that their contributions will not be valued and that the teacher will perceive their questions as "stupid." These students, as well as some of the other students in this class, have also identified a fear of misusing science language in front of their teacher and their peers. [40]

When teachers present science material in ways that students perceive to be high-status and inaccessible, students' sense of group membership in science, and consequently interest in learning is adversely affected. Researchers such as BARTON and YANG (2000) and LEMKE (1990) describe how science is portrayed as an elite subject that only special people can understand, a view which conflicts with the idea of science as a community of practice that is open to all participants and is being promoted to enhance the learning of all K-12 students. It is therefore understandable that students would express fear of talking science in front of their teachers, as they may perceive teachers as part of an elitist science community that is too distant from themselves. While exclusionary language makes it difficult for most students, it can have a particularly negative affect on groups that are already marginalized in science, as science favors the language and methods of argumentation more associated with white, middle-class males (LEMKE, 1990). [41]

Teachers may not intend for science to be seen as inaccessible and elitist, as they generally want all of their students to do well in science and they work hard to help their students succeed. For example, in an autobiographical piece, Linda writes, "I wanted my students to see that science is not so hard." Similarly, our use of social theory in collaborative work with the students was not meant to be exclusionary. However, it is likely that most teachers are still influenced by pervasive schemas regarding people who understand science as special, separate, or somehow better. At one point, Linda describes, "I felt good in college, that I could understand physics, since physics is such a hard subject. Also I was one of very few women who majored in it, so you kind of feel special because of that." Given how students' fears of teachers influence their comfort level in speaking science, and given that teachers themselves may hold views of science as elitist, and therefore unintentionally (maybe for some, intentionally) perpetuate such views, the conclusion emerges that teachers are quite influential in establishing either welcoming or exclusionary classroom environments. Similarly, as scholars we may feel that we are special and that feeling of superiority may emerge in how we talk and write, even in collaboration and despite our egalitarian intentions. We are influential in whether those we work with experience the process of research as empowering or not. Based on analysis of some of the students' discussions about social theory and academic language, it seems like scholarly discourse can be perceived similarly to science discourse as being inaccessible and as distinguishing participants from each other rather than encouraging collaboration. As it should for teachers,

researchers must carefully mind this tendency as well if we are to be concerned with ethical engagement. [42]

The impression that the use of a particular discourse may leave on student researchers is salient given that these students frequently are subject to oppression because of their language use as minorities and as urban youth. Three of the students have expressed how they need to be concerned about speaking what they refer to as Ebonics or street slang in school, and how teachers often correct their grammar. It is an issue for the students that can lead to their agency being truncated in various settings. Students may experience a sense of inferiority, coupled with a sense of unfairness. Nadine discusses her teachers: "They think it's bad to use street language or slang. I call it street language but it's called Ebonics too. They always correcting you. Not just on papers but when you are talking. But if they understand me I don't see why they correcting me all the time." Nadine continued, "The teachers think street language is not as good, it's not just that they correct you, it's how they correct you." [43]

The teachers' actions are not the issue we are concerned with here, but instead the message students get about the value of their language and the truncating of their agency that occurs if one always has to worry about speaking in ways that are perceived as lesser or incorrect. On one level, this issue is about students' self esteem, but on another level, it is about oppression. While learning to speak and write in "mainstream" English is valuable, students' ways of speaking need to be valued as well, as it is an important part of students' identities and if it is not respected there can be negative consequences for students' development and school success (DELPIT, 1997). Students should not be silenced from talking, especially as this silence is not conducive to learning. [44]

In the research process, students were generally not silenced as most settings were informal, students were encouraged to speak freely, and they often stated opinions contrary to those of Stacy and Linda. However, in a few situations, such as this presentation, they may have felt more pressure than usual to avoid Ebonics. In practical terms, the students have described how it is good for them to avoid Ebonics in order to be understood in particular settings. However, it is also important to consider that incidents when students experience exclusion based on language are experienced in the context of daily living with the divisions set up by language as non-neutral attempts at subjugation. The very fact that one type of language is favored in schools and on tests that are influential in the course of their lives, such as the Scholastic Aptitude Tests, which are influential in college admissions, sends a powerful message that they, their language, and their culture are not highly valued. [45]

Our concern is that by involving them in this research, we provide one more setting where they are dealing with the inequalities in the devaluing of dialect/language in our society, and thereby undermining the wider ethically driven social/political goals of this research. An informant can tell his/her experience in her own words, and the researcher will adjust to the language and

attempt to understand the terms and usage of the informant. And however
awkwardly, the researcher may attempt to use this language as a means of
showing respect for its own sake and for facilitating access to the lives of those
being studied. As part of this research process, we have been asking the student
researchers to adjust and use particular language. [46]

Despite these issues, opportunities to learn social theory, conduct presentations,
and engage with adults in academic discourse are in many ways conducive to
student agency. The students describe themselves as "multilingual" when they
discuss how they change the way they talk between family, friends, school and
work. Presentations and discussions using forms of talk associated with
academic settings provide students with opportunities to become more fluent and
confident in these settings, which can transfer to other fields such as school,
work, and eventually, college environments. The students themselves have
described how they value and benefit from opportunities to use other language.
Ashley explains how she appreciates being in environments where she needs to
speak what she refers to as "English," as opposed to what she refers to as
"Ebonics": "If you are using Ebonics too much, it becomes part of your vocabulary
and is hard to break. After the summer I couldn't remember how to spell nothing.
Everything in my first paper of the year was in Ebonics ... and you can't go to
work speaking Ebonics." The question is how to avoid the problem of
perpetuating status boundaries through language use in which students are
positioned as outsiders, as this kind of outcome is not consistent with the political
or ethical goals of this research project. [47]

4.3 Attempting to better meet ethical standards and goals of the research

4.3.1 Cogenerative dialogues surrounding language

Part of the aim of this research was to work toward the goal of "science for all," to
value students' contributions and to increase their agency in science classrooms.
Exclusive language subverts this goal. As we tried to make science language in
the classroom less exclusive by using a method of participatory research and the
tools and terms from social theory, we faced the challenge of conducting
research and using social theory in an ethical way that would not truncate
agency, silence students' voices, or position this language and thereby, the
researcher, as better for knowing it. [48]

On the other hand, it would have been unethical to make the call that the
students should not learn social theory. There were many benefits of their
learning this theory for the research project and for the participants, not the least
of which is that the students like learning new ideas. When students were taught
social theory, it allowed them to be more of an "equal" partner in the research. A
term like social capital that we taught the student and teacher researchers was
useful, because we could talk about "earning social capital" in ways to cogenerate
solutions for improving all students learning science. For example, Linda
described how she thought easy questions would give students social capital with
other students. The students told her that this strategy does not work because

everyone knows that a question is easy. A student loses social capital if the answer to a question is wrong, but does not gain if it is right. They explained that open-ended questions were more effective for students to earn social capital with each other. While this conversation could have taken place without that introduction of this term, it may have been harder to accomplish, since students and teacher talked about this issue in different language, which would have introduced more opportunities for misunderstanding. In this instance and in many others all participants were involved in discussing the social theory terms, refining their use, and backing up their views by examples, which contributed to their working toward mutual understanding of classroom events. Over time, situations where the students use different forms of language and become aware of their use can serve as opportunities to build their identities in different fields, and their agency within these fields. [49]

Yet the use of social theory and academic language more generally introduced yet another domain where they are told that their ways of communicating are not good enough. We cannot ignore that their home/street language and scholarly language are not equally privileged discourses in fields such as work, school, and academic settings. This raises several questions. Without their learning this language, how can research be collaborative? If they do not learn the scholarly research language in which a researcher needs to write and think, they do not have access to what is said about them. They can read it but not understand. Who are we to say they should not learn social theory because the language could be exclusive and potentially lead to truncated agency? Their agency can also be truncated if they do not learn it. Collaborative research seems to require student and adult researchers learning each other's "languages" and developing effective ways of communicating. [50]

This is a political issue, but there does not seem to be a political solution, only an ethical dilemma. We felt we had to work in a way that was as ethical as possible —in that our interactions were based on an ethics of caring (NODDINGS, 1984), were inclusive, and were in accordance with the political (ethical) research goals. We chose not to diminish students' roles as researchers by denying them the experience of seeing how papers were written and learning the language of research and social theory. Instead, we continued to use such language and ideas, but conducted cogenerative dialogues surrounding their use similar to those we had regarding classroom events. [51]

In the classroom cogenerative dialogue that focused on exclusion through science language, Linda explained to the students that she cannot speak for science teachers in general, but she does not want perpetuate exclusionary practices, and intends to be more careful. She also asked students if they could speak up if the words used in class are confusing, assuring them that she does not see it as a reflection on their knowledge or abilities, and as a teacher, she really wants to know. After these dialogues, the particular students involved as researchers more frequently asked Linda to clarify her language and her terms, which suggests that they felt a greater comfort in the classroom and that a greater mutual understanding between the teacher and students had developed.

This understanding helped students to ask questions without feeling that they were at risk, as they realized that the teacher knew they were hard words, did not intend to be exclusive, had asked to be reminded, and wanted to improve her teaching. One result of cogenerative dialogues is that Linda and the students had a forum in which they could discuss this issue, and could use the dialogue as a basis to make classroom changes. We were enthusiastic about this outcome of mutual understanding and classroom change, which was in accordance with the authenticity criteria of GUBA and LINCOLN. [52]

In the research, we tried to work in similar ways, bringing up the issue of exclusive language in scholarly discourse in ways that were explicit and critical. We discussed how people make up new words to express things more concisely or to communicate unique ideas, and how this language can be a useful part of the learning process and of becoming part of the science learning community. We also discussed how when new words are not particularly useful, the jargon may mostly serve exclusionary rather than inclusive purposes around the conjoint effort to expand understanding and communication possibilities. Technical language can serve multiple purposes, and can be exclusive by distinguishing members from non-members, or can be practical by expanding the possibilities of precise meaning making and communication. We tried to communicate the idea that these words and concepts can be helpful in analyzing classroom events, yet that they should not view it as inherently better than the descriptions that they generate from more familiar language. The goal of these dialogues was not only to make our own use of academic language with the students more conform with our ethical commitments, but was for the students to be able to transfer this understanding to other situations. Hopefully, when they encounter some other language as being privileged over their own, they may be better able to understand and be critical of the discursive power moves that maintain hierarchical distinctions. We hope that this understanding is empowering, although it may not be, which is an important issue beyond the scope of this paper. However, one of Nadine's comments was encouraging, "I think that the terminology is necessary in some cases but I think that when it is used that they should explain it in simpler forms and explain why the "'big' words are necessary." This view suggests Nadine understands the value of "terminology" for expressing ideas yet is critical of how it is introduced and when it should be used. [53]

By actively encouraging conversations around the use of language, by attempting to explain it, by encouraging questions, by putting the language itself under analysis, and by trying to create community surrounding the use of these terms rather than teaching them in a transmission model, we attempted to make the use of social theory in participatory education research more ethical. We cannot change overnight the way science is explained in textbooks or what is accepted as scholarly language and the distance that it produces between those within and those outside of the scholarly community. But in dialogue as co-researchers we can attempt mutual understanding and discuss issues of power and language. We can be more explicit about how we write in particular ways for particular settings, and acknowledge that there is inequality in what is privileged, rather

than leaving students with the impression that we think that those who know this
language already are somehow better than those who do not. [54]

4.3.2 Changing the format of presentations

In assessing why student discomfort with academic language was greater during
their PowerPoint presentations than it had been in other situations, we decided
that it was the particular format of the presentation that made the power
differential more salient. Unlike in the small meetings, in the presentations the
students did not feel comfortable asking for clarification. The academic language
was not seen in this situation as an opportunity to learn and expand
communicative possibilities, but instead as a means of unnecessarily excluding
those outside the academic research community, as the questions could have
been stated in more accessible ways. The presentation was somewhat like a
science class where the teacher is placed above the students, where his/her
language is privileged, and where the students have to make all the adjustments
because their language may not be valued in that setting. Such a situation may
have made it so that students had to worry about being not respected. [55]

Certainly, we do not think that some other kind of presentation format could have
completely eliminated the power differential between university researchers and
high school student researchers, as that is naïve. However, although these
differentials cannot be completely subverted, we believe it would be helpful in
planning similar events to acknowledge any potential problems, question them,
and prevent the most damaging aspects of them. On the interpersonal level, a
particular problem necessary to address is the potential for burdens and/or
negative emotional experiences of youth researchers in the particular field of an
academic presentation. [56]

Students may feel more comfortable with unfamiliar language if they have the
agency to respond back, meaning that they can appropriate the structure of the
presentation to accomplish their own ends. The students may therefore have
been more comfortable in this presentation if they had previously acquired
agency within such settings and felt at liberty to say they are not sure, to
question, and to jointly delve into the meanings. Learning a language should be a
participatory process, assuming that new learners are able to engage in dialogue
with those who are more experienced in the use of this language. However, if one
fears that one's racial or ethnic group will be excluded based on the language
then learning though participation is hindered. [57]

Reflecting on this situation, we do not think it would be wise to necessarily have
the students stop presenting to the adult researchers in the future, as in many
ways it was an empowering and educative experience, with benefits for the
students, for the adults, and for the research. However, after this initial
presentation, Stacy arranged for students to talk with unfamiliar adult researchers
in smaller groups where she could take a more active role as an intermediary in
the questions if necessary, for example, asking, "Do you mean this?" to model
that it is appropriate to go back and forth and to reduce the pressure on the

students. We are of course uncertain about how effective this was, but we do know that after small group presentations the students did not make similar comments about language to those that they made in this first incident. Instead, they commented directly on the adults they had been interacting with, "He was funny" and "She talked about her own project too much," which suggests to us that the experience was more personal, less intimidating, and students were observing others as well as being observed. [58]

The move to change the research presentations to be more like dialogues was based on the belief that students have more agency in classrooms when they can ask questions. Although such an ability does not eliminate the power differentials between the teacher and student, they are lessened somewhat in that the student can exercise more control over the structure, with greater influence over the discussion and of how s/he can represent him/herself. Similarly, a job candidate may be in a vulnerable position in an interview, but has greater agency if she feels able to ask the interviewer to rephrase a question. In a parallel way, we believe that the student researchers should be in an environment where they feel more able to ask adult researchers to rephrase questions or where they can ask questions themselves. [59]

In addition, knowing that student researchers may be experiencing the burden of representing their race, a commitment to a just research process should extend beyond representing research participants in ways that will benefit them and others similarly situated, but also to take care in setting conditions that will allow them to represent themselves in the way that is conducive to agency. A commitment to student voice is not just including their "authentic" voice "as is" but facilitating their own reflective and thoughtful presentation of what they would like to convey, which is the same as what we allow ourselves in our edited publications. While we appeared to have been successful in the format of creating ethnographies, we were less successful when setting up the initial presentation. However, again, this is not a paper about what is best to do in any given situation, but instead it outlines some of the salient issues encountered in this project and to pose these as serious ethical issues if one is committed to the idea of research in the interest of positive political ends or social goods. [60]

The changes that we made in the format of student presentations stemmed from our belief that the research process needs to be continually re-evaluated and modified based on a commitment to greater coherence with the research goals. Certainly an opportunity to conduct collaborative research should not be just another opportunity for students to experience the oppression that occurs in schools by introducing them to yet another world where language excludes. We chose to deal with this issue through cogenerative dialogues surrounding scholarly language, discussions of language and exclusion, trying to neutralize potential negative feelings and increase the political awareness of participants. Further, we believe it is important to emphasize the personal relationships that have the possibility to mediate the power relations that inhere in privileged language. [61]

5. Conclusions

Involving students as researchers can have some powerful benefits, as a
collaborative research process may be more likely to address the interests of
participants, lead to mutual understanding, and empower participants to work
together with researchers toward positive change. However, such methods do not
solve the problem of unequal power between the researcher and the researched
and they can pose as many complicated ethical issues as they attempt to solve.
In this paper, we have explored some of the ethical concerns surrounding our
attempts to mitigate what we came to see as potential ethical harms of involving
students as co-researchers, even though at the time, we only had a vague sense
of what these might be and are only now coming to a better understanding of
them. [62]

We are certainly not saying that it is wrong to involve students as researchers or
to teach them social theory related to the research process, as we believe their
involvement and exposure to social theory was valuable for these students, for
their classrooms, and for the project. Instead, we claim that while attending to
ethical concerns may be a part of a research project's larger social justice goals,
they do not stop at the decision to engage in a collaborative or other ethically
driven qualitative approach. Rather, ethical issues may become more complex
and difficult to navigate as they emerge in the interpersonal interactions of
ethnographic research. In the end, it is our obligation to structure situations that
offer students the greatest agency, in both the short and long-term, by reducing
the pressure on them to represent their race and/or class and by avoiding
exclusive language practices. [63]

As African-American youth in schools, the student researchers in this study face
alienation from the use of language that excludes, as the ways of speaking
accepted in schools differ from how students speak with family and friends. To
expose students to yet another environment in which they might feel their ways of
being and/or speaking are not good enough can clearly be viewed as an ethical
violation and may also contravene a political and ethical goal of this research,
which is to transform science classrooms into better environments for urban
students. Relatedly, the role of a student researcher is another possible situation
for students to experience stereotype threat. There is the potential for
contradictions with the ethic of caring (if students feel hurt in the process) as well
as social justice ethical aims (subjecting them to another environment in which
the researcher's ways of knowing are privileged over theirs). [64]

While we cannot give definitive answers on how to avoid problems involving
ethical issues, we can offer some concluding ideas that have helped guide us in
attempting to make a participatory research process involving urban youth as
ethical as we can. One conclusion that we came to is the importance of continual
reflexivity, as research in the interest of positive social change requires ongoing
examination of how students experience unfamiliar discourse, and insuring that
procedures and methods of conducting and reporting on the research do not
jeopardize ethical and political goals. Another conclusion we reached is that

environments that foster interpersonal relationships can serve as a protective force against the hierarchies of the academy, at least in terms of the impact on the students. A third conclusion is the importance of taking actions that are respectful of students' voices, that do not unfairly burden them, and that are based on thoughtful consideration regarding what might be beneficial or harmful for their development, because student researchers are young people who for a period of time are in our care. Although we cannot claim to know what is best for a particular student's development, the uncertainty does not absolve us of the responsibility of considering the impact of various situations, such as those that may unduly put pressure on a student to represent his/her race. A fourth and related concern pertains to not only how we represent students, but also to whether we are creating a research environment in which they have considerable agency and choice in how they represent themselves. By including students as researchers, we are increasing not only our ethical burdens regarding representation, but their own. [65]

While political commitments toward a more just and equal society can inform research methods, a research method in itself may not necessarily be effective in meeting those aims. Political commitments merge into ethical issues that are multi-dimensional, and involve not only particular goals for the dissemination of research, but commitments to an ethic of caring and of remaining committed to one's political/social goals in the interpersonal realm. [66]

Acknowledgments

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Authors

Stacy OLITSKY is a doctoral student in the Graduate School of Education at the University of Pennsylvania. Her research interests include interaction ritual in classrooms, in-field and out-of-field science teaching, the influence of social capital and cultural capital on science learning, activity theory and classroom change, and students' experiences with school choice.

Contact:

Stacy Olitsky

Graduate School of Education
University of Pennsylvania
3700 Walnut Street
Philadelphia, PA 19104
USA

Phone: 1-215-898-7927

E-mail: solitsky@dolphin.upenn.edu

John WEATHERS is a doctoral student in the Graduate School of Education at the University of Pennsylvania, studying educational policy. His research interests include the role of institutions in fostering social capital, organizational learning research and theory, teacher professional communities, and democratic forms of school governance.

Contact:

John Weathers

Consortium for Policy Research in Education (CPRE)
3440 Market Street
Philadelphia, PA 19104
USA

Phone: 1-215-573-0700 x259

E-mail: johnweat@dolphin.upenn.edu

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