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ABSTRACT

This study focuses on alternative ways of thinking about the experiences of two cohorts of high school students participating in separate political simulations, one about peace negotiations in the Middle East (the Arab-Israeli Conflict simulation, or AIC), and one focusing on domestic American policy issues (the Conflix Project, or Conflix). Both simulations involve several different forms of intensive communication: online communication with other participants; online communication with college and high school mentors; face-to-face decision-making dialogue with other players and teachers; and online face-to-face out-of-character debriefing discussions. By examining the ways student participants utilized each mode of communication in either activity, the research explores how new educational experiences might be created, drawing on the strengths of both in-person interactions and online communication. (Contains 68 references.) (AEF)

**The secret lives of students and politicians:
Online and face to face discourse in two political simulations**

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Objectives and Purposes

Many studies have examined online discourse in educational telecommunications projects (Farrell, Peguero, Lindsey, & White, 1988; Tobin & Davidson, 1990), but far fewer have explored how online and off-line dialogue can be combined to create rich educational experiences. This study focuses on alternative ways of thinking about the experiences of two cohorts of high school students participating in separate political simulations, one about peace negotiations in the Middle East (the Arab-Israeli Conflict simulation, or AIC), and one focusing on domestic American policy issues (The Conflix Project, or Conflix). Both simulations involve several different forms of intensive communication: online communication with other participants; online communication with college and high school mentors ; face-to-face decision-making dialogue with other players and teachers; and online and face-to-face out-of-character debriefing discussions. By examining the ways student participants utilized each mode of communication in either activity, we will explore how new educational experiences might be created, drawing on the strengths of both in-person interactions and online communication.

The Projects

In AIC, high school students in a dozen or more schools around the world take on the roles of world leaders engaged in the ongoing conflict in the Middle East. Students are grouped with classmates into nation-teams, and use specially designed web-based software to communicate with characters from other teams. Starting from an initial description of the current political situation, the characters interact with each other over an 8-week period. Apart from the scenario and background materials that are provided, the events of the game are entirely student-driven. Guidance and enrichment are provided by "facilitators" (most often teachers at the students' school), as well as the AIC mentoring staff"

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(college students receiving course credit for acting as advisors and gamemasters).

In Conflux, high school students in five schools take on the roles of real-life politicians, lobbyists and journalists in a series of online policy conferences. Working in committees charged with addressing specific areas of American civic life, each first-time participant adopts the personas of one or two real-life politicians. Rather than working in formally assigned teams, students act unilaterally, but often form dynamic political alliances based on ideological grounds and political expediency. Apart from one committee dealing with foreign policy in a scenario-based format, the events of the game are entirely student-driven, with agenda-setting and decision-making based on a form of probabilistic decision-making (Flood, 1978; Weisermann, 1999). As in AIC, guidance and enrichment are provided by facilitators (most often teachers at the students school), who often also take on the roles of lobbyists, journalists and foreign dignitaries. Conflux also employs the services of college mentors, although in recent years proficient high school students have been encouraged to take on mentoring roles as well.

Literature Review: Online Discourse, Experience and Learning, and the Use of Simulation Gaming

Online discourse

Research on online discourse is a growing field. Many researchers have compared on-line "computer-mediated communication" (CMC) with face-to-face talk and other written forms of communication, and have found substantial differences. In general, CMC is more formal than speech but less formal than other forms of writing (Collot & Belmore, 1996; Moran & Hawisher, 1998; Yates, 1996). More importantly, it is widely accepted that the absence of subtle social cues gives CMC messages a tendency to more frank and egalitarian, but also less trusting and friendly (Curtis, 1998; Moran & Hawisher, 1998; Putnam, 2000). The studies cited above are concerned with "general" online communication from voluntary Internet groups or personal e-mail, rather than with CMC done in the context of a school assignment.

However, research about online text in educational telecommunications projects is also growing as a unique field of study unto itself. Echoing the research on "general" online discourse, some studies suggest that when used within a classroom, CMC can lead to conversations that are more egalitarian, in that they elicit more equal distribution of contributions. In explaining this difference, researchers cite the lack of social cues that reinforce classroom power hierarchies (Beach & Lundell, 1998; Cohen & Scardamalia, 1998; Hawisher & Selfe, 1998; Rickly, 1995). Most studies in this area examine online text as a self-contained discourse space (e.g., Brown, Ellery, & Campione, 1998; Guzzial, 1993; Sugar & Bonk, 1998). Only a few studies even acknowledge the idea that CMC and face to face discussion might be intertwined in productive ways (Cohen & Scardamalia, 1998; Tabak & Reiser, 1997), and none have examined in depth

the relationship between on-line and face-to-face discussion in classroom situations that include both. Wallace (2000) has noted that in much of the literature on educational technology, the role of face-to-face dialog among students and teachers is often ignored. For this reason, despite its superficial relevance, the literature on online discourse contains relatively little utility for understanding the dynamics of learning in a project like AIC or Conflix.

Experience and learning

As a learning activity, AIC and Conflix fall solidly within the constructivist perspective, inasmuch as both place special emphasis on learning through experience. As such, the simulations find their *raison d etre* in Dewey's description of progressive education:

To imposition from above is opposed expression and cultivation of individuality; to external discipline is opposed free activity; to learning from texts and teachers, learning through experience; to acquisition of isolated skills and techniques by drill is opposed acquisition of them as means of attaining ends which make direct vital appeal... (Dewey, 1938, p. 19)

Of course, experience does not necessarily lead to desirable learning outcomes, a point Dewey acknowledged (Dewey, 1938). In order for experience to be beneficial, there must be some sort of reflection and abstraction, generally through the use of symbol systems (Dewey, 1916/1966, p. 232). Lampert and Ball (1998) have framed a central challenge of teaching as getting students to abstract from concrete experience, or, in their words, "the challenge of aiming for big ideas through the study of particulars" (p. 161). Kurt Lewin, and later Kolb (1984) have extended this idea into a "cycle" of experiential learning, where direct experience is followed by observation and reflection, then abstraction, then testing those abstractions, and back to direct experience again (Kolb, 1984).

More recently Duffy and Jonassen and their colleagues (1992) have followed in the footsteps of Dewey, Lewin, and Kolb, arguing that learning is rooted in experience and emphasizing strategies that allow students to have meaningful or "authentic" experiences and then make sense of those experiences. Authentic experience, in this perspective, comes from pursuing activities in a context that comes from a "real world" domain (i.e, the world of work as opposed to that of school). "Authentic contexts" can include ones created expressly for the purposes of learning in school. The context doesn't have to actually *be* in the real world. Instead, "the authenticity arises from engaging in the kinds of tasks using the kinds of tools that are authentic to that domain" (Duffy & Jonassen, 1992, p. 9). Several constructivist approaches emphasize this kind of intellectual authenticity. Cognitive apprenticeship (Brown, Collins, & Duguid, 1989) aims at helping students, through modeling and guidance, to engage in the same kinds of intellectual practices as adult practitioners of a discipline. Anchored instruction (Bransford, Vye, Kinzer, & Risko, 1990) creates a (fictional) narrative context from which problems are "authentically" drawn. Project-based learning (Blumenfeld et al., 1991; Krajcik et al., 1996; Krajcik, Soloway, & Blumenfeld,

1998) aims for authenticity by structuring investigations around "driving questions" that have meaningful connections to students' lives.

Authenticity in AIC and Conflix has commonalities with these approaches. Tasks such as finding and synthesizing information, creating arguments, and weighing alternatives are contextualized within a larger goal of doing well in the game. The game itself has a certain realism in that the characters, nations, and scenarios are based in the real world. But if authentic tasks must be authentic to some real-world domain, that domain takes on great importance. We have argued for political science as the core domains of both AIC and Conflix, but when students are playing characters, they look like diplomats and politicians, not political scientists. This is a fine distinction, but an important one. Of course, the practice of diplomacy and the practice of politics can both be informed by political science, and that is exactly what we want students to do. The technical tools of AIC and Conflix give students a way to practice diplomacy from an inside point of view, but we also want them to take the large view. That is where the intellectual tools of political science can be of benefit.

Learning through simulations

Simulations have been used as a pedagogical tool in nearly every subject area and grade level (Chapman & Sorge, 1999; Muir, 1996; Randel, Morris, Wetzel, & Whitehill, 1992). Considering the number of simulation activities that exist, however, relatively few empirical studies have been done. Literature reviews of the few empirical studies that do exist suggest that when traditional outcome measures are used, only a few simulations show advantages over direct instruction (Chapman & Sorge, 1999; Randel et al., 1992).

Constructivist perspectives suggest, though, that the kind of knowledge learned in experiential activities such as simulations may be different than that learned in traditional settings, and not always predictable in advance (Bednar, Cunningham, Duffy, & Perry, 1992; Cunningham, 1992). Simulations in particular allow for unexpected learning. Simon (1996) poses the question, "How can a simulation ever tell us anything that we do not already know?" (p. 14). He proposes two answers: first, while we may be able to define the premises of a simulation clearly, we may not be able to accurately predict the educational outcomes to which these premises lead. Second, a simulation allows one to simplify a part of the world so that assumptions about certain kinds of interactions can be tested.

It is important to distinguish between simulations where content is built in as opposed to ones where the players provide the content. On one end of the scale are simulations where every player option and outcome possibility is pre-programmed. In simulations based on a "Goal-Based Scenario" model (Schank, 1992), for example, users are led through a scenario and at certain points are given options to choose from. The combination of choices that a user makes determines what happens as the scenario progresses. Entertainment simulations such as "Myst" or "SimCity" also fall at this end of the scale. In these types of simulations, the designer knows what inputs will lead to what outputs, and the point is to train others to see that too. The scenarios may be very

complex, but complexity comes from embedding hundreds or thousands of responses to possible behaviors. Complex though they may be, it would be disingenuous to label such activities as purely constructivist. Indeed, one might reasonably conclude them to represent a highly sophisticated instantiation of behaviorist principles, with rich algorithms eclipsing predetermined epistemological premises.

On the other end are simulations where a set of elements (players or programmed units) and the ways the elements interact are pre-defined, but the exact content is not. Outcomes are usually open-ended and dependent on the interactions that occur in a particular run. Software such as StarLogo or Interactive Physics allow users to define elements, interactions, and starting conditions, and then observe what happens when the elements are set loose. Games like "Diplomacy" or "Dungeons and Dragons" start with a set of human players, a basic scenario, and basic rules, but events and outcomes are entirely in the hands of the players. In these types of simulations, the outcomes are much less predictable. While it is sometimes possible to make generalizations about the behavior of people or software elements, there is always a possibility of surprise for the designer as well as the participants. AIC and Conflix both fall into this category, and it is this kind of simulation that can teach something new to the designers as well as the players (Simon, 1996).

Recently, researchers at MIT have been touting what they call "participatory simulations" (Colella, 2000). In these simulations, participants might model an epidemic by carrying around tiny devices that can transmit "viruses" to each other. Participants are then make theories about the behavior of the devices and conduct group experiments. Developers of these simulations argue that by becoming elements of the simulation itself, participants are more likely to feel motivated to understand the system. This last argument certainly applies to AIC, but while AIC is certainly "participatory" in nature, an important distinction should be made. Unlike in the MIT simulations, in AIC the students' task is not to figure out the rules that the developer has designed into the system (the simulation "model"). Rather, the students, the teachers, and the mentors negotiate these rules among each other. The argument is also applicable to Conflix, where a considerable amount of rule-making and discussion about the nature of democratic governance occurs in most sessions.

Methods and Data

Our methodology falls into the category of "narrative analysis." In recent years, as we have begun to understand better the role of narrative in everyday understanding (J. Bruner, 1986; Bruner, 1990; Jackson, 1995; McEwan & Egan, 1995), narrative has gained wider acceptance as having a legitimate role in research. Many researchers have argued that narrative is a particularly important way of understanding complex experiences that unfold over time (Denzin & Lincoln, 2000; Polkinghorne, 1995; Rorty, 1989). Lodge (Lodge, 1990) writes, "Narrative is concerned with process, that is, with change in a given state

of affairs, or it converts problems and contradictions in human experience into process in order to understand or cope with them." (p. 142).

The difficulty with applying narrative analysis to AIC and Conflix is that there are so many narratives going on simultaneously. Each activity can be "sliced" several different ways. For example, the activities can be divided into three "discourses": (1) "Game discourse," which is text that makes up the in-character simulated world of the game; (2) "Surrounding discourse," which includes speech that students have with each other or their teacher as they struggle with creating the "game discourse"; and (3) "Meta-discourse," which includes out-of-character discussions and reflections about the implications of the activity. The activities can also be "sliced" in terms of the different roles involved (character, facilitator/teacher, mentor, project developer, researcher). All of these roles implies a different, if overlapping, points of view. Finally, the scope of the narrative can be more focused or more inclusive: it could focus on anything from a single student, to a team, to a particular "run" of the simulation, to the project as a whole. Each slice shows something important, but each is deeply connected to the other slices; each leaves out something crucial.

In honesty, we have not yet settled on a unified approach for analyzing these activities through narrative. We would, however, like to highlight three approaches that we are pursuing.

Layered Discourse. One approach is to highlight the interactions between the various slices of activity through what linguists would call a "laminated," or layered, narrative. We include an example of such a narrative from AIC that includes three categories of discourse mentioned above: "Game discourse," "Surrounding discourse," and "Meta-discourse." The resulting narrative chooses a vignette in the simulation and shows the three discourses running in parallel.

Building Theory Through Dialogue. A second approach attempts to show how sophisticated learning and theory building can result through dialog between people involved in various roles (character, mentor, game designer, researcher), and in particular when participants have the opportunity to move between these roles.

Documentary Video. A third approach moves away from the written word altogether, into the realm of documentary video. Since so much of the important discourse that goes on in Conflix occurs informally, we have turned to video not just to record activity, but also to describe it. This is both a medium and a methodology that has only recently begun to gain legitimacy within the field (Denzin & Lincoln, 2000). Excerpts of the video were shown at AERA 2001, where this paper was presented, and a brief description of the video is included later in this paper. This description, however, is in journalistic narrative form, being the closest written genre to the film itself.

Our data include logs of students' online communication, classroom field notes, video and audio tapes, participatory online web logs, and interviews with participants, mentors, and facilitators. Each author was involved in the design of one of these exercises, leading a mentoring group, and facilitating at least one group of participants.

Methodological Concerns

There are two critical dangers in doing this kind of research. One is a danger shared with all teacher-research and participant-observation studies: that the knowledge created in this research might be so personal and "subjective" that it is not useful to anyone else (Cochran-Smith & Lytle, 1999). The second is that the narrative might become "purely descriptive," with no power to create understanding that goes beyond a chronology of specific events.

The first concern is particularly important because both of us have been deeply involved in the design and implementation of the projects. Conflix, in fact was begun by one of us (Weisserman) as part of his work as a high school teacher. It quickly became clear that an impersonal, detached stance would not be possible:

What began as an attempt to create an online democracy for educational purposes had evolved into something much more, and much less. Like Drake, I found myself studying not a subject but a context. The violations of traditional social research methods were legion. My own students made up the bulk of each cohort. Most of them were not what one might call typical. Furthermore, many had studied with me before, or had also enrolled in other classes I was teaching the same term. Some had been drawn into the project from other classes I taught, and others had participated more than once. I quickly became engrossed by the sub-cultures that developed among them, with distinct languages, rites and rituals. It wasn't until much later that I realized I belonged to some of them.
(Weisserman, 1999)

Addressing this problem means doing several things. One is having a base of good evidence on which to create a narrative. The necessity of a base of good evidence is why we have gathered data extensively from multiple sources — something which will be addressed later in this section. Moreover, we will take a cue from Holt's admonition that just because historical narratives are interpretations doesn't mean that anything goes: There is a craft and a discipline in making a good, evidence based story.

Another way of addressing the danger of subjectivity is to take into account the perspectives of the people involved. This idea has a long tradition, beginning with Gertz's (1973) idea of ethnographic "thick description" — description based on the interpretations of one's informants. More recently, this idea has evolved into the idea of "polyvocal" research (Farrell et al., 1988; Tobin & Davidson, 1990), that is, research that explicitly asks the participants to document and interpret their

own experiences. In this sort of research, the researcher's voice ideally becomes one among many, though in practice it is hard to imagine that the researcher's voice does not carry special weight and authority within the narrative. This means that we must be able to reflect on our own pedagogical and ideological beliefs, and our own learning that we experience as a result of our involvement with the activity (E. M. Bruner, 1986). Holt (1995) reminds us that the process of creating a narrative can be a narrative in itself: "in the process of doing history, one can be changed, transformed by what one learns" (p. 11).

Addressing the second danger means to make sure that the narrative *explains* something. Tom Holt (1995) again: "Historical narratives are not simply descriptive, but inherently analytical. To answer the question of how or why some event, development, or process happened is to think a narrative, which is human experience ... in some temporal sequence" (p. 13).

On the other hand, it is worth turning back to the anthropologists for caution, lest we think that we can create a narrative "purely" on evidence, without any ideological slant. E.M. Bruner (E. M. Bruner, 1986) writes that: "It is not that we initially have a body of data, the facts, and we then must construct a story or a theory to account for them. Instead the narrative structures we construct are not secondary narratives about data but primary narratives that establish what is to count as data" (p. 142). Furthermore, explanatory narratives are constructed jointly with our informants, and so our choice of informants affects everything that happens. "We choose those informants whose narratives are most compatible with our own" (E. M. Bruner, 1986, p. 151).

With these caveats, what follows are samples from several different kinds of discourse, each written in their own genre, as befitting the subject.

Approach One: Layered Discourse

Many have argued that social interaction, or "discourse" in a broad sense, is an important component of educational experiences and meaning-making in general (Bakhtin, 1986; Collins, Brown, & Newman, 1989; Herrenkohl, Palincsar, DeWater, & Kawasaki, 1997; Roschelle, 1996; Scardamalia, Bereiter, & Lamon, 1994; Vygotsky, 1978). While character-playing games such as AIC and Conflix can be used to further many different educational goals (such as learning facts about the Middle East or American government), we argue that whatever outcome goals might be present in any particular instantiation of the project, these simulations are, most essentially, tools for promoting discussions. The events of each game are negotiated among the students, facilitators, mentors and project designers, and this discourse appears to be the primary way students construct meaning from their experiences in these games. Therefore any analysis of the outcomes of either project must take into account the discussions students have with each other in and around the project.

Even with that in mind, the nature of learning through these games is complex and difficult to predict. Unlike most web-based learning programs, character-playing games give students the ability to choose the direction their activity takes through online and offline discussion and collaboration. The negotiation among students, facilitators, mentors, and project designers can lead to unexpected changes in attitudes and knowledge, and, in some instances, have even lead to reconsideration of the goals of the project.

In an attempt to address the complex nature of discourse and learning in these simulations, we have identified three main loci of discourse in each game:

"Game" discourse. This is discourse that students produce in a conscious effort to fulfill the demands of a role or a rule-bound situation. Game discourse consists mainly of online conversations, in genres such as diplomatic messages or press releases, among students acting as characters in threaded discussion forums and online talk shows, and between characters and mentors.

"Surrounding" discourse. This contains discussion that the students have in their own voices that is linked in some way to the Game discourse. For example, this discourse may be a way of making decisions necessary to the creation of Game discourse; it may be a reaction to Game discourse of others; and it may be discussion that takes up issues related to the Game discourse. In AIC, surrounding discourse generally takes the form of face-to-face discussion , which may occur in traditional classroom settings, small team groups, or in more informal social settings. In Conflix, surrounding discourse takes place in several forms, especially informal plotting sessions among players and between players and mentors.

"Meta-discourse." This discourse includes discussions by students, educators, mentors, and simulation designers about the educational and ideological value of the project; its relationship to school curricula; its value within particular content areas; and instructional design issues. Meta-discourse can be found in regular mentor meetings, conversations among facilitators and simulation designers, and -- when they become aware of their own learning -- in student dialogue as well.

However, identifying these three loci of discourse is not the same as creating a clearly delineated taxonomy of the ways students communicate with each other. Each of these discourses is incomplete without the others. Moreover, the types of discourse in question defy easy categorization, and traditional methods of text or conversation analysis do not adequately explain the complex activities that occur in these games. The meaning students construct as a result of participation in these exercises has much to do with how sequences of events and conversations unfold for individual characters over time.

The following is a snapshot of AIC. It is an attempt to take one particular slice of the project and show how several levels of activity occur simultaneously and interdependently. To do this, we have taken data from the project and created a text containing three "strips" which correspond to the three levels of discourse proposed above: Game discourse, surrounding discourse, and meta-discourse. Each is created from textual data that has been excerpted and edited with narrative clarity in mind. The strips run horizontally, in parallel, and each strip deserves some explanation.

- Game discourse comes from in-character online postings made by the high school participants and mentors. The postings are a tiny portion of the written activity in the simulation: we have chosen two press releases and portions of two mentor updates in a game where there were 96 press releases, 34 updates, and 1,973 communiqués, plus several dozen action forms and weekly summaries. Explanatory comments are in italics.
- Surrounding discourse in this sample is a similarly small portion of the hours of conversation among team members and the teacher-facilitator (Kupperman) that occurred during the high school classes. Explanatory comments are in italics.
- Meta-discourse includes an excerpt from fieldnote data and quotes from interviews and debriefing discussions, along with further reflections and explanations. Fieldnote data and quotes are in normal type, while reflections and explanations are in italics.

The focus of this narrative is narrow: the sample deals with how the Israel team from the Spring, 2000 Red Game reacted to a particular event in the game (specifically, a bombing within Israel). The selections were chosen with two

criteria (1) that they illustrate each kind of discourse clearly, and (2) that together they make a coherent whole, showing how the discourses work together.

With this type of text, there is an obvious problem for the reader: how does one read such a thing? It is tempting to say, "Any way you like," and leave it at that. However, there are some aspects that we would like to call attention to.

First is the fact that the game discourse has a certain coherence of its own. There is a fictional universe of the simulation which is created in the online text, and this is what ties the activity together. It makes sense, therefore, to read the game discourse strip straight through first of all.

However, the game discourse is authored by many people dynamically over a period of time, and there is a great deal that goes on *around* the reading and writing of the text. In particular, the details of decision-making, which form some of the highest-level cognitive tasks in AIC, are usually not apparent in the game discourse. This is where the surrounding discourse comes in.

Other relationships between the discourses are worth noting. An interesting aspect of the relationship between game discourse and surrounding discourse is that while the game discourse provides information and defines a situation that forms the basis for the surrounding discourse, the surrounding discourse feeds back into the game discourse, adding to it and creating a revised situation. In this way, the surrounding discourse takes on a meaning and urgency within the world of the simulation.

The connection between the surrounding discourse and the meta-discourse is very much a teaching relationship. It is easy to see how the facilitator/simulation designer shapes the direction of the students' conversation toward particular educational goals. However, it is important to emphasize that the goal setting works both ways: goals and standards are continually being revised and negotiated among all the people involved.

Finally, a similar interaction goes on between the meta-discourse and the game discourse. The simulation designer may set the initial situation and rules, but since the game discourse is constantly growing and changing, the designer and the mentors must continually fine-tune the game discourse in light of their goals and standards for the simulation, which in turn are influenced by the events in the game.

Meta-Discourse

Surrounding Discourse

Game Discourse

On April 6, a breathless news item came over the wires*:

NEWS FLASH

Devastation ripped across the state of Israel yesterday as dynamite exploded in empty buses parked in Transportation Authority yards. A total of 256 Israeli buses were destroyed. A note found near the scene claimed that Hamas was responsible and threatened more deadly action. In Israel, the public has shown its outrage at this action by calling for either tightening security and better intelligence information or the removal of the current government. No comment has been received by the Israeli government yet.

[*Note: news wire items are written by the Game Mentor based on Action Forms submitted by characters in the simulation.]

(April 7, 2000)

Rodney, playing Ehud Barak (prime minister of Israel): I understand that there's this huge uprising that we have to look out for. What should we do then? Isn't that like sort of covered in the first part of that thing where it's like... declaring martial law on that area?

Facilitator: Declaring martial law is not going to

Brett, playing David Levy (foreign minister of Israel): Yeah, bombing our busses is not going to do anything!

Facilitator: In the short term, yeah, you can declare martial law, you can crack down, you can close the borders....

Brett/Levy: This is not the final plan, this is showing them that we don't take their crap....

Facilitator: I'm just saying that, if you do that long enough, hard enough, there's going to be resistance. And who knows what Arafat's reaction is going to be. If you close down the borders, take really drastic action, it's going to completely derail the Palestinian- Israeli negotiations.

Rodney/Barak: They're already derailed as it is.

Brett/Levy: We have to show them that if they resort to these tactics, it's not going to get them.

AIC is not about violence, I have repeatedly told mentors and participants. Despite news reports and history books filled with a seemingly endless string of wars, invasions, assassinations, and rock-throwing, we have maintained that the vast majority of political interaction among nations in the Middle East consists of negotiation and rhetoric.

It was ironic, then, that a violent event precipitated the activity presented here -- activity that I believe was some of the most thoughtful and meaningful in the simulation.

Soon afterwards, Sheikh Ahmed Yassin, Spiritual leader of the militant Palestinian group Hamas, released a statement to the press taking responsibility:

Press Release by Hamas: Appearing in Al-Filastine (Ramallah) - 4/9/2000

With great pride and tenacity, Hamas takes full responsibility for the bombings of the 256 empty Israeli buses. We also feel no regret over the four lost lives that resulted from these bombings.

Yet even with this responsibility and obvious disruption of the peace process, the Israeli government has yet to communicate with any Palestinian groups. The basis for our actions was to reiterate the Palestinian interests in the Middle east because so far we have been completely ignored. Israel, Lebanon, Syria, Great Britain, Russia, the U.S., and even the Palestinian Authority seemingly have forgotten about the true interests of

anywhere....

Facilitator: Remember what happened when Rabin was assassinated.... Peres came into power, soon after that there was a series of terrorist bombings by Hamas, the Israeli public got upset, Peres was voted out of power, Netanyahu came into power — there was this right-wing government for about 4 years — until last year. And basically no negotiations with the Palestinians or Syria happened. That's the cost of the ... crackdown. Now, you've got to watch your own butt, because your coalition is not rock solid either. And the voters can vote you out of office, if they feel they're threatened.

Rodney/Barak: So, basically, what do you think we should do? I understand that ... we have to stop them somehow, but we have to have some long term plan, because we can't do one thing without leaving some negative impact on what's going on. Like we can try to assassinate Samantha [a student in the class playing Ayatollah Khamenei of Iran], but that will only do [so] much. We can try to bomb some area, but that's not going to do much anyways. We can declare martial law and close our borders, but that's only going to hurt our relations with all the countries. And if we don't do anything, like nothing happened, then we're just going to be looked on as weak. Right?

Facilitator: Mm hm.

Rodney/Barak: So we're going to have to compromise somehow, and I'm not sure what our best move with that is. I mean.... I just don't know... It's like we already increased security and that didn't work.

On April 7, I wrote the following in my fieldnote journal:

"For Rodney, at least, today the whole simulation was worth it. The Hamas bombing precipitated it. When he first found out about it, his reaction was let's bomb them. At first he confused Hamas with the Hezbollah and wanted to bomb Lebanon. Then with that cleared up, he asked me where Hamas was, and when I said Qatar, he wanted to bomb Qatar. Then the West Bank. He started filling out an action form. He began leaning toward a crackdown in the occupied territories, and I asked him and Pete and Brett what the consequences of that would be. This led to me asking, What kind of power do the Palestinians have? Rodney said that they might have international pressure on their side, and I agreed and brought up the intifada, which they had only the vaguest notion of."

the Palestinian people and instead have been focusing on military alignments and securing their own current positions. The Palestinian people have no homeland and we will no longer stand to be ignored.

Apparently, our most recent actions were not visible enough to allow the Israeli government (as well as its allies) to see the Palestinian people as a player in these negotiations. Hopefully, our next response will warrant more reaction and attention to our objectives.

-Yassin

So we're just going to increase security more? What does that mean? If we increase security more, is it like a soldier on every sidewalk cement step?

Brett/Levy: Look. If we let the Hamas — if we let them off and don't seriously do some damage to them they'll be like "Oh I see, exploding things is a *good* way to get our point across." Let's do it AGAIN!"

Rodney/Barak: That's the whole point. The whole point is that we can bomb them back but that won't do much. But we have to do something, because if we don't do anything then that's exactly what we look like. So we have to do something but we can't just do one thing. ... [The Palestinians have] got the power to do basically anything they want to us, no matter how tight our security is; just because they're so many of them. So what has to happen is that we've got to somehow come up with a long term plan that will allow us to have a response to this thing, but also allow us to—

Brett/Levy: All right, here's my two pennies on this one. Hamas has committed a crime. They're going to prison for a while. Somehow. Eventually, yeah, we can have a long term plan, and like the first thing is, if they want to get anything back, they have to have a long term period of good behavior.

Rodney/Barak: I agree with that. We do have to do something, but we have to decide what.

At this, Rodney seemed to realize for the first time how **anything** they did would have negative consequences. And if they did nothing, "we would look like wimps." Brett took the hard line that there should be retaliation no matter what the consequences and he and Rodney argued a bit. Rodney asked me "what should I do?" but this time I want them to decide. I left the decision for Tuesday."

The action shocked and angered the Israeli Government. David Levy, the hawkish Israeli Foreign Minister, did not mince words.

Press Release by Israel: Ha'aretz newspaper (Tel-Aviv) - April 11, 2000

In a letter sent to the Ha'aretz by David Levy was published saying:

"The current act of violence that has taken place on Israeli soil is a true example of ignorance and the absolute destruction of the peace process as we know it.

The Hamas, for some reason believe that the best way to get their demands met, is to make a potentially fatal attack on Israel. Somewhere inside their ill logic they felt that ignoring the fact that Israel has been in negotiations with the PLO and dealing with various other threats at the same time. This selfish destructive action has in no way sped the Palestinians on

April 11. The Israel team needs to decide what how to respond to the Hamas bombings. They leave the computer room where everyone else is working, and have a "secret" meeting in the hall.

Rodney/Barak: We have to do something, we have to do something. Here's what I think we should do. Everything that seems like a big thing to do probably has some negative consequences. Like if we declare martial law, or we close our borders, or do something, it will be looked on as really rash, wrong, and like bad – right?

Brett/Levy: Yes..

Rodney/Barak: So I think what we should do, is just increase security a little more, and that's it.

(Brett makes a sound like a quiz show "wrong answer" buzzer.)

Rodney/Barak: Why is that a bad idea?

Brett/Levy: (He makes the buzzer sound again.) I'd like to point out that if anyone calls us "rash", who's saying that about the Hamas? Hamas blows up busses and they're like, "good for them!" Israel tightens security and they're like "Buuuuh!" (Sarcastically) Israel is a group of Nazi terrorists for tightening their security! They should welcome world peace with open arms! And let Britain in there and blow them up!

Rodney/Barak: That's the thing, though, that's the whole point. Like the thing is—

Looking at the classroom dialog from that day (partially reproduced above), I can see Rodney struggling with this difficult decision. Brett and I tried to pull him in opposite directions. Brett urged swift and decisive retaliation, while for every retaliatory action Rodney proposed, I argued that the consequences might lead them into even deeper trouble.

What the Israel team didn't know at the time is that Yassin, the leader of Hamas, was being played by a college student who was a friend of the Game Mentor. The mentors and this "confederate" player had gotten together a few days earlier and decided on the "bombing" as a way to provoke activity in the game. At this point in the simulation, the mentors had discovered that they could play an active role in shaping events. In a post-simulation interview, the Game Mentor said that "by the end of the game we realized that all of us together could mold the way the game goes, and we could make the game go however we wanted to." Though the mentors' justification for their decisions did not go much further than "activity is good," the result turned into a meaningful experience for the Israeli team: they were able to feel some of the difficulty in choosing an appropriate response to a threatening situation.

the road to peace. It has in fact made things worse and slowed the negotiations to a dead halt for an undetermined amount of time. I would think the PLO would act in outrage at a group that would dare represent them with violence. I would like to ask the Hamas: are you trying to completely remove the possibility of peace in Israel?

If not why would you make such a disgusting move against our Government? If you are, I pray for your children for what group of people have any hope of survival if their governing power so openly embraces violence?"

Brett/Levy: Why doesn't Israel just give up their entire country to Syria, the PLO, and Lebanon, as ammends for peace. That would be the only suitable action that anyone would agree with.

Pete/Peres: You can't take that position, it's like the worst thing we could possibly do right now. We have to stay strong.

Brett/Levy (to Rodney): You only care about what the mentors think. They could care less.

(Everyone's voice is raised to nearly shouting.)

Rodney/Barak: I don't care about that, I don't care these—

Brett/Levy: There's all these governments doing whatever the hell they want to, and we're like trying to make decisions and work toward peace, and we make like one decision in our own favor and we're like, we're "rash".

Rodney/Barak: So what should we do? What should we do? Brett, what do you think we should do?

Brett/Levy: I'm still angry with the Hamas. We can't just be like, "OK you guys did a potential—"'

Rodney/Barak: So we should bomb them? We should bomb them? Because—

Brett/Levy: Ok let's pretend that, oh, there were 2 people on each one of those busses that blew up. That would have been 500 people killed by that Hamas bombing. "Oh well, good old Hamas! You're just going to blow us up, you get back there —"

Looking back, it is striking how "in character" the Brett and Rodney were. In the real world, David Levy took the same sort of moralistic stance that Brett took on that day: strict tit-for-tat, severe punishment for those who do us harm. In class after the end of the simulation, Brett remarked, "In my character, the way I saw it, I was not compromising about anything. I didn't want the PLO to have their land back. When the Hamas did that bombing, we basically let it totally destroy the peace talks, because we weren't really in favor of the peace talks anyway, and it was like, here's a reason to diffuse the peace talks. That's all I wanted. I didn't want the PLO to get their land back. I could have cared less." On the other hand, Rodney's character, like the real Ehud Barak, was caught between conflicting impulses: wanting to do what was best for peace in the long term, while not wanting to compromise Israeli security or look weak.

This may have been nothing more than a coincidental parallel between the students' own personalities and their characters. But it is clear that -- at this particular point in the simulation, at least -- the decision was a serious one, something worth arguing about.

Israel began an intensive security crackdown. The news wires reported the following news item on April 12.

NEWS FLASH

In response to the Hamas bombings, Israel has initiated an intense crackdown on terrorism. IDF forces have conducted searches and placed arrests on over 100 suspected Hamas terrorists and supporters. While this action has helped rid Israel of many terrorists, the Hamas' reaction to this search and arrest operation may be severe.

Rodney/Barak: The problem with the Hamas, though, is that there's not one place that they're located. And the thing is that a lot of the places they are located are in Israel. So we can't just bomb them, because we'd be bombing our own country. That's the problem.

Pete/Peres: We can set up a terroristic network.

Brett/Levy: Yaaaaah.

Rodney/Barak: We can set a terrorist network to kill them. We can do that, I've done that. **That's what my action form says to do, actually.**

Pete/Peres: Send troops?

Rodney/Barak: We should just increase security and have them arrest everybody that's a Hamas-i-ite.

Pete/Peres: That's good.

Brett/Levy: Hamas-i-ite?

Rodney/Barak: Hamas-i-ite.

Ultimately, the team decided on a relatively restrained course of action -- a security crackdown. They wrote this up in an action form, which was accepted and reported by the Game Mentor in an update, shown above.

The incident may have contributed to a certain pessimism that gripped most of the students after the simulation ended. When I asked the class what they thought might be the real solution to the Arab-Israeli conflict, Rodney's response was desparing:

"There are people on the extremes of the situation, who will not want to do anything. And if they control part of the government, they have a say in that. Or they make their [point] by blowing up some place. That's what we'll see, we'll see there's people totally unwilling to compromise. Because those people hold parts of the government or whatever, there won't be enough compromise."

Approach Two: Building Theory Through Dialogue About Learning

The Interactive Communications and Simulations (ICS) Group has long employed University of Michigan students as mentors for its online simulations and communication-oriented activities (Kupperman & Weisserman, 2000; Scott, Espinosa, Stanzler, & Goodman, 2000; Weisserman, 1999), and there is a significant body of theoretical research supporting such mentoring projects. Vygotskian theories of cognition (Vygotsky, 1978), for instance, suggest that more capable peers can lead students to forms of cognition and subjects of inquiry that they might not otherwise reach themselves (Bonk, Medury, & Reynolds, 1994). The idea, of course, is that individuals can effectively learn new skills through the use of human scaffolding offered within their zone of proximal development (Salomon, Globerson, & Guterman, 1989; Wertsch, 1991). Largely, these projects have been successful (Scott et al., 2000), and the ICS mentoring seminars have become crucial to the success of its projects (including, but not limited to, Conflx and AIC).

A significant limitation of the ICS mentoring framework, however, is due to the very nature of online communicative activity: most ICS mentoring activity occurs exclusively online. Despite recent (and well-publicized) efforts to move towards educational communities that exist exclusively online (such as the Concord Consortium's Virtual High School; see) (Hsi & Tinker, 1998), many researchers have come to believe that online educational endeavors are most valuable when they are thoughtfully embedded within offline classroom-based and informal social experiences. In fact, Scott (2000) makes a compelling argument that in most truly constructivist electronic activities, online interaction is just the tip of the iceberg. His Iceberg Theory contends that the most meaningful cognitive activity is usually buried below the water's surface, within the classroom's offline culture. (That has been the case in The Conflx Project from day one: see Weisserman, 1999). Herein lies one significant limitation of the current ICS mentoring framework. While university students are generally more capable than their novice counterparts, they are not truly peers in the most important sense of the term. The defining barrier is neither age nor cognitive ability, but rather the college student's lack of admission to, and participation in, the student culture below the surface of the game. Vygotskian theory does indeed point to the value of mentoring relationships; but it also emphasizes that learning is inherently situated in these social, cultural, institutional and historical contexts (Wertsch, 1991).

Recently, however, much attention has been given to the need for educators to discover new forms of cognitive mentorships within a more legitimate social context (Brown et al., 1989; Collins, 1996). Indeed, some researchers have suggested that the online communities can be effective sites for peer mentorships (Brown & Campione, 1994; Riel & Harasim, 1994; Sugar & Bonk, 1995). To that end, in late 1998 we added a new level of human scaffolding to Conflx by allowing successful former players who were still in high school to take

on some aspects of the mentoring role. These high school mentors, quickly surpassed the college-aged mentors in their ability to mediate the learning experience of the players largely, we suspect, because they themselves were not only part of the game's offline culture, but because to a large extent they themselves were its culture-bearers.

Tharp and Gallimore (1988) have suggested six ways in which mentors can assist novice performance. These include: Modeling; Contingency Management; Feedback; Instructing; Questioning; and Cognitive Structuring. Tharpe (1993) later amended this taxonomy to include a seventh task, Task-Structuring. Traditionally, ICS university mentors have engaged primarily in three of these tasks: Questioning (in their roles as journalists); Feedback (as political aides); and Contingency Management (as game-masters who assign power rankings, and as journalists who sometimes engage in editorial critiques of political activity). To a lesser extent, they also engage in Modeling (on certain occasions, college mentors have adopted the roles of confederate politicians, especially early in the game) and Task-Structuring (through selection of Agenda Round and Resolution Round options, and through the occasionally inclusion of special scenario-based emergency rounds).

However, a major component of the high school mentors' experience with the project has been to engage them in some fairly sophisticated discussion of educational theory, almost as a type of anthropological science. Indeed, one recent cohort has made the focus of their efforts understanding the subtle connections between players' learning and the online and offline cultures of which the players are a part. For better or for worse, much of this discussion has gone unrecorded, because much of it has gone on informally, or out of our own earshot. Part of it, however, has been recorded in an online group journal (referred to as a weblog, or blog), which is in our opinion representative of the informal discussions, and this section will draw on that growing archive of electronic discourse.

The discussion centers around building a model by which the high school mentors might come to understand the relationship between culture and learning in The Conflx Project. The following is representative of the ongoing discussion:

Online group journal entry by Michelle, a high school mentor:

Seeing as I'm not sure where to really begin, I think an introduction would be appropriate to get things rolling. My name is Michelle; I am a senior at West Bloomfield High School, and a member of the "Conflx Inner Circle" as you might call it. Basically, I am a Conflx nut. I am a 2nd time mentor and a 3rd time player in Conflx, and as of late I have been working to develop some interesting theories about the game

As a veteran Conflux player, I have had the opportunity to be a part of some innovative concepts revolving around the game and its principles. Most importantly, however, is the concept that I, along with a few others, are now working to develop into a concrete model [for understanding how culture and learning relate in this game]

The model, as we call it, is really a conceptual understanding of the Conflux Culture, which can honestly be something of a challenge to comprehend, let alone map out and understand. The best way I can think to describe it is really as the collective nature of Conflux as a whole, how certain principles and ideologies play a factor in the developments within the game. The culture really includes everything within the boundaries of the online activity, but also within the out of character interaction that surrounds the game. Many of the characteristics within the Conflux culture have significant political and educational significance, and can serve in many respects as a microcosm of American politics and of human nature and our role in a society.

So just what is this model that we are attempting to create? And how did we come up with the initial outline for it? Allow me to explain. This really started in a lot of ways with some concerns I had been having about the course of this semester of Conflux. Luke had pointed out the shift from deliberation to scandal as the primary focus of the active players, which fit directly into concerns that I was having about the balance of power and control in Conflux and its effects on the learning environment. What we have now, I said, are three very distinctive subcultures existing within the Conflux culture as a whole. One, the scandal subculture, is far more powerful than the others, and I believe it is the wrong place for the center of the Conflux culture to revolve around.

Looking for a way to visually express my divided subculture conjecture, I turned to these lovely colored block squares [in the school's] carpeted hallway. The squares are a block divided into nine sub blocks of different colors. Using each one of the rows, I began to map out this conjecture with respect to the Conflux culture and its connection to the learning environment. With some prompting from Weiss, we expanded the initial assumption to include the concepts of philosophy, and interaction. With help from the other creative Conflux mentor minds, the model soon moved off the floor and to the chalkboard, allowing us to attempt a 3-D representation of the concepts, and evolving our model to its present state.

Michelle goes on to describe a model designed to map general tendencies in Conflux. The initial model divided activity according to a character's personal philosophy, motivation, and method, with labels of "elitist," "idealist," and "the masses" (i.e. populist). The evolution of the model is beyond the scope of this

paper, but this online dialog illustrates the way students have begun to discuss not just the events of the simulation, but its overall educational goals.

You should also know that this examination of Conflix culture, and this model are also the center of another debate, the debate over where the focus of Conflix should be. Luke and I think that the real power and the focus behind the game should be in the center, deliberation, in other words is the key to keeping the culture the most effective in terms of learning. We feel that right now the focus of the Conflix culture is so far to the right, and emerged in the scandal subculture. We feel that by strengthening the deliberation subculture, we can draw the [other] subculture[s] in, and de-alienate them, as they as they are right now in the game. We think that by bringing the focus center again, we can naturally attract the necessary attention to draw the game back to the deliberation again.

Some people however, disagree with us, they think that strengthening the deliberation isn't the way to go about this. Although, I am not entirely sure how to relay their opinions on specifics of the matter, so you'll have to ask one of them to explain their ideas for how we should go about fixing this culture.

You should also know one other thing, where the mentor culture comes into play in this model. Well the mentors are an obvious part of the culture. But we think for the most part the mentors are divided, as are players, with mentors in each column and row. We also think that the mentor activity corresponds with the concept that Luke and I were discussing, there are too many mentors right now in the Scandal subculture, which contributes to the unbalanced culture as a whole. Weiss sat us down the other day in fact to talk about the Mentor culture as a whole, and how its divisions are a concern. The fact is, the mentor culture sounds a lot like that of the culture as a whole, but this mentor aspect is new to our model, so it will obviously need to be developed further.

Online group journal entry by Rachael, a high school mentor:

Over the past few days, there have been structures created that try to model the Culture of Conflix, showing where people are and where they SHOULD be. SHOULD BE in the sense where, they will learn the most....

Now, at first when these models were being made, I thought that we were correct in saying that there is a place these players SHOULD be in order to learn the most. But when I sit back and look at it, I totally disagree with that idea. Players should be where they want to be, because when they are there, they will learn the most. In the first idea, with the flat

square, we talked about bringing the extremes to the medium. So say for example, taking a very player down to the medium, and bringing an[other] player up. By putting them in the medium, is that going to increase or decrease their learning? Well, now to me the answer is obvious. Its going to decrease it, based on the fact that if you don t WANT to be there, you aren t going to open yourself up to learning, or enjoyment for that matter.

As mentors, we talk a lot about enhancing ones learning experience. Yes that is our job to do, but I think that we can sometimes look at it the wrong way. In the beginning of the game up to the middle, the players are drawn towards their niche, and once they arrive there, its very rare they ever leave. Reason being like I have said before, they enjoy being there and they want to be there. If they didn t, they never would ve gone. Anyway, as mentors, we cannot try to conform the players to one environment, but rather we have to in some extent conform ourselves to each individual. This way, we can keep these players in their own environments, where they can learn to the fullest. That is why I believe the cube wont work. I understand that as mentors, we have separate niches as well. And I think that most of us can agree that even though we are at times separated, we fall into the same sub-culture (its kinda like the sub-sub culture thing, whoa-that s confusing!). We all want these players to learn. We all want to teach them the best we can. Now, the ways we go about it create the differences among us, but we are still striving for the same goal. I m not saying that we need to change our niche based on the players. But with the higher level of experience we have, we sure can alter it in order to benefit the newcomers

Online group journal entry by Michelle, a high school mentor:

Conflx is a game. Since it is a game, albeit one unique in description, it must have rules. All games have rules, some spoken and some not, some which are determined by decree of the players in the game, and some by the maker of the game, you know, the rules printed in the packet of instructions that come in the box. I suppose a good example of this can be shown in the game Monopoly. Many people, I would wager to say most all people, play Monopoly with a \$500.00 pot to be collected each time a player lands on the free parking space. Let's call this the "free-parking" clause. All fees and dividends are put into this pot until someone collects and then the process repeats. You probably already know about this clause, or have heard of it. But what you may not have been aware of, and what many people are entirely ignorant of, is that this "free parking rule" does not exist in the official rulebook of the game Monopoly. Mind you the rulebook does not forbid such a clause at all, but it does not establish one of any kind. What is most striking to me is not that a rule has been created, and infused into standard practice, but that so many people

are ignorant of the fact that it does not officially exist as a rule of Monopoly game play. Perhaps they have been told that it was an official rule and never bothered to check for themselves. The fact is, VERY few people actually read through those official Parker Brothers game instructions. Most people never pick them up at all. Most people, the majority of people, just start playing the game. They skim the rules, note the vital ones, and then proceed to create a game style all their own. Often with patterns from games previously played and rules previously invented; with rules passed through the knowledge of experimentation [ed note: that's DEEP. Think about it a while.] Some of these invented rules have become like law, they are in a sense, laws directed onto the people by the people themselves, and not by the distant board game inventor.

Conflix is no exception to its own host of "free-parking clauses," laws that have been manufactured by the many players that have passed the game from one generation to the next. People passing along their own rules of governance, while sending each box fully equipped with those unalterable Parker Brothers game rules as well. It's the combination of these two types of rule-making that define the game, these two variables control the laws of governance, and they are unalterable and the adaptable. While I am using the Monopoly metaphor more specifically to address the state of Conflux, you should know that I understand the bigger implication of the metaphor and what it says about the laws of society in general. We as an American society, any society, have alterable and unalterable laws. They are as you told me, the "Natural laws" and the "Social Mores". Natural laws are the laws that in effect set the outermost perimeters of the game. They establish the point at which the game is no longer being played, the point at which you are no longer within the boundaries of the game. Social mores are the laws, or unlaws as the case may be, which establish the structure within the game, and allow certain paths or directions within the game to be maintained. Unlike the aforementioned laws, these mores can change and do change often.

You asked me Weiss, to articulate just what these sets of laws are, and why they are significant in Conflux. Having done the former, I will now attempt to do the latter. I tried to think of this as a collective culture, and ask questions: Where are the ends of Conflux? Who makes them? I looked at those little yellow post-it-notes: May do. Can't do. Must do. I came to a realization. Natural laws are unalterable because if you were to change them than you would no longer be playing Conflux, but a different game altogether, note the laws of the Conflux Constitution. Social mores CAN be changed because they are all still within the game jurisdiction of Conflux, despite how obscure some of those laws might be. The fact is Weiss; there are very few established laws in Conflux. And after careful consideration I have decided that I don't know how to define these rules, as you like me too, because I think that many of them don't exist, or exist

in theory, yet to be solidified. Moreover, our natural laws are often what we have come to accept as natural laws, laws that were once social mores, just as the "free-parking clause" can be compared to the existence of scandal in the Conflix environment. Perhaps therein lies some sort of justification for the position of a Mentor, to mold these laws, to define them, to shape the game to keep Conflix but allow it to move and change over time. As mentors our existence is justified by this existence of laws, or rather by their ambiguity.

I have been looking at this with a bias. The fact is, the game should be left to run its course, and the people must be allowed to create their own laws. They must be allowed their "free-parking rules" because those rules shape the game environment. Only from testing and invading boundaries and limits, can people learn how strong their established natural laws are, in a specific sense, how that constitution holds up when tested. How does the government hold up when tested? There is no real way to define the ends of Conflix until we have reached them. In a manner of speaking, Conflix is not educational anarchy as I have perceived it so often before, but a massive experimentation with the limits of the individual, and power that he or she possesses to control the environment they exist in. I look at this in so many ways now, above all in the political and social setting. The true educational value of Conflix is not deliberation, as I have long insisted that it should be, but the study of law and rulemaking. It's a civics class. But it's not; it's a game too. I understand now what you meant Weiss when you said that this semester was more educational than the last, I didn't see it because I didn't really comprehend how it was possible: its what I didn't see that is so important. The connection is clear now. Conflix is a game, a civics game, a dots game, and a social game...

Approach Three: Documentary Video

As noted, the third approach we have taken involves the use of video. Probably, this has been the most useful approach to research on these projects, not just in terms of expressing our findings but in terms of forcing us to thoughtfully approach what we have already uncovered.

What we have found is that capturing candid video, then incorporating it into rich documentaries, has led us to think about these projects in new and different ways. As Denzin and Lincoln (2000) note, films allow the researcher to move from the personal to the political, the local to the historical and the cultural. They are dialogical texts. They presume an active audience. They create spaces for give-and-take between reader and writer. They do more than turn the other into the object of the social science gaze.

In Conflux, especially, the use of film has produced rich results, partly because of the researcher's role as a classroom teacher. Thus, what follows is a sample of the discourse not only captured by the use of documentary film, but partly facilitated by it. It is difficult, not to say almost hypocritical, of us to make a claim for the use of film as a legitimate medium not only for research but of dissemination of research findings, then turn to expository text to describe these films. Alas, it is not possible to include the film in this paper. However, an example of these videos is available in Quicktime format at <http://ics.soe.umich.edu/papers/AERA2001/>.

To maintain the tone of the film as best we can, we turn to journalistic narrative as the best possible alternative:

The movie is entitled Crossing the Line.

It is amateurish, although endearingly so, like those MTV-style docudramas with their faux-real finish. Some of the candid shots are filmed without benefit of a tripod, while others jerk from subject to subject with an astonishing lack of manual dexterity. The interviews are more aesthetically pleasing, having been conducted in a studio with the benefit of lighting and a black velvet backdrop. Even so, the sound is uneven at times, subject to the occasional pop and crackle of a six-dollar microphone. And the transitions are uneven, with the odd bit of dialogue truncated in mid-syllable. But there is a certain quality to it, as though the filmmaker possessed the artistry but not the technical expertise to make a professional quality documentary.

It begins with Jaime. She is about sixteen years old, animated as all hell, with almond eyes the size of saucepans and a face that is almost disturbingly expressive. (Later, she will tell you she is the product of a shotgun wedding, or what happens when a Chinese guy knocks up a little

blonde chick from Nebraska.) Like most of the kids in the film, she is deeply articulate and passionate about what she does, with the profound conviction that comes from being extremely young and extremely bright. She is seated on a stool in front of the dark backdrop, hunched slightly forward, hands in her lap. She rolls her eyes upwards and brushes back her bangs as she describes Karl.

I hate his politics, I hate the way he thinks, I hate his whole his whole ideology, she says, struggling for the right term. Words fail her again, and you get the sense that it is a rare occasion indeed. I just hate everything he stands for. It s just wrong.

She seems older than she is at times like this, when she s processing what has happened. But the effect is momentary, as the camera cuts to an informal candid shot, from an earlier time. She is in a crowded classroom now, part of a small group discussion. The room itself is busy-looking, cluttered, with photos of former students tacked up on every wall and curling in the building s pervasive humidity. There are movie posters on the wall, a hideous lamp, a full-sized cut-out of Albert Einstein. Computer desks line three of the walls. In the middle, four or five desks are pushed together, and as the other students talk Jaime quickly melts into one of those slouching positions only a teenaged girl finds comfortable. The camera zooms in on the back of her sweatshirt, on which someone has stuck three sticky-notes, which read, Worst Conflux Player Ever. Zoom back as someone shows Jaime, who peels the notes off, glances at them, and sighs in resignation. Then she wads them up and chuckles them hard at a swarthy kid who looks maybe eleven years old.

Later, you find he is older than that, but not by much. Karl is barely fourteen, but precocious, already a high-school junior. Short and owlish, with outsized feet and hands, he bears an uncanny resemblance to The Count from Sesame Street, and you resist the urge to repeat, One batty batty batty, two batty batty batty. Five years from now, you think, the girls will slobber over him, but it will be five long years indeed. He laughs, and Jaime gets up from her seat and, half-kidding, punches him in the back. The stickies are clearly a running joke, but there s some real tension there.

Cut to another candid shot, this one with Jaime and Karl seated on top of their desks, arguing directly as the other students watch with voyeuristic interest. A dark-haired boy with Slavic features stands nearby, ready to interject.

You are the worst Conflux player ever, Jaime tells Karl, more seriously than you might expect. I realize I ve only been playing Conflux for a few

months, but already I know you are the worst player in the history of the game.

Karl is not laughing now. Why, Jaime? he asks, almost taunting. Why do you think so?

Another student catcalls: Yeah, Jaime, why do you think he s a bad player? He s kicking your ass.

Jaime looks at the cameraman, explaining. He s just wrong, she tells him. He s using, like, words and alliances and stuff, and he s not actually saying anything, and he s gaining power from it, and it s wrong.

You have alliances, Karl says. How are your alliances any different?

You don t have you re just manipulating everyone, and they re too stupid to realize it, because they think you ll actually share power with them, she retorts. You don t actually have any beliefs about the issues, you re just trying to better your own position.

So, that s what you re doing. What is your alliance about?

National health care, she answers, a little smugly.

Bullshit, says Karl, as if that settled matters. You re getting power too.

Jaime turns to the cameraman. Nothing he says has any substance.

Good, it s working, says Karl. You see? It s all about getting power. That just means I m doing well. He is not pompous, just a little mischievous. But you wonder how this ll translate when he s older.

She makes a sound, a sort of frustrated grunt. Nothing he says has any substance, she says. He s formed this network of little politicians who hide the fact that he doesn t actually have any beliefs.

Cut back to Jaime s interview. If you had a chance to start government over again, to reform it in a way that makes sense, shouldn t you do it over better, the way it should be? Not make it some weird, dystopian system that s even more corrupt than the one we have now, where the demagogues have power and the honest people have nothing?

And back to Karl. It is his turn to be seated on the stool, in front of the curtain: I think of this as being a giant mind game. Screw them before they screw you. You play the game Jaime plays, or Ilya plays, and you

get nowhere. But you play the game the way I play it, you can get things done.

Now the camera turns to Luke, a rail-thin kid wearing an old man's cap. It is, you suspect, a kind of fashion statement, just not a very good one. Intelligent eyes, dirty blonde hair. He looks like the fortunate offspring of Matt Damon in Good Will Hunting and Michael J. Fox in Family Ties.

At least he's honest about it, Luke says, gesticulating in a way that is more self-conscious than practiced. He nods in what I presume to be Karl's direction. Every other politician in this game pretends he doesn't believe in seeking power, but look what you're all doing. Even you, Ilya he points directly at the Slavic-looking kid, who is off camera, even you, Ilya. You're the most dishonest person in the game. Here you are running for president, and you claim not to be interested in gaining power?

Ilya turns out to be the most polished politician of the bunch, and the least secure. Dark hair, pale features. He holds his hands together in a preacher's pose.

I'll tell you why I'm running for president, he says. I think I'm pretty good at this. I think I understand the issues better than anyone, and I think I'm the most able person to establish anything resembling a coalition. I trust and listen to what other people say instead just politicking.

They hoot him down a little for his conceit, but he continues. Have you read my latest posts? He pauses. Probably not, they're too long and substantive and stuff, but here's what I've been trying to say. Now they really hoot him down, and a few of the kids throw things at him.

Jaime and Karl, they both just watch.

Meanwhile, the camera shifts, and so does the setting. A young man sits outside, cross-legged on the school's front lawn. He is tan, well-fed, very suburban. He gives the impression of someone who's smirking, even when he's not. The caption at the bottom of the screen reads: Grant, High School Mentor.

He is pensive, answering a question. In my personal opinion, I feel politics is definitely about power. I think people go into politics for a reason, and it's not to represent the common good of man. He pauses. When I talk about democracy I'm talking about a system in which the general population has a meaningful say in public affairs, and by that definition, I don't think we're a democracy, no. I am not sure whether he is talking about the game or real-life, and the abiding impression is that he

doesn't either. And if this is an oligarchy, then we mentors are the oligarchs. The reality is, we are the people who control what is going on, and if we didn't want something to happen, well he trails off, leaving the thought unfinished.

Conclusions

The preceding narratives are attempts at representing activity that goes on in AIC and Conflx. But they are not objective representations of randomly selected events; rather, they are interpretations of carefully chosen slices of activity. As such, they make normative statements about what we think is valuable about these projects. The narratives are attempts at representing complex data, but they are also statements about what is important to notice and think about. (Logician and law scholar Layman Allen has phrased the issue unforgettably as, "What is WOMAN?" where WOMAN stands for "Worthy Of My Attention Now.")

For us, what is "worthy of my attention now" generally has to do with interactions between people and learning that is constructed collaboratively. Even though the projects revolve around online communication between participants, we want to draw attention to the face-to-face discussions that feed from the online activity and then feed back into that activity. The role of the teacher is also crucial in determining what sort of learning goes on; these are not courses that are "taught online." The position of project designer as a simultaneous teacher, researcher, and learner is important to us as well. We can say with confidence that the people who have learned the most from these projects have been ourselves.

In these projects, there is no single definitive account of what happened, what was experienced, and what was learned (let alone by whom). What we have is not a story but a tangle of stories; not a methodology but an attempt at creating a more adequate language of description; not findings about what typically happens given certain conditions, but descriptions of what is noteworthy. In regard to these approaches, we are reminded of Clifford Geertz's attempts to make sense of people, towns, and nations that are constantly changing and interacting with each other:

It is not history one is faced with, nor biography, but a confusion of histories, a swarm of biographies. There is order in it all of some sort, but it is the order of a squall or a street market: nothing metrical. It is necessary, then, to be satisfied with swirls, confusions, and inconstant connections; clouds collecting, clouds dispersing. There is no general story to be told, no synoptic picture to be had. Or if there is, no one, certainly no one wandering in to the middle of them like Fabrice at Waterloo, is in a position to construct them, neither at the time nor later. What we can construct, if we keep notes and survive, are hindsight accounts of the connectedness of things that seem to have happened: pieced-together patternings, after the fact

To form my accounts of change, in my towns, my profession, my world, and myself, calls thus not for plotted narrative, measurement, reminiscence, or structural progression, and certainly not for graphs; though these have their uses (as do models and theorizings) in setting frames and defining issues. It calls for showing how particular events and unique occasions, an encounter here, a development there, can be woven together with a variety of facts and a battery of interpretations to produce a sense of how things go, have been going, and are likely to go. Myth, it has been said, I think by Northrop Frye, describes not what happened but what happens. Science, social science anyway, is much the same, save that its descriptions make claim to solider grounding and sounder thought
(Geertz, 1995, p. 2)

The danger, of course, is to us as researchers (and, one supposes, to journal reviewers and readers). It would be tempting to get lost in the approach of multiple voices, to record but not consider, to relate but not reflect. The three approaches presented in this paper by no means avoid these dangers completely. However, each offers certain benefits that cannot easily be afforded through traditional means of analysis:

Layered discourse allows us to think about texts not just as static products, but as objects that are both the cause and result of discourse. It is intended to be a framework for thinking about the relationship between written text, face-to-face discourse, and reflective thought. Perhaps more importantly, though, it makes a normative argument for what is important in an online project: that the online discourse is an essential part, but only a part, of an educational experience that includes face-to-face interactions among classmates and teachers, as well as ongoing reflections on what has been learned and what *should* be learned.

Building theory through online discourse web journaling provided some intriguing benefits. We engaging in this "web logging" or blogging with a group of high school students whose primary tasks involved mentoring others engaged in the online activity. In discussing what the players non-mentors engaged in the activity learned, we did not come to any ground-breaking conclusions about the content matter. We did, however, come to understand a fair amount about what mentors learn when they mentor. As it happens, a great deal of reflection about the nature of education is captured in the journals, and the use of this tool is a promising way to explore a type of reflection that falls between the genres of the individually-written essay and the ephemeral classroom discussion.

Of the three, constructing the documentary video proved to be the most germane for capturing the human elements of both projects not just in terms of recording the affect of the participants, but also in terms of capturing the offline culture that surrounds the game. It also introduces an element of for want of a better word passion that other forms of analysis generally lack. As researchers,

crafting a narrative from inches of disk space (here metaphor fails us in the pre-digital age the phrase would have been miles of film) forced upon us a critical subtlety that would have been far easier to avoid in a more traditional media. This experience was powerful enough that we are experimenting with having mentors create videos of their own, documenting the learning that occurs in the project, as they see it.

Works Cited:

- Bakhtin, M. M. (1986). *Speech genres and other late essays* (V. W. McGee, Trans.). Austin: University of Texas Press.
- Beach, R., & Lundell, D. (1998). Early adolescents' use of computer-mediated communication in reading and writing. In M. C. M. David Reinking, Linda D. Labbo, Ronald D. Kieffer (Ed.), *Handbook of literacy and technology* (pp. 93-112). Mahwah, NJ: Lawrence Erlbaum Associates.
- Bednar, A. K., Cunningham, D., Duffy, T. M., & Perry, J. D. (1992). Theory into practice: How do we link? In T. M. Duffy & D. H. Jonassen (Eds.), *Constructivism and the technology of instruction: A conversation* (pp. 17-34). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26(3 & 4), 369-398.
- Bonk, C. J., Medury, P. V., & Reynolds, T. H. (1994). Cooperative hypermedia: The marriage of collaborative writing and mediated environments. *Computers in the Schools*, 10(1), 1-2:79-124.
- Bransford, J. D., Vye, N., Kinzer, C., & Risko, V. (1990). Teaching thinking and content knowledge: Toward an integrated approach. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp. 381-413). Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Brown, A. L., & Campione, J. C. (1994). Guided discovery in a community of learners. In K. McGilly (Ed.), *Classroom lessons: Integrating cognitive theory and classroom practice*. Cambridge, MA: The MIT Press.
- Brown, A. L., Ellery, S., & Campione, J. C. (1998). Creating zones of proximal development electronically. In J. G. Greeno & S. V. Goldman (Eds.), *Thinking practices in mathematics and science learning* (pp. 341-367). Mahwah, NJ: Lawrence Erlbaum Associates.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18, 32-42.
- Bruner, E. M. (1986). Ethnography as narrative. In V. W. Turner & E. M. Bruner (Eds.), *The anthropology of experience* (pp. 139-155). Urbana, IL: University of Illinois Press.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.

- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Chapman, K. J., & Sorge, C. L. (1999). Can a simulation help achieve course objectives? An exploratory study investigating differences among instructional tools. *Journal of Education for Business*, 74(4), 225-230.
- Cochran-Smith, M., & Lytle, S. L. (1999). The teacher research movement: A decade later. *Educational Researcher*, 28(7), 15-25.
- Cohen, A., & Scardamalia, M. (1998). Discourse about ideas: Monitoring and regulation in face-to-face and computer-mediated environments. *Interactive Learning Environments*, 6(1-2), 93-113.
- Colella, V. (2000). Participatory simulations: Building collaborative understanding through immersive dynamic modeling. *Journal of the Learning Sciences*, 9(4), 471-500.
- Collins, A. (1996). Design issues for learning environments. In S. Vosniadou & E. D. Corte & R. Glaser & H. Mandl (Eds.), *International perspectives on the design of technology-supported learning environments* (pp. 347-361). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Collins, A., Brown, J. S., & Newman, S. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 453-494). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Collot, M., & Belmore, N. (1996). Electronic language: A new variety of English. In S. C. Herring (Ed.), *Computer-mediated communication: Linguistic, social, and cross-cultural perspectives* (pp. 13-28). Amsterdam: John Benjamins.
- Cunningham, D. J. (1992). Assessing constructions and constructing assessments: A dialog. In T. M. Duffy & D. H. Jonassen (Eds.), *Constructivism and the technology of instruction: A conversation* (pp. 35-44). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Curtis, P. (1998). Not just a game: How LambdaMOO came to exist and what it did to get back at me. In C. Haynes & J. R. Holmevik (Eds.), *High wired: On the design, use, and theory of educational MOOs* (pp. 25-42). Ann Arbor, MI: University of Michigan Press.
- Denzin, N. K., & Lincoln, Y. S. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, Calif.: Sage Publications.
- Dewey, J. (1916/1966). *Democracy and education*. New York: The Free Press.
- Dewey, J. (1938). *Experience and education*. New York: Collier Macmillan.
- Duffy, T. M., & Jonassen, D. H. (1992). Constructivism: New implications for instructional technology. In T. M. Duffy & D. H. Jonassen (Eds.), *Constructivism and the technology of instruction: A conversation* (pp. 1-16). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Farrell, E., Peguero, G., Lindsey, R., & White, R. (1988). Giving voice to high school students: Pressure and boredom. You know what I'm sayin'? *American Educational Research Journal*, 25(4), 489-502.
- Flood, M. (1978). Let's redesign democracy. *Behavioral Science*, 23, 17-23.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.

- Geertz, C. (1995). *After the fact: Two countries, four decades, one anthropologist*. Cambridge, Mass.: Harvard University Press.
- Guzdial, M. J. (1993). *EMILE: Software-realized scaffolding for science learners programming in mixed media*. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.
- Hawisher, G. E., & Selfe, C. L. (1998). Reflections on computers and composition studies at the century's end. In I. Snyder (Ed.), *Page to screen: Taking literacy into the electronic era* (pp. 3-19). London: Routledge.
- Herrenkohl, L. R., Palincsar, A. S., DeWater, L. S., & Kawasaki, K. (1997, April). *Developing scientific communities in classrooms: A sociocognitive approach*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.
- Holt, T. (1995). *Thinking historically: Narrative, imagination, and understanding*. New York: College Entrance Examination Board.
- Hsi, S., & Tinker, R. (1998). *A scalable model of collaborative learning: The virtual high school cooperative*, [on-line]. Available: <http://www.concord.org/library/model.html>.
- Jackson, P. W. (1995). On the place of narrative in teaching. In H. McEwan & K. Egan (Eds.), *Narrative in teaching, learning, and research* (pp. 3-23). New York: Teachers College Press.
- Kolb, D. A. (1984). *Experiential learning*. Englewood Cliffs, NJ: Prentice-Hall.
- Krajcik, J. S., Blumenfeld, P. C., Marx, R. W., Bass, K. M., Fredricks, J., & Soloway, E. (1996). *The development of middle school students' inquiry strategies in project-based science classrooms*. Paper presented at the International Conference for the Learning Sciences, Northwestern University, Evanston, Illinois.
- Krajcik, J. S., Soloway, E., & Blumenfeld, P. C. (1998). Scaffolded technology tools to promote teaching and learning in science. *Yearbook (Association for Supervision and Curriculum Development)*, 1998, 31-45.
- Kupferman, J., & Weisserman, G. (2000, June 14-17). *Narrative analysis of two on-line political simulations*. Paper presented at the International Conference of the Learning Sciences, Ann Arbor, MI.
- Lampert, M., & Ball, D. L. (1998). *Teaching, multimedia, and mathematics: Investigations of real practice*. New York: Teachers College Press.
- Lodge, D. (1990). Narration with words. In H. Barlow & C. Blakemore & M. Weston-Smith (Eds.), *Images and understanding* (pp. 141-153). Cambridge, UK: Cambridge University Press.
- McEwan, H., & Egan, K. (1995). Introduction. In H. McEwan & K. Egan (Eds.), *Narrative in teaching, learning, and research* (pp. vii-xv). New York: Teachers College Press.
- Moran, C., & Hawisher, G. E. (1998). The rhetorics and languages of electronic mail. In I. Snyder (Ed.), *Page to screen: Taking literacy into the electronic era* (pp. 80-101). London: Routledge.
- Muir, S. P. (1996). Simulations for elementary and primary school social studies: An annotated bibliography. *Simulation & Gaming*, 27(1), 41-73.

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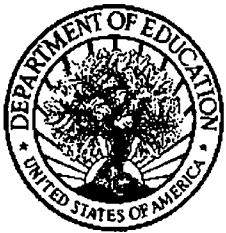
- Polkinghorne, D. E. (1995). Narrative configuration in qualitative analysis. *Qualitative Studies in Education*, 8(1), 5-23.
- Putnam, R. D. (2000). *Bowling alone : The collapse and revival of American community*. New York: Simon & Schuster.
- Randel, J. M., Morris, B. A., Wetzel, C. D., & Whitehill, B. V. (1992). The effectiveness of games for educational purposes: A review of recent research. *Simulation & Gaming*, 23(3).
- Rickly, R. (1995). *Exploring the dimensions of discourse*. Unpublished Unpublished doctoral dissertation, Ball State University.
- Riel, M., & Harasim, L. (1994). Research perspectives on network learning. *Machine-Mediated Learning*, 4(2 & 3), 91-113.
- Rorty, R. (1989). *Contingency, irony, and solidarity*. Cambridge, UK: Cambridge University Press.
- Roschelle, J. (1996). Learning by collaborating: Convergent conceptual change. In T. Koschmann (Ed.), *CSCL: Theory and practice of an emerging paradigm* (pp. 209-248). Mahwah, NJ: Lawrence Erlbaum Associates.
- Salomon, G., Globerson, T., & Guterman, E. (1989). The computer as a zone of proximal development: Internalizing reading-related metacognitions from a reading partner. *Journal of Educational Psychology*, 81(4), 620-627.
- Scardamalia, M., Bereiter, C., & Lamon, M. (1994). The CSILE project: Trying to bring the classroom into world 3. In K. McGilly (Ed.), *Classroom lessons: Cognitive theory and classroom practice* (pp. 201-228). Cambridge, MA: The MIT Press.
- Schank, R. C. (1992). *Goal-based scenarios* (Technical Report 36). Evanston, IL: The Institute for the Learning Sciences/Northwestern University.
- Scott, D. J., Espinosa, R., Stanzler, J., & Goodman, F. L. (2000). The iceberg metaphor of educational telecommunications: History and application. *Media and Education*, 5, 37-47.
- Simon, H. A. (1996). *The sciences of the artificial* (3rd ed.). Cambridge, MA: MIT Press.
- Sugar, W. A., & Bonk, C. J. (1995). *World Forum communications: Analyses of student and mentor interactions*. Paper presented at the Annual National Convention of the Association for Educational Communications and Technology, Anaheim, CA.
- Sugar, W. A., & Bonk, C. J. (1998). Student role play in the World Forum: Analyses of an arctic adventure learning apprenticeship. In C. J. Bonk & K. S. King (Eds.), *Electronic collaborators: Learner-centered technologies for literacy, apprenticeship, and discourse* (pp. 131-155). Mahwah, NJ: Lawrence Earlbaum Associates.
- Tabak, I., & Reiser, B. (1997, December). *Complementary roles of software-based scaffolding and teacher-student interactions in inquiry learning*. Paper presented at the Computer Support for Collaborative Learning, Toronto, Canada.
- Tharp, R. G. (1993). Institutional and social context of educational practice and reform. In E. A. Forman & N. Minick & C. A. Stone (Eds.), *Contexts for*

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34

- learning: Sociocultural dynamics in children's Development.* Oxford, UK: Oxford University Press.
- Tharp, R. G., & Gallimore, R. (1988). *Rousing minds to life teaching, learning, and schooling in social context.* Cambridge: Cambridge Univ. Press.
- Tobin, J., & Davidson, D. (1990). The ethics of polyvocal ethnography: empowering vs. textualizing children and teachers. *Qualitative Studies in Education*, 3, 271-283.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.
- Wallace, R., Kupperman, J., Krajcik, J., & Soloway, E. (2000). Science on the Web: Students on-line in a sixth grade classroom. *Journal of the Learning Sciences*, 9(1), 75-104.
- Weisserman, G. (1999). *That democracy thing: Citizenship, design and the reluctant activist.* Unpublished manuscript, University of Michigan, Ann Arbor, MI.
- Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action.* Cambridge, Mass.: Harvard University Press.
- Yates, S. J. (1996). Oral and written linguistic aspects of computer conferencing. In S. C. Herring (Ed.), *Computer-mediated communication: Linguistic, social, and cross-cultural perspectives* (pp. 29-46). Amsterdam: John Benjamins.

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