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Computer-Supported Collaborative Learning
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Collaboration amidst disagreement and moral judgment: The dynamics of Jewish and Arab students' collaborative inquiry of their joint past

Sarah Pollack · Yifat Ben-David Kolikant

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Abstract We present an instructional model involving a computer-supported collaborative learning environment, in which students from two conflicting groups collaboratively investigate an event relevant to their past using historical texts. We traced one enactment of the model by a group comprised of two Israeli Jewish and two Israeli Arab students. Our data sources included the texts participants wrote—pre-, post- and during the activity, jointly and individually—the transcripts of the e-discussion and reflections written after the activity. The setting enabled us to further our understanding of what collaboration means when students' voices do not converge. We examined whether the activity was productive in terms of learning, and the dynamics of collaboration within the milieu, especially the intersubjective meaning making. The e-discussion that was co-constructed by participants was a chain of disagreements. However, participants' reflections reveal that the group structure and the e-communication method were perceived as affording sensitive collaboration. Furthermore, a comparison between the individual texts, pre- and post- the group discussion, revealed that the activity was productive, since students moved from a one-sided presentation of the event to a more multi-sided representation. Based on the analysis of the e-discussion, we conclude that the setting provided students with opportunities to examine their voices in light of alternatives. We propose the term *fission* to articulate certain moments of intersubjectivity, where a crack is formed in one's voice as the Other's voice impacts it, and one's voice become more polyphonic.

Keywords Collaborative learning · Conflict · Intersubjectivity · Historical thinking · Polyphony · Wiki

Q1 S. Pollack (✉) · Y. B.-D. Kolikant
School of Education, Hebrew University of Jerusalem, Mount Scopus, 91905 Jerusalem, Israel
e-mail: sara.pollack@mail.huji.ac.il

Y. B.-D. Kolikant
e-mail: yifatbdk@mscc.huji.ac.il

Introduction

We conducted an investigation into the dynamics of intersubjective meaning making in a context characterized by disagreement, contradiction, and divergence. Specifically, we developed an instructional model involving a computer-supported collaborative learning (CSCL) environment, in which students from two conflicting groups read historical sources regarding an historical event relevant to their past and then jointly wrote their interpretation(s) of the event.

Inspired by Bakhtin (1991), our model is aimed at generating opportunities for students to participate in what Bakhtin termed "internally persuasive discourse" (IPD), and was interpreted by Matusov as "a dialogic regime of the participants' testing ideas and searching for the boundaries of personally-vested truth." (Matusov and von Duyke 2010, p. 174). In line with that, our model is designed to provide students with opportunities to examine their voice—ideas, viewpoint, knowledge, beliefs, concerns and so forth (Wertsch 1998)—with an Other, an interlocutor whose own voice may be different and perhaps even contradictory. We share Matusov's (2001) viewpoint that "[i]n collaboration, participants need each other not simply because they help each other accomplish some common goals that, otherwise, they could not accomplish on their own, but because they define a dialogic agency in each other" (p.397), as well his belief that such a process can bring participants "to transcend their ontological circumstances" (Matusov 2009, p. 208).

We followed one group that participated in such an activity and produced a joint answer. The group comprised of two Israeli Jewish and two Israeli Arab students, representatives of two groups which are in an intractable socio-political conflict. We had two objectives: (a) to investigate whether students' participation in the activity was fertile, in terms of generating IPD and thereby furthering participants' understanding of their past, and if so (b) to understand the dynamics of collaboration within the milieu (peers, technology, task, the macro context, etc.), especially the intersubjective meaning making.

The setting enabled us to further our understanding of the meaning of "collaboration" when students do not agree, converge, or are even close in their voices. Inspired by Bakhtin's (1991) dialogical stance, we perceive intersubjectivity as a dynamic process of polyphony. We propose the concept of *fission* to articulate the characteristics of certain moments of intersubjectivity. We have borrowed this term from the field of physics where it denotes the process in which an atom's structure becomes unstable as a result of a hit by an external neutron. According to our metaphor, we envision cracks forming in one's voice, hitherto primarily shaped by surrounding in-group voices as the Other voice impacts it, and as a result, one's voice becomes more polyphonic. This concept is important since it sheds light on the mutual interplay between the collaborative situation and the individual voice.

This research, thus, makes a modest step in addressing an important challenge for the CSCL community to resolve: "we most need to understand those processes of learning highlighted by intersubjective epistemologies, at both the interpersonal and community levels" (Suthers 2006, p. 319).

Internally persuasive discourse, intersubjective meaning making, and historical understanding

In this article, we take a dialogic stance to learning and use IPD to inform our pedagogical goals. Matusov and von Duyke (2010) describe these pedagogical guidelines:

> Teaching in a dialogic IPD approach means that the student's learning emerges through their guided engagement in historically and topically valuable internally

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> persuasive discourses where the students become familiar with historically, culturally, and socially important voices, and learn how to address these voices, and to develop responsible replies to them." (p.179).

The collaborative nature of IPD-inspired pedagogy is straightforward. IPD emphasizes that participants need each other. Successful enactments of IPD do not necessarily require that participants be driven by the same goals and do not necessarily have to agree. Participants' voices are not expected to "melt" into one voice, not even in part. Rather, as participants converse, their voices collide providing an opportunity for individuals to test their own voice in light of other voices uttered. The concept of IPD emphasizes the subjectivity of knowledge produced by participants, its asymmetry, to the extreme that a situation can serve as an opportunity for some participants to test their voices but not for others although all "share" the same situation. The potential of CSCL as a venue for IPD-inspired instruction is self-evident. In a CSCL environment, the computer and Internet technology mediate students' interaction with the other voices, and thereby might support and scaffold such interactions (Stahl et al. 2006; Roschelle and Teasley 1995).

Because of the collaborative nature of our instructional model, its celebration of the subjectivity of knowledge production within it, and our interest in understanding the interactional achievements in this setting (Stahl et al. 2006), we explored the concept of intersubjective meaning making, or as Suthers (2006) put it "how people in groups make sense of situations and of each other" (p. 321). A very common metaphor used when investigating intersubjective meaning making is that of common ground (Clark and Brennan 1991). This metaphor underlies a line of research focused on what is shared or being taken as shared before, throughout or after the collaboration takes place. This metaphor leads to pedagogy aimed at melting students' voices or bringing them closer into a unified voice, and hence was less relevant to our research work.

Matusov (1996) defines intersubjectivity as a process of coordination of students' contributions to the joint activity. This definition captures intersubjectivity in situations of divergence of voices and emphasizes that both agreement and disagreement as well as both understanding and misunderstanding shape and promote the joint activity. Indeed, Matusov (1996, 2001) demonstrates this definition with situations where participants disagreed throughout the entire activity. Matusov's analytic attention was mostly focused on describing how contributions (i.e., voices) were interlaced in the joint activity and brought about the production of qualitative outcomes. Less attention, if at all, was given to understanding the impact of one voice on another, a primary objective we set as we strove to examine learning in our IPD-inspired environment.

Another definition of intersubjectivity that captures situations of divergence of voices is provided by Suthers (2006):

> The joint composition of interpretations is the gist of intersubjective meaning making. This conception provides an alternative to "going from unshared to shared information" as the gist of cooperative learning. No commitment to mutual beliefs residing in some Platonic realm is necessary; the physical and historical context available to participants is the field upon which intersubjectivity plays (p. 321).

The term composition is borrowed from mathematics. One can compose functions from other pre-defined functions, and in analogue, one can build one interpretation on another, previously uttered interpretation. However, in both of these definitions, less attention is given to understanding the impact of one voice on the other, a primary objective we set as we strove to examine learning in our IPD-inspired environment.

Inspired by Bakhtin (1984), we view intersubjectivity as a dynamic process of polyphony. In his analysis of novels by Dostoyevsky, Bakhtin (ibid.) proposed that they were structured polyphonically, meaning that they consisted of a "multiplicity of independent and unmerged voices and consciousnesses … each with equal rights and its own world [that] combine, but do not merge, into the unity of an event" (p.208). Accordingly, by polyphony, we refer to the quality of the *individual utterance* to embody the Other's voice in his/her voice, which thereby creates a dialogic relationship between two voices. This viewpoint inspired us to focus our investigation on how participants connect with each others' voices (ideas, viewpoints, and so forth). This focus is in line with Koschmann's (1999) suggestion that polyphony can serve as a way "in which single utterances can be viewed and analyzed as dialogic."

A model of bi-ethnic conflict-based collaborative activity in historical inquiry

Our instructional model brings together students from conflicting groups, and deals with historical texts about a past event that is related to the conflict, in a technology mediated environment. The assumed role of the Other's voice is to generate the opportunity to examine one's own voice (including knowledge, viewpoints, and beliefs) as the Other presents an alternative voice, namely to encourage IPD. We hypothesized that our collaborative setting could potentially foster students' historical understanding of the event.

History is interpretative and multifaceted in its nature. Historical understanding involves the ability to see through the eyes of the people who lived in the past (i.e. historical empathy), the ability to evaluate historical presentations while being conscious of author bias as well as the contextual (in terms of social and cultural aspects) nature of the text, and awareness of the nature of history (Seixas 1993; Wineburg 2001).

Many studies in history education indicate that students' interactions with historical presentations are often dominated by the students' sense of belonging, albeit usually not consciously (Wertsch 2000; Wineburg 2001). Chambliss and Garner (1996), for example, found that adults read texts selectively; they accept facts that support their beliefs, but meticulously examine and critique anything that contradicts their own preconceptions. Similar results have been reported regarding students (e.g., Reynolds et al. 1982; Dole and Sinatra 1994; Wertsch 2000). In other words, in these studies, IPD did not take place.

The above-mentioned studies are based on a "dyadic" interaction, i.e., agent and text. Our hypothesis was that a triadic interaction among agents from groups with opposing views and historical texts could foster the generation of an IPD. We assumed that the Other's voice would be more approachable and harder to ignore if presented (in addition to the text) by an interlocutor, who could attune his or her responses to refute the position of someone's argument.

We were also concerned that the socio-political macro context of conflict would intensify participants' sense of belongingness, and would thus lower their ability and willingness to see through the eyes of the other. We assumed that participants might feel that they were betraying their beliefs if they even attempted to listen to the other party's narrative, let alone demonstrate empathy for the Other. Specifically, the enactment described herein involved Israeli Jewish students and Israeli Arab students who live in the Jewish-Arab conflict. Seeing through the eyes of the Other is difficult since the group's collective narrative bolsters the group's self-identity and justifies its role in the conflict, [and] it, also, invalidates the other side's collective narrative and its role in the conflict: If 'we' are right, 'they' are surely wrong, and if 'we' are victims, 'they' are obviously the perpetrators (Salomon 2004, p.276–277).

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Therefore, when designing our model we consulted many CSCL studies, in particular, factors that foster or hinder task accomplishment, as the composition of the group, the features of the task, the context of collaboration and the medium available for communication (Dillenbourg et al. 1996; Dillenbourg 1999). Moreover, since our CSCL environment brings together participants from two conflicting groups, we also consulted Intergroup Contact Theory (Allport 1954; Pettigrew 1998). According to this theory, the effectiveness of encounters between groups with conflicting identities depends mainly on the following conditions: equality between the participants within the context of the activity, encouragement of collaboration rather than competition, institutional support, and the generation of social norms supporting inter-group contact.

We chose to use a Wiki environment (specifically, we used Pbworks, http://pbworks.com) as a platform for the collaborative activity. The affordance of Wiki environments to enable and enhance collaborative activity is widely recognized. Usually, the emphasis in the literature is on the technical and cognitive aspects of the collaboration enabled by the Wiki environment, which is friendly and easy to use. The virtual writing space accessible to all participants (usually, including access to all drafts and previous versions as part of the same writing session) enables and supports the development of shared knowledge dynamically through joint, asynchronous (re)writing. A wiki usually supports asynchronous interaction; however, a synchronic channel can easily be embedded into the Wiki environment, such as chats. (e.g. Alison and Luke 2009; Augar et al. 2004; Forte and Bruckman 2006; Pifarré et al. 2010).

In addition to the above advantages, we assumed that a Wiki environment would mediate the social atmosphere. It has the potential to facilitate egalitarian participation, since it allows all participants to share their own answers equally and to read and comment on the answers of others. It can also increase students' sense of safety. Amichai-Hamburger and McKenna (2006) claim that the internet has the potential to create a safer space for users than face-to-face situations because it enables them more control over the communication process. They suggest that the internet's unique qualities may help in the creation of positive contact between rival groups. The empirical results by Mollov et al. (2001) support this claim. They found the internet supportive in a discussion between Jews and Muslims about their religions.

We believed that having a one-on-one conversation with someone from the Other group might be too intimidating. Therefore, our students worked in foursomes, the groups comprised of two pairs, one from each of the conflicting groups. The two pairs are physically remote from one another, which creates two parallel channels of communication: face-to-face communication within each pair opaque to the other pair (though the environment also supported e-communication between the members of each ethnic pair), and the communication between the two pairs through a synchronous chat and the Wiki.

To support equality, we also included sources that presented two narratives (i.e., sources that were composed with the advice of an Arab historian as well as a Jewish historian). Additionally, all participants were assigned similar roles and responsibilities throughout the assignment. This, too, increased the equality status.

Finally, in order to mitigate the danger of the discussion turning into competition between the narratives, in which the final answers would reflect the "winning" narrative, participants were not expected to reach agreement regarding the interpretation of the historical event. Rather, they were given two options: either to write a joint essay answering the assignment questions (and potentially reflecting both narratives) or to explain the essence of the disagreement between them that prevented them from writing a joint essay.

The specific assignment

The macro context

This model was implemented in Israel, where Jews are in the majority, and Arabs, who comprise about 20% percent of the Israeli population, make up the biggest minority. The Israeli Arabs are citizens of Israel. They are also descendents of the Palestinians who were in the majority in Israel during the British mandate (1917–1948). As such, their sense of belongingness to the Israeli and the Palestinian groups, which are in conflict, is complex.[1]

We were aware that the majority-minority power relations between Jews and Arabs in the macro context of Israel would have an influence on the students' participation (Stephan et al. 2004). Such influence could manifest, inter alia, in an asymmetry expressed by the adoption of different goals and the tendency to employ different actions. More specifically, Maoz (2000) reported that in such encounters, the Jews, the majority in Israel, tended to be dominant in "cold" actions—actions that do not necessarily concern the conflict directly, but rather focus on other aspects of the social activity. In contrast, the Palestinians tend to be dominant in "hot" actions—those that compel discussion of the conflict.

The assignment

The event studied was the Arab Disturbances of August 1929. This event was preceded by ongoing tensions between Arabs and Jews regarding prayer rights at the Western Wall, in the Old City of Jerusalem. This site, which since the Ottoman rule had belonged to the Wakf (Muslim religious trust), was headed at that time by the Mufti, Haj Amin al-Husseini. The Jews had been given the right to pray at the Western Wall by the Ottomans. On August 23, 1929, Arabs attacked Jews in the Old City of Jerusalem. Large-scale attacks against Jews erupted in other parts of the country and continued until August 29th. The British, who ruled the country at that time, gradually restored order after the arrival of troops and battleships. In all, 133 Jews were killed, mostly by Arabs, and 116 Arabs were killed, mainly by British forces.

The students were asked to answer the following three assignment questions: (a) What was the significance of the event? (b) What were the causes of the event? (c) Could it have been avoided?

The students were given four historical source texts and were expected to read all four: two summaries of papers written by Jewish historians and two summaries of papers by Palestinian historians. The Jewish historians, Kolinsky (1990) and Lang (1988), claimed that the event was premeditated by the Mufti, Haj Amin al-Husseini, who incited masses of Arab followers to riot, and that the British did not take enough precautions. The Arab historians, al-Kayyali (1971) and Ayyad (1999), claimed that the pro-Jewish British policy, the accelerating Jewish pressure to change the status quo regarding Jerusalem's holy sites (e.g., the Western Wall), and the Jewish takeover of the lands and workplaces of Arab residents brought about the event, and the Mufti tried to calm the Arabs rather than incite them. The scholars also differed in their views about the implications of the event. For example,

[1] See the report by the public committee appointed in 2008 by the Israeli Minister of Education to define state policy in the field of education for a shared life for Arabs and Jews. URL: http://cms.education.gov.il/EducationCMS/Units/Owl/Hebrew/HoraotNehalim/VaadotUpeiluyot/VaadatSE/VehaadatMeshotafim.htm (The document is in Hebrew. An executive summary in English in pages 45–48.)

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according to Lang (op. cit.), the Jews suffered a loss as a result of this event while the Arabs benefited, since the British became less committed to the Jews and more willing to consider Arab demands. In contrast, according to Ayyad (op. cit.), the Arabs did not gain from this, as Britain did not retreat from its commitment to establishing a Jewish "national home" in the region.

The activity consisted of two 1-week phases: an individual phase, followed by a bi-ethnic, collaborative phase. In the individual phase, each student read the sources and composed an essay addressing the assignment questions. Next, in the collaborative phase, the students formed an inter-ethnic foursome, comprised of two students from each ethnic group. They were expected to read the other three individual essays and were given two options: either to write a joint essay that answered the assignment questions, or to explain the essence of the disagreement between them that prevented them from writing one answer. The interaction was thus triadic among agents from two conflicting groups and historical texts.

Methodology

Participants and data sources

The assignment was one of the regular assignments in a course entitled "Introduction to Educational Technology" an elective for graduate students in the School of Education at an Israeli university. In this paper, we focus on one foursome: two Arab students, (all names are pseudonyms), Hiya and Mona both females, and two Jewish students, Moti, male, and Rina, female.

The participants were in their mid-twenties to mid-thirties, all of them Israeli citizens. They had studied history during their high school years, including the details of the specific event chosen for the assignment.

The individual essays were composed and uploaded to the Wiki environment as part of the students' homework assignments. Then, an in-class laboratory session was devoted to the students' e-discussions. We asked the groups to split into ethnically-homogenous pairs and requested that one pair move to another room. Each student had access to a computer of his or her own; however, in practice, Mona and Hiya sat together at one computer, with Mona doing the typing. Similarly, Moti and Rina sat together, with Moti typing. In our description of the foursome's discussions, we refer to Hiya and Mona as the (Israeli) Arab pair (IAP), and Rina and Moti as the (Israeli) Jewish pair (IJP).

We used the following data sources: (1) the transcript of the 50-min synchronous (textual) e-discussion between the two pairs; (2) the individual answers students uploaded after reading all the sources which are referred to as pre-discussion answers; (3) the joint essay that was produced by the foursome as a result of the bi-ethnic e-discussion; (4) students' individual post-e-discussion answers; and (4) reflections written by each student individually one week after the bi-ethnic foursome discussion took place.

Method of analysis

Students' joint and individual answers The analysis of these texts focused on students' historical understanding, that is, on identifying the historical agents to which students attributed an active role in the event discussed (Seixas 1993; Peck et al. 2005), the role attributed to each agent, the constraints, circumstances and beliefs upon which the agent is perceived to have

acted, and the perceived relations between this agent and other agents. Additionally, moral judgment was determined based on students' use of expressions indicating a positive or negative opinion regarding the historical agents' actions.

E-discussion In order to understand the dynamics of students' participation, several methods were used. For the analysis of the e-discussion, we utilized (with some adjustments) the method proposed by Van Drie et al. (2005) to analyze the quality of peer discussion on two levels: utterances and episodes.

Analysis at the utterance level enabled us to understand the tasks that the participants carried out, as well as how they took previous utterances and acts into account. To this end, we divided each written e-message into utterances, each utterance comprising one communicative function based upon the coding scheme used by Van Drie et al. (2005). For example, these communicative functions involved task acts of historical discussion (e.g., argument, counter-argument, question, reason and confirmation); task acts concerning the organization and planning of the task (e.g., planning how to approach the task and evaluating the other participants' approach to the task); and task acts concerning social actions.

Task acts concerning social actions were divided into two sub-categories: (a) task acts that could strengthen a sense of social cohesion or togetherness (e.g., acts that show solidarity, greetings, compliments and offers of social support); and (b) task acts that could weaken it (e.g., acts that display unsatisfactory feelings, announce controversy or emphasize the Otherness of peers or self).

We also analyzed the transcripts at an episodic level since the utterance level by itself does not give a description of the dynamics of the discourse, for example, how an idea evolves through the discussion. To this end, utterances were segmented into episodes, each devoted to the discussion of one topic. Next, we analyzed each episode according to the historical understanding expressed (using the same method we applied for analyzing students' answers described above), the degree of co-construction, and the dynamics of the interaction.

The episodes were also classified according to their degree of co-construction into three categories: (1) co-constructed episodes, in which at least two participants contributed equally to the discussion; (2) dominated episodes, in which at least two participants contributed but were dominated by one of them; and (3) individual episodes, those in which only one person participated. For each such episode, we noted the ethnicity of the participants and the initiator of the episode in order to examine whether the collaboration was in fact bi-ethnic or dominated by one ethnicity.

Additionally, in terms of the dynamics of the interaction, each episode was classified into one of the following three types: (1) conflict episode, in which a topic was elaborated in a chain of counter-arguments; (2) cumulative reasoning episode, in which knowledge was elaborated in a series of propositions, each extending a previous one; and (3) writing-procedure episode, in which students constructed the joint text. We also determined whether the issue discussed was mutually agreed-upon or not.

Students' reflections We employed a thematic analysis of students' individual reflections, focusing on students' perceptions regarding the affordances of the technological environment and the changes in their outlook during and following the activity.

Integrative analysis Finally, in order understand the dynamics between the voices, that is, to discern the voices embodied in utterances and the relationship between them, we compared utterances with previous utterances expressed throughout all the texts produced or used by the students.

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Results

First, a comparison conducted between the individual answers written pre- and post-the e-discussion and the joint answer is presented, which was conducted to examine students' historical understanding as well as trace footprints of the e-discussion.. Then, an analysis of the e-discussion at the episodic level is presented in order to provide a bird's-eye view of the characteristics of the e-discussion. We then describe the e-discussion in detail. Students demonstrated a tendency to utter counter-arguments in response to those of the Others. Sometimes, those chains of disagreement yielded intersubjective moments, where one voice collided with another and impacted it. We propose the term *fission* to articulate those moments. Finally, we present the results of the analysis of students' reflections on the activity, which shed light on the affordance of the milieu, as perceived by the participants.

Growth in students' historical understanding

Students' pre-e-discussion answers Students' pre-answers were characterized by one-sidedness, specifically, in the description of the students' in-group historical agent as unaccountable (or even a victim) vs. the historical agent of the Other, as accountable (or even a perpetrator). For example, Hiya wrote[2]: "perhaps, if they [Jews] hadn't touched the Western Wall, things would have been different, and integrating the Arabs in a work situation with the Jews would have improved the economic situation." This answer pictured the Jewish historical agent as accountable for the event.

Rina and Moti pictured the Arab historical agent as a perpetrator. According to them, this agent intentionally generated the event. Rina referred to the violent intentions mentioned by the Arab historical agent: "the Arabs were observed training with weapons and incitement of religious scholars was heard in the villages." Moti refers to the motives of their leaders: "the occurrences were meant to strengthen the Arabs." Similar to Hiya, Rina and Moti did not ascribe accountability to their in-group historical agent. Specifically, Moti described the Jewish historical agent as "weak," and Rina's only reference to this agent was that the leaders "were abroad" during the event.

Mona differed from the rest of the group in that she ascribed accountability to all historical agents. She pictured the Jews as "rebellious" (for entering the area of the Western Wall), thereby tacitly assuming that they were accountable for the occurrence of the event, but she also thought the Mufti "could have acted differently and could have calmed the Arab side."

The students also referred in their answers to the British historical agent. In fact, they differed in the accountability they ascribed to this agent. Mona and Moti found the British accountable for the event due to their incompetency to navigate within the two conflicting interests they had. Mona assumed the British intentions brought about the event: "everything that happened was because of the provocation of the British rule. It had conflicting interests. On the one hand, it supported the Arabs and on the other hand, it wanted to establish a Jewish state." Moti assumed the opposite: that the British were drawn into the event. Rina accused the British for "burying their head in the sand," instead of controlling the event. Thus Mona and Rina judge the British as immoral, whereas Moti referred to them as having constraints. Hiya did not refer to the British historical agent at all.

[2] All the texts are translated from Hebrew

The foursome's joint answer The foursome's joint answer regarding the question of accountability was written as follows:

> There is a disagreement among the group members concerning the Mufti's accountability for and the part he played in the pra'ot.[3] We think that he could have at least reduced the degree or extent [of the violence]. We agree that the British could have prevented or mitigated the pra'ot. Each side could have influenced and mitigated the incidents.

This essay is relatively short. It describes the agreements and disagreements achieved through the e-discussion, but it does not reflect the students' voices as were expressed during the e-discussion (or their individual answers pre the e-discussion), since it includes no reasoning. Also, unlike the individual answers, no historical agent is morally judged. It also differs from the pre-e-discussion individual answers of Moti, Rina, and Hiya in that some accountability is ascribed to both students' in-group historical agent. The one exception is the use of the term "pra'ot" (instead of, for example, uprising, event, or riots), that could imply a moral judgment (perhaps subconsciously) that Arabs perpetrated against the Jews.

The post e-discussion answers The joint answer does not fully overlap with any of the individual post-e-discussion answers, yet its footprints are evident in them.

Students' post e-discussion answers were more multi-sided than their pre-answers. This quality had two expressions: (a) the ascription of the in-group historical agent a certain accountability to the event, as well as employing historical empathy towards the other historical agent, i.e., presenting this agent as acting not only with cold intentions but also upon constraints, thereby reducing the moral judgment; and (b) the answers reflected an understanding of the event as a more tangled system of interrelations, in comparison to the rather simplistic victim/perpetrator description in the pre-answers.

Rina did not change her attitude toward the British and the Arabs. However, this time she did not discuss the Arab historical agent's intentions. Instead she focused on claiming that the Mufti could have done more to calm his people. The British were described as not being "alert enough," and employing less negative moral judgment (in comparison to "burying their head in the sand" in the pre-answer). She did not mention the Jewish historical agent, let alone discuss its relations to the other historical agents. Therefore, her answer is still very much one-sided.

Greater multi-sidedness was reflected in the answers of the other three students. The weight ascribed to the British historical agent had somewhat lessened in the answers of Mona and Moti and instead more weight was ascribed to both the Jewish and the Arab historical agents. Mona became less decisive about the British interests: "the British could have controlled the situation but it probably served their interests:" the main body of her answer is devoted to the responsibility of the Jewish and Arab leaders to calm the people, a point she had mentioned before, but only briefly.

Moti shows a similar tendency. While he did not change his main claims—that the British were accountable and that the Arabs benefitted from the event—he puts an emphasis on the bad relations between the Arabs and the Jews, thereby abandoning the presentation of the Jews as weak, and instead (tacitly) assumes the Jews carried a certain responsibility for the Arab situation: "if the relations between the Jews and the Arabs were better and they would

[3] The term *pra'ot* (in Hebrew) is used in many Hebrew sources to refer to violent events against the Jewish people, such the pogroms of 1882 in Russia.

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have felt as partners to live in the country nearby or together with the Jews, maybe the uprisings against the Jews would have been avoided."

Hiya referred in her answer to the same theme she had referred to in her pre-e-discussion answer: the Jews entrance to the Western Wall area and the economic situation. However, whereas previously she focused on the actions perpetrated by the Jews, this time she portrayed the preceding events as related to the "both sides." Hence, she abandoned the presentation of the other-group agent as the sole perpetrator. Additionally, the British historical agent that was not mentioned in her previous answer is mentioned in relation to the two other historical agents: "all accountability lies with the British, they are in charge… they could have bridged between the two sides with regard to holy places and land and the economic situation."

The e-discussion in a bird's-eye view

The analysis of the e-discussion at the episodic level is presented in Table 1. The active contribution of both sides to the e-discussion is evidenced by the following: (a) the discussion consisted of 26 messages,[4] 14 of which were written by the IJP and 12 by the IAP. The average message length was 24 and 29 words per message, for the IJP and the IAP, respectively; and (b) out of the six episodes that constituted the e-discussion, five were co-constructed (episodes no. 1, 2, 4, 5, 6) by both the IAP and the IJP, and only one was an individual contribution of the IAP (episode no. 3).

The interaction was mostly devoted to historical discussion (in four of the six episodes). Yet, an asymmetry in the participation of the IAP and the IJP was revealed; the IJP initiated four episodes (episodes nos. 1, 2, 4, 6), while the IAP initiated only two episodes (episode nos. 3, 5).

The discussion was tense. Four episodes were conflict episodes, characterized by a "ping-pong" chain of counter-arguments. Moreover, in these episodes, students employed moral judgment vis-à-vis the historical agent of the Other. The conflict episodes were not resolved by mutual agreement on the topic discussed, except for episode 4, which concerned the British agent, a third party in the Jewish-Arab conflict.

The dynamics of the e-discussion

As mentioned above, the foursome was asked to answer three assignment questions. In the first two episodes, the students agreed on the answers to the first two questions. In fact, while the IJP was waiting for the IAP to login to the Wiki environment, they uploaded Mona's answer to the first question and Hiya's answer to the second question to the group's web page. The rest of the e-discussion was then devoted to the third question: could the event have been avoided? This question led them to discuss who was accountable for the event, as well as who lost and who gained as a result of it.

We can divide the e-discussion into three chapters. Chapter 1, which include episode 1 and 2, is when students first discuss the role of the historical agent of their in-group. Chapter 2, involving episode 3 and 4 is an interim phase where the group avoid discussing this issue. Chapter 3 (episodes 5 and 6) starts when they return to discuss this issue.

[4] These 26 messages encompassed a total of 94 utterances.

t1.1 **Table 1** A description of the episodes that formed the e-discussion

t1.2	Episode description					Historical agent and moral judgment [a]	
t1.3	No.	Type	Topics discussed	Initiated by	Degree of co-construction	IJP	IAP
t1.4	1	Conflict–Unresolved	The Mufti's accountability and interests	IJP	Co-construction	A(-),B	–
t1.5	2	Conflict–unresolved	Accountability for the event and interest—the Mufti or the Jews?	IJP	Co-construction	A(-),B	J(−), A(+)
t1.6	3	–	The difficulty of discussing conflicting historical events as a minority	IAP	Individual	–	–
t1.7	4	Conflict–resolved	The British loss and accountability	IJP	Co-construction	–	B
t1.8	5	Conflict–unresolved	The Jewish/Arab loss	IAP	Co-construction	A(−),J(−),B	J(−), A
t1.9	6	Writing procedure	Constituents of group opinion	IJP	Co-construction	A(−),B(−)	J(−)

[a] The letters J, A, and B in the table refer to the Jewish, Arab and British historical agents in the utterance. The symbols − and + in brackets denote a negative or a positive moral judgment towards the historical agent. The absence of parentheses for a specific letter representing an agent means that no moral judgment was expressed towards this agent

Chapter 1 The discussion in the two first episodes focused on the question of accountability, which is a major point of controversy between the two peoples. Both episodes were initiated by the IJP in order to respond to the individual answers of each of the IAP. Nonetheless, both episodes start with the IJP's message that the controversy is minor, for example: "Mona, we enjoyed reading your answer a lot. The controversy between us is minor" (utterances 1-2). These utterances were probably aimed by the IJP to mitigate the tension that their negation might bring about, since in both episodes, these announcements were immediately followed by the IJP's counter-arguments to the IAP's pre-activity answers. Specifically, in episode 2, the IJP claimed that (a) the Mufti, the Arab leader, "had the interest to strengthen his rule through the uprisings" (utterances 23), and was thus responsible for bringing about the violence, whereas (b) the Jews are not accountable, as Hiya claimed, specifically, that the "The frustration on the Palestinian side was extreme without any relation to the event at the Western Wall" (utterance 30). The IJP also claimed that (c) that the British did not deliberately cause the event and did not gain from the event, as Mona claimed, but rather were drawn into it. They supported these claims by three reasons: that the world could criticize Britain for the violent event, the wish of any regime to have order, and the fact that after the event the British brought in more forces (utterances 24–28).

The response of the IAP opened with the following argument: "each side sees the other side as responsible [for the event]" (utterance 35). They repeated this claim in utterance 37 as well. This ad–hominem argument was followed by two counter-arguments: one that rejected the idea that their in-group historical agent was accountable for the event, followed by an accusation that the other group's historical agent was accountable: "we don't think that the Mufti had an interest to lead the Palestinian people at the expense of other people… Riots started when the Jews entered places holy to the Muslims" (utterance 36, 38–39).

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Hence, in line with their pre-e-discussion answers, both the IJP and the IAP found the Other group's historical agent accountable for the violence while their in-group historical agent was not found accountable. Additionally, both pairs did not make any attempt to explain why they viewed their in-group historical agent not accountable. Yet, participants' utterances in these episodes differ from those in their pre-e-discussion answers. In the individual answers, all four participants chose to ignore texts and claims that assumed accountability of their in-group historical agent. Here, both faced the need to develop answers to these very claims since these claims were emphasized in the utterances of the Other, in a social situation (chat) in which ignoring is not an option. Facing this situation, both, the IJP and the IAP chose to reject these claims.

Chapter 2 Both pairs, the IAP and the IJP, appeared to sense that their criticism of the other historical agent raised the tension in the group and both tried to navigate the e-discussion away from the apparent tension, since their following responses aimed at conveying a social message to the Other. The IAP initiated an individual episode (episode 3) in which they discussed their difficulties in participating in such an activity, feeling torn between their conflicting identities as Israeli citizens and "the people and ethnicity which [they are] from" (utterance #51). The IJP chose to convey a message of togetherness and suggest a way to structure the joint work: "we're trying to find shared points to upload to the Webpage jointly" (utterance 41).

The IJP then initiated episode 4, which was devoted to discussing whether the British agent—a third party in the conflict and hence a less tense topic for the foursome—gained (as the IAP claimed (or lost (as the IJP claimed) as a result of the event. The episode was resolved as the group accepted the IJP's claim that the British lost as well as a reservation made by the IAP, that their loss was not significant.

Chapter 3 Table 2 presents the text of episode 5 and its analysis at the utterance level.

In this episode, participants returned to discuss the accountability of their in-group historical agents. As we will show, *fission* in the IJP's voice occurred. Specifically, we will show that there was a "crack" in the IJP's voice as a result of a "hit" from an external voice, that of the IAP. The IAP's voice impacted the IJP's voice, though it did not melt into it, not even in part.

Returning to discuss the accountability of in-group historical agents The episode began when the IAP raised the suggestion that both the Jews and the Arabs lost as a result of the event (64–66). They posed the following question: "What do we have, Arabs and Jews?" (66). Similar to episode 2, the IJP first conveyed a message of encouragement about the agreement achieved within the group so far (67–69), and only then turned to express disagreement with the IAP. In line with previous episodes, the IJP's argument was in line with the Zionist narrative (e.g., Lang, 1988), claiming that this event was a "win/lose" situation in which the Arabs gained (utterance 70) at the expense of the Jews' loss because the British changed their policy after the event (utterances 71–72). This description portrays the Jews as victims, and the Arabs, though not explicitly accused, as perpetrators, since they "won."

The IAP's "hit" The IJP's description of the Arab/Jewish interrelations was probably discordant to the IAP, since they turned to ask: "Moti, why do you think that the Arabs at that time threatened the Jews in their struggle for a State?" (utterance 73), a question followed by another question "What were the Jews' intentions at that time?" (utterance

Q3 **Table 2** An analysis of episode 5 at the utterance level

	Speaker	Utterance no.	Text	Category
t2.2				
t2.3	IAP	64	But don't you think we lost, too?	Critical question
t2.4		65	The British already have their empire.	Argument
t2.5		66	What do we have?	Argument
t2.6			Arabs and Jews?	
t2.7	IJP	67	We agreed that the British lost [the event].	Acceptance
t2.8		68	Of course, not much	Rephrased argument
t2.9		69	Because their country was not damaged.	Reason
t2.10		70	I don't think that the Palestinians lost.	Counter-argument
t2.11		71	Because the [British] rule became pro-Arab	Reason
t2.12		72	In contrast, the Jews were harmed by British policy.	Counter-argument
t2.13	IAP	73	Moti, why do you think that the Arabs at that time threatened the Jews in their struggle for a State?	Critical question
t2.14		74	What were the Jews' intentions at that time?	Critical question
t2.15		75	But the Palestinians were harmed.	Counter-argument
t2.16		76	The [Jewish] newcomers had almost complete control over Muslim sites,	Reason
t2.17		77	and they controlled the country.	
t2.18		78	The economic state of the Arabs deteriorated	Reason
t2.19		79	and they [Jews] would not agree to hire them.	
t2.20		80	And they [Jews] controlled most things,	Reason
t2.21		81	meaning they took the places [lands], the work and the livelihood.	
t2.22	IJP	82	We didn't say that.	Agreement
t2.23		83	We said the contrary.	
t2.24		84	The Arabs felt threatened.	Argument
t2.25		85	that the Jews who immigrated to Israel were taking away their jobs and lands	Reason
t2.26		86	British rule became pro-Arab only after the pra'ot.	Counter-argument

74). These questions challenge the image presented by the IJP of the Arab historical agent and the Jewish historical agent as perpetrator and victim, respectively.

The IAP then suggested an alternative description of these interrelations. They elaborated on how the Jews' actions harmed the Palestinians. They presented the Jews as being unjust to the Arabs, refusing to hire Arabs, taking-over of the land and so forth (utterances 76–81).

A "crack" in the IJP's voice In the next response, the IJP assumed accountability for their in-group historical agents. Furthermore, their response demonstrated empathy towards the Arab people: "The Arabs felt threatened that the Jews who immigrated to Israel were taking away their jobs and lands" (utterances 84–85). This is the first occurrence of such a perspective about the two historical agents from the IJP's voice. Before that, the Arab historical agent was portrayed as coldly planning the violence merely to promote political goals. Moreover, the IJP moved from ignoring voices about the accountability of their in-group agent to incorporating these voices into their voice.

The IAP's voice was not reproduced as is into the IJP's voice, but rather a new meaning was uttered. The IAP claimed that the Jewish actions harmed the Palestinians, whereas the

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IJP suggested that the Palestinians felt threatened because of these actions (not clear as to whether these actions really harmed them or not). Moreover, the IJP did not change their core claim, their narrative.

Episode 6, initiated by the IJP, was opened by the IJP's suggestion of an outline for the joint essay. Moreover, probably striving to reach agreement, the IJP chose to recruit Mona's voice "Is it possible to write what Mona wrote [in her pre-discussion answer]: the Mufti could have acted differently and (could have) calmed down the Arab side?" This suggestion is less extreme in comparison to the Jewish students' viewpoint on the Mufti uttered so far. The IJP also suggested including the agreement achieved on the British historical agent. The IAP agreed, yet requested an addendum concerning the accountability of the Jewish agent (not mentioned in the IJP's outline): "Yes you can refer to that, and also add that the Jews could have been calmed, too" (utterance 93). The IAP, too, hence uttered a less extreme accountability in comparison to previous utterances. The IJP agreed.

Reflection

In their reflections, all the students reported feeling uncomfortable at the beginning of the e-discussion. An extreme example was Mona, who had initially perceived the activity as insecure, and traced the roots of her feeling to growing up as a member of a minority: "Politics was not allowed on my family's agenda. There was a threat from my parents. Even a prohibition…even if I wanted to say something, I couldn't." She reported the effect that participating in the activity had on her: "[it] changed my personal attitude towards the political issue. It encouraged me and enabled me to become engaged in political topics."

As we hypothesized, working within ethnically-homogenous pairs (rather than one-on-one) played a role in reducing the tension, because a partnership with someone of the same ethnicity increased the feeling of security: "I wanted to answer, but I felt that I still couldn't. Hiya started laughing and said, 'What are you so nervous about?'… I asked Hiya what to write and then it started flowing" (Mona). A similar theme was mentioned by Rina, who attributed insecurity to Moti at the beginning of the e-discussion because he preferred interacting with the Arab students as a pair rather than individually.

Another factor that was reported to be helpful in reducing tension was the collaborative approach of the other pair: "Rina's sentence, "Let's work as a team' encouraged me. It helped a lot. And the attitude was very good, very gentle" (Hiya). Rina reported a similar sense of relaxation: "Not only did the collaborative activity not feel like [we were] walking on eggshells, it enabled working in a tranquil atmosphere, more than [I] had anticipated at the beginning."

All four participants experienced the communication enabled by the Wiki and the Chat as affording. However, a certain asymmetry was observed. All the students referred to the technical and cognitive aspect of affordances. In addition, the two Arab students reported that distance communication played a role in moderating and reducing tensions: Hiya wrote, "the physical distance contributed to the learning. The fact that the eyes of the other group member's do not look at us and embarrass us allowed us to write our answers more freely."

Asymmetry was also observed in the way that the IJP and the IAP experienced the collaboration. While all the students reported that they had benefitted from the activity, especially from the conversation with the Other, both Jewish students mentioned the theme of repression. For example, Moti said, "Many times I felt I preferred to find common ground and even to please the other side rather than to stick to my own opinions." Rina got the impression that the group preferred to discuss "safe" topics: "Both sides found a scapegoat and blamed the British for the disturbances. Apparently, it was a convenient solution from

which both sides gained. It enabled a tranquil atmosphere, [because] nobody blamed the other within the group." Rina's utterance could be interpreted as an expression of the difficulty in discussing a charged topic with the different Other. In contrast, the Arab students felt it was an equal and free collaboration. For example, Hiya said "We worked together on all the answers…we based our answers on all the opinions, not just one" In fact, we believe that they perceived the activity as productive because of their experience of equal collaboration (rather than repression of voices).

Discussion

Has learning occurred?

Our model was aimed at provoking, enabling, and encouraging students to extend their historical understanding by generating opportunities to participate in a process of internally persuasive discourse (IPD). In our model, students were encouraged to examine their narrative—ideas, viewpoint, knowledge, beliefs, concerns and so forth—with an Other, an interlocutor whose own narrative may be different and probably even contradictory.

The comparison between the students' pre- and post-answers revealed that they extended their historical understanding of the event. Although they all read the same sources, they produced one-sided individual pre-answers, which were dominated by their sense of belonging. These responses (as well as their first reply to their peers' answers (chapter 1 in the e-discussion)) reflected a gap between the students' viewpoints, which aligns with Salomon's (2004) description of the gap between the Jewish and the Arab narrative.

However, the individual answers written after the e-discussion show that their voices were enriched by means of the Other voice and the alternatives suggested by this voice during the e-discussion. The students' viewpoints of the event did not "melt" into one narrative and perhaps did not even get closer; however, their presentations of the event became less one-sided as they took into account the circumstances of the Other historical agent as well as the accountability of their in-group historical agent, two aspects of the event that they chose to ignore before the e-discussion (subconsciously or not). We have thus concluded that our model generated IPD.

"Fission" as a concept to articulate intersubjectivity within disagreement and divergence

In order to write a joint essay, students had to listen to the Other voice, which contradicted their voice, their truth which triggered them to utter a new utterance, a counter argument. Such interaction can bring to what we term *fission* in students' voice(s). As mentioned above, we borrowed this term from physics, where it denotes the process in which an atom's structure becomes unstable as a result of a hit by an external neutron. In our metaphor, we envision cracks forming in the in-group's voice as the Other voice impacts it.

In our case, a "crack" in the IJP's voice was evident in chapter 3 of the e-discussion, as they assumed some accountability for their in-group historical agent and demonstrated a more empathetic view of the Arab historical agent. This viewpoint was not evident before in their voice, and was later echoed in Moti's (IJP) post-activity answer. This crack resulted from the "hit" of the "external" voice, the preceding IAP's response, where the IAP challenged the viewpoint of the IJP regarding both the Jewish and the Arab historical agents and suggested an alternative viewpoint.

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One might argue that the change in the IJP's voice did not necessarily happen because of the Other's "external" voice "hit." In support of this claim are the facts that the Arab voice "hit" the IJP's voice in chapter 1 and no change was evident. We agree that in chapter 1 there is no evidence for fission in the IJP's voices. Fissions do not occur every time one encounters a different voice. In chapter 3, the IAP's hit managed to surprise the IJP. Surprise occurred because the IAP illuminated part of the event on which the IJP's narrative did not elaborate. Specifically, they built on the Jewish narrative of progress, within which the actions of the Jewish historical agent is portrayed as moral, of heroic pilgrims: Jews immigrating into the country, working in the country, and buying lands, and so forth to "make the wasteland bloom." The IAP used these elements to contend that the very "blooming" enterprise had a negative impact on the Arab historical agent.

Apparently, in chapter 1 the IJP was not surprised. Although the IAP's claim was similar to that in chapter 3 in that it assumed the accountability of the Jewish historical agent, the explanation they offered was that the Jews wanted to enter holy places for the Muslims, referring to the Western Wall. This explanation did not contradict the IJP's narrative, their truth. On the contrary, it could have strengthened their view of the Arab historical agent as accountable and immoral, trying to avoid what they could perceive (in line with the Jewish collective narrative) as a fundamental right, since the Western Wall is holy to the Jews as well.

Fissions describe intersubjective moments because in this moment one idea connects with another idea, one's voice becomes embodied in another voice, or using Bakhtin's (1984; 1991) terminology, a voice became more polyphonic. Obviously, not all the intersubjective moments take the form of fission. Yet, fission is an important type of intersubjectivity since it furthers our understanding of intersubjective processes of meaning making, especially in situations of divergence. The conceptualization of these moments as fissions emphasizes that intersubjective moments should not be reduced to mere agreement with the Other who made an impact. Fission would not even necessarily result with pieces of the Other voice melting into one's voice. As Bakhtin (1991) explains, any word, once uttered, is half ours and half the next speaker's. Our case demonstrates that. The IJP did not accept the IAP's claims as was. They used the IAP's words to utter a different interpretation of the event. Specifically, the IAP claimed that the Jewish historical agent harmed the Arab historical agent, whereas the IJP claimed that the Arab historical agent felt threatened because of the Jews. Fission should also not be viewed as a mere addendum to one's voices, since the IJP's new interpretation was not different only from the IAP's utterances, but also differed from their own utterances up to then.

Furthermore, fissions demonstrate that intersubjectivity is not necessarily symmetrical. It needs two (or more) for fission to occur; however, this does not mean that both participants will be impacted in the same manner. They might even experience the situation in different ways. Recall events in your life experience that a conversation with someone critically changed your thinking, but was not as constructive to your interlocutor.

Finally, fissions are not the only way for intersubjectivity to occur and do not capture the whole fabric of intersubjectivity within a collaborative situation. In our specific case, fissions occurred in adjustment to another type of intersubjective moments, constituted by students' *direct* attempts to stay together and accomplish the task by writing an answer agreed upon by all. These moments were constructed by uttering and listening to messages that convey that the task is feasible and attainable as well as messages on agreements accomplished that signaled togetherness and progress achievements. The importance of fissions is in their explanatory power of the mutual interplay between collaboration and learning, an important aspect less addressed by the definitions of intersubjectivity by Suthers (2006) and Matusov (1996; 2001).

The setting: Hindering or facilitating collaboration?

The unique setting posed a challenge to the students. They had to work as a group and strive towards the goal that had been set: to write a joint essay. To this end, they had to converse with members of an ethnic group involved in an ongoing conflict with their own ethnic group on an event related to that conflict. In fact, all four students reported initial feelings of discomfort.

The Internet was perceived by participants as facilitating the communication rather than constraining it. They explained that its virtual nature enabled participants to privately consult with their partners before responding to the Others, which increased their sense of security. As mentioned above, the students were grouped into ethnically-homogenous pairs that were physically separated from each other. Apparently, this setting provided a kind of a buffer between the two pairs, while simultaneously facilitating communication between them. These findings support the claim by Amichai-Hamburger and McKenna (2006) that the Internet may help in the creation of positive contact between rival groups.

We also believe that the joint essay plays a major role in our setting; however, not the traditional role assumed for student products as an indication of students' knowledge. In fact, the joint answer did not overlap with any of the individual post-activity answers. Furthermore, the joint essay was shorter and shallower than the post-activity individual answers.

However, the task of composing a joint essay played an important role in the social interaction. Because of the need to write a joint answer, students had to utter and listen to the Other voice, which triggered historical discussion with the Other, which in turn brought about learning. It also helped students mitigate the tension by announcing the progress made in the joint artifact, the essay. It enabled the group to move on, despite the disagreement, by summarizing the points of controversy, thereby legitimizing each voice (even if not agreed upon). Moreover, producing a joint essay required the participants to understand the various viewpoints within the group.

Finally, although both the IJP and IAP were active during the activity, the groups' work processes were asymmetrical. While both the IJP and the IAP were engaged in the action of discussing the historical event, the IJP were more engaged than the IAP in the actions composing the joint essay. This asymmetry is compatible with results from Israeli studies on co-existence education, and can be attributed to the majority-minority (e.g., Maoz 2002; Salomon 2004). Counter-intuitively, we believe that this asymmetry was the very thing that kept the interaction going. Apparently we created a space where students' (different) agencies can be legitimized and can co-exist. Moreover, as we have shown above, this asymmetry did not diminish opportunities for students to examine their voice, which was our educational goal.

Conclusions and implications

The study we presented traced one group, consisting of two Israeli Arabs and two Israeli Jews, who participated in an enactment of an instructional model we had developed. We found that the model has the potential to generate an IPD and bring about growth in students' historical understanding.

We proposed the term *fission* to articulate intersubjective moments and the learning that occurred. Here, fission was used to describe a fertile interaction between voices of representatives of groups involved in the macro context of a socio-political conflict. However, this term is useful in articulating those certain moments in collaboration when the Other penetrates into one's voice, though not necessarily through agreement and convergence. This

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term emphasizes that intersubjectivity is not necessarily symmetrical to participants involved in its generation.

Fission can also serve as a useful metaphor for educators as inspiration to articulate educational goals not necessarily aimed at students' convergence of voices, but rather aimed at provoking, enabling, and encouraging students to pursue their own voice with the help of the other participants. Obviously, bringing conflicting voices does not ensure that fissions will happen. Educators need to carefully design and implement the environment within which students interact so that it supports the creation of fissions. For example, in our case, technology served as a mediator of the tension and increased the students' sense of security. The joint essay provided an opportunity, at the same time, to listen and utter voices to regulate the tension through the joint writing of agreements and disagreements. In this experiment, the teacher did not take an active part besides administration. However, we believe that educators' intervention within the activity can act as leverage for the generation of fissions. Future research is required. Further work is also required to enable generalization. However, these results do convey an encouraging message about the feasibility and worthiness of such activities.

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References

Adwan, S., & Bar-On, D. (2004). Shared history project: A PRIME example of peace-building under fire. *International Journal of Politics, Culture, and Society, 17*(3), 513–521.

Alison, R., & Luke, H. (2009). The wiki way of learning. *Australasian Journal of Educational Technology, 25* (2), 135–152.

Al-Kayyali, A. W. (Ed.). (1971). *Tarikh Filastin al-Hadith (The History of Modern Palestine)*. Beirut: Institute for Palestine Studies.

Allport, G. W. (1954/1979). *The nature of prejudice*. Cambridge, MA: Perseus Books.

Amichai-Hamburger, Y., & McKenna, K. Y. A. (2006). The contact hypothesis reconsidered: Interacting via the Internet. *Journal of Computer-Mediated Communication*, 11(3), article 7. http://jcmc.indiana.edu/vol11/issue3/amichai-hamburger.html.

Augar, N., Raitman, R., & Zhou, W. (2004). Teaching and learning online with wikis. In R. Atkinson, C. McBeath, D. Jonas-Dwyer, & R. Phillips (Eds.), *Beyond the comfort zone: Proceedings of the 21st ASCILITE Conference* (pp. 95–104). Perth, 5–8 December. http://www.ascilite.org.au/conferences/perth04/procs/augar.html.

Ayyad, A. (1999). Arab Nationalism and the Palestinians (1850–1939). Retrieved from http://www.passia.org/publications/research_studies/books/arab_nationalism/index.html.

Bakhtin, M. M. (1984). *Problems of Dostoevsky's poetics. Edited and translated by Caryl Emerson*. Minneapolis: University of Minnesota Press.

Bakhtin, M. M. (1991). *Dialogic imagination: Four essays by M. M. Bakhtin* (C. Emerson & M. Holquist, Trans.). Austin, TX: University of Texas Press.

Chambliss, M. J., & Garner, R. (1996). Do adults change their minds after reading persuasive text? *Written Communications, 13*(3), 291–313.

Clark, H. H. & Brennan, S. E. (1991). Grounding in communication. In L. B. Resnick, J. M. Levine, 873 & S. D. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 127–149). Hyattsville, MD: 874 American Psychological Association.

Dillenbourg, P. (1999). What do you mean by collaborative learning? In P. Dillenbourg (Ed.), *Collaborative-learning: Cognitive and computational approaches* (pp. 1–19). Oxford: Elsevier.

Dillenbourg, P., Baker, M., Blaye, A., & O'Malley, C. (1996). The evolution of research on collaborative learning. In E. Spada & P. Reiman (Eds.), *Learning in humans and machine: Towards an interdisciplinary learning science* (pp. 189–211). Oxford: Elsevier.

Dole, J. A., & Sinatra, G. A. (1994). Social psychology research on beliefs and attitudes: Implications for research on learning from text. In R. Garner & P. A. Alexander (Eds.), *Beliefs about text and instruction with text* (pp. 254–264). Hillsdale: Erlbaum.

Forte, F., & Bruckman, A. (2006). From Wikipedia to the classroom: exploring online publication and learning. *Proceedings of the 7th International Conference of the Learning Sciences*. Bloomington, IN, June 2006.

Hertz-Lazarowitz, R., Zelniker, T. Stephan, C. W., & Stephan, W. G. (Eds.) (2004). Arab-Jewish coexistence programs. *Journal of Social Issues*, 60(2).

Kolinsky, M. (1990). Premeditation in the Palestine Disturbances of August 1929? *Middle Eastern Studies, 26* (1), 18–22.

Koschmann, T. (1999). Toward a dialogic theory of learning: Bakhtin's contribution to understanding learning in settings of collaboration. *CSCL '99*, Stanford, CA.

Lang, Y. (1988). The events of 1929. Disturbance, riot, or uprising? *Cathedra, 47*, 134–154 (in Hebrew).

Maoz, I. (2000). Power relations in inter-group encounters: A case study of Jewish-Arab encounters in Israel. *International Journal of Intercultural Relations, 24*, 259–277.

Matusov, E. (1996). Intersubjectivity without agreement. *Mind, Culture, and Activity, 3*(1), 25–45.

Matusov, E. (2001). Intersubjectivity as a way of informing teaching design for a community of learners classroom. *Teaching and Teacher Education, 17*(4), 383–402.

Matusov, E. (2009). *Journey into dialogic pedagogy.* Hauppauge, NY: Nova Publishers.

Matusov, E., & von Duyke, K. (2010). Bakhtin's notion of the Internally Persuasive Discourse in education: Internal to what? (A case of discussion of issues of foul language in teacher education). In K. Junefelt & P. Nordin (Eds.), *Proceedings from the Second International Interdisciplinary Conference on Perspectives and Limits of Dialogism in Mikhail Bakhtin*, Stockholm University, Sweden June 3–5, 2009 (pp. 174–199). Stockholm: Stockholm University.

Mollov, B., Schwartz, D., Steinberg, G., & Lavie, C. (2001). The impact of Israeli-Palestinian intercultural dialogue: virtual and face to face, presented at the *International Association for Conflict Management Annual Conference*, Cergy, France, June, 24–27.

Peck, C., Poyntz, S., & Seixas, P. (2005). 'Agency' in students' narratives of Canadian history. Paper presented at the *Annual Meeting of the American Educational Research Association* (Montreal).

Pettigrew, T. F. (1998). Intergroup contact: Theory, research and new perspectives. *Annual Review of Psychology, 49*, 65–85.

Pifarré, M., Argelagós, E., & Guijosa, A. (2010). Using the affordances of Wiki to support collaborative argumentation in secondary science education. In D. S. Beckett (Ed.), *Secondary education in the 21st century.* NY: Nova Publishers.

Reynolds, R. R., Taylor, M. S., Steffensen, M. S., Shirey, L. L., & Anderson, R. C. (1982). Cultural schemata and reading comprehension. *Reading Research Quarterly, 17*(3), 353–366.

Roschelle, J., & Teasley, S. D. (1995). Construction of shared knowledge in collaborative problem solving. In C. O'Malley (Ed.), *Computer-supported collaborative learning*. New York: Springer.

Salomon, G. (2004). A narrative-based view of coexistence education. *Journal of Social Issues, 60*(2), 273–287.

Seixas, P. (1993). Historical understanding among adolescents in a multicultural setting. *Curriculum Inquiry, 23*(3), 301–327.

Stephan, C. W., Hertz-Lazarowitz, R., Zelniker, T., & Stephan, W. G. (2004). Introduction to improving Arab-Jewish relations in Israel: Theory and practice in coexistence educational programs. *Journal of Social Issues, 60*(2), 237–252.

Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning. In K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* (pp. 409–426). New York: Cambridge University Press.

Suthers, D. D. (2006). Technology affordances for intersubjective meaning making: A research agenda for CSCL. *International Journal of Computer-Supported Collaborative Learning (ijCSCL), 1*(3), 315–337.

Van Drie, J., Van Boxtel, C., & Van der Linden, J. L. (2005). Historical reasoning in a computer-supported collaborative learning environment. In A. M. O'Donnell, C. E. Hmelo, & G. Erkens (Eds.), *Collaborative learning, reasoning and technology* (pp. 266–297). Mahwah: Lawrence Erlbaum Associates.

Wertsch, J. (1998). *Mind as action*. NY: Oxford University Press.

Wertsch, J. (2000). Is it possible to teach beliefs, as well as knowledge about history? In P. Stearns, P. Seixas, & S. Wineburg (Eds.), *Knowing, teaching, and learning history* (pp. 38–50). New York: New York University Press.

Wineburg, S. (2001). *Historical thinking and other unnatural acts: Charting the future of teaching the past*. Philadelphia: Temple University Press.