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IN POINT OF PRACTICE

Computer-Mediated Communication and Virtual Groups: Applications to Interethnic Conflict

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This essay represents the first in a series wherein an established scholar is invited to synthesize his or her program of research to offer practical applications.

This essay concerns applications of computer-mediated communication (CMC) research in groups toward the enhancement of relations between members of potentially hostile ethnopolitical groups. The characteristics of CMC offer several possible means of facilitating the reduction of animosity through online contact among intergroup constituents. The scatter of applicable findings across disciplines, and imprecision in theoretical appropriations, have inhibited advancement of applied research in this context. This essay examines findings from management, intergroup, and interpersonal approaches to CMC, and provides some examples, suggesting opportunities for synthesis and the development of starting points to design the arrangement of diverse online groups that may help reduce conflict among otherwise antagonistic members.

Keywords: Computer-Mediated Communication (CMC); Interethnic; Intergroup; Hyperpersonal

It is often the case that the objectives and situations encountered in applied research shed light on the gaps in theory and experimental research. To a researcher whose work has focused on identifying the conditions under which aspects of new technology foster improved relational outcomes in various settings (Walther, 1996), a touchstone

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application of these issues has become the employment of computer-mediated communication (CMC) in order to improve interethnic relations, particularly among Israeli Jews and Arabs. From this perspective, it appears that applied research demands a more synthetic approach to relational dynamics in online settings than the state of theory currently seems to offer. This essay attempts to examine and synthesize research from other, less charged settings, in hopes of stimulating original research that may take advantage of its synthesis and recommendations.

From its beginning, the study of CMC involved theoretically informed, applied research. Appearing primarily in psychology and management journals, early CMC research frequently focused on how the medium affects group discussions and decision-making. As the field evolved, it has frequently retained its focus on virtual groups in organizations, education, and other domains. Newer models and theories describing relational processes in groups and elsewhere have been part of this evolution. The hyperpersonal model of CMC, for instance, was developed to account for relational patterns in virtual groups as well as a variety of other settings. The model focuses on the manner in which CMC can facilitate relational communication that becomes more desirable than that which might be achieved in parallel, offline interactions (see Walther, 1996, 2007). Discussion of this model and other models have not been without tensions—claims and counterclaims about how best to account for various online phenomena—but these tensions have often been productive, and helped promote understanding of emergent technologies as they have come to be used in a variety of relational contexts.

A number of researchers have asked how the application of various CMC processes may improve relations in groups of diverse and potentially hostile participants, and whether such online encounters can affect changes beyond the local group, increasing empathy and reducing prejudice toward the groups' larger constituencies. Progress in this direction may benefit from judicious application of select theories and empirical precedents, but the research that bears on the strategic use of CMC for this purpose appears to be both fragmented and, at times, overly simplified. It is fragmented in that similar problematics and evidence-based solutions are scattered across disparate contexts and disciplinary constructs. For example, recent organizational research dealing with CMC and virtual teams has focused on "faultline" problems (e.g., Polzer, Crisp, Jarvenpaa, & Kim, 2006) and shared identity issues (e.g., Mortensen & Hinds, 2001), which has not yet been synthesized by CMC researchers in other areas.

Oversimplification has occurred in that some theories have been appropriated superficially, resulting in suggestions for the practical application of various positions that may not reflect actual theoretical specifications. There has also been an unfortunate tendency, particularly by social identification theorists, to reject interpersonal factors as potential influences in online groups, resulting in the dismissal of research that attempts to specify and integrate overlaps between group and interpersonal relations (e.g., Postmes & Baym, 2005). Consequently, researchers who focus on intergroup problems have paid little attention to findings about

variations in the usage arrangements of CMC use that promote interpersonal relationship development within groups.

Despite these problems, in various disciplines and applied areas, CMC research has generated a good amount of information about how groups of relative strangers can be coaxed into quite positive relationships. The challenge remains to integrate and synthesize the research in order to identify gaps, and ultimately propose strategies that facilitate the use of sociotechnical arrangements to overcoming animosity, and apply generalizable theoretically-based strategies in applied contexts of dire importance.

Why CMC?

There are several reasons that CMC might offer benefits in the reduction of interethnic hostilities which surpass face-to-face possibilities. In a practical sense, face-to-face contact is often not a realistic option. As Ellis and Moaz (2007, p. 293) reviewed, "Israeli Jews and Palestinians are trapped in an intractable conflict that makes face-to-face contact very difficult and sometimes dangerous . . . [But] in the past few years, there have been an increasing number of online discussions between Israeli Jews and Palestinians." CMC also offers the potential to focus collaborators on a task without seeing the physical features of their partners which would otherwise arouse stereotypes; as previously asked (Walther, 2004, p. 10), "In CMC, when the turban and the yarmulke need not be visible during interactions, can commonalities be made more salient than differences?"

At a more theoretical level, Amichai-Hamburger and McKenna (2006) have suggested that CMC affords opportunities to apply Allport's (1954) "contact hypothesis," in that prejudice can be reduced through interaction that allows participants to develop intimate interpersonal relationships with members of an outgroup. Research on offline intergroup contact has surfaced a variety of conditions that help facilitate prejudice reduction (see Pettigrew & Tropp, 2000), many of which CMC helps meet. For instance, CMC allows people to interact from the comfort of their own respective homes, which may mitigate the anxiety that often accompanies meeting members of other groups face-to-face (Amichai-Hamburger & McKenna, 2006). Likewise, contact is more likely to ameliorate prejudice when it occurs while participants pursue some superordinate goal, and abundant literature describes the use of virtual groups pursuing educational and organizational foci. One further qualification to the effect of interpersonal relations on intergroup prejudice reduction, argue Hewstone and Brown (1986), is the requirement that those involved in such interpersonal relations maintain cognizance that their new friend is a member of the outgroup, a point to which we will return later.

Despite these potentials, previous efforts using CMC to reduce Jewish/Palestinian enmity have garnered inconsistent results. In one case, Mollov (2006) facilitated online dialogues among Jewish Israeli and Palestinian students that focused explicitly on Jewish and Islamic religious practices. Factual learning about the groups' holidays increased for both groups, and postdiscussion attitudes about the exchanges were very positive. In contrast, online encounter groups focused on Jewish and Palestinian

groups' political concerns exacerbated culturally based argument styles that promote conflict (Ellis & Moaz, 2007; Moaz & Ellis, 2001). There are precedents from conflicts in other areas as well. Austin's (2007) review of CMC use among schools in Northern Ireland reports several successes and facilitative recommendations, although it does not speak to the kinds of theories or principles that readers outside instructional settings may seek. The results as a whole suggest that mere contact via CMC is insufficient to yield improvements in intergroup relations without the specification and management of other factors.

Promises and Problems in Social Identification and CMC

Visual Anonymity and Social Identification

Previous application of CMC to the contact hypothesis has suggested that the social identity model of deindividuation effects, or SIDE model (Reicher, Spears, & Postmes, 1995) offers principles that should facilitate the reduction of intergroup prejudice in online groups. SIDE argues that CMC's visual anonymity leads users to experience social identification with other online partners. CMC reflects social identity theory's (Tajfel & Turner, 1986) claims that when people see themselves more as part of a group than as an individual, they perceive ingroup partners as though they are equivalent and interchangeable. Intergroup comparison exaggerates similarity between oneself and other ingroup members, and magnifies differences between ingroup and outgroup members (Tajfel, 1978; Tajfel & Turner, 1979).

The SIDE model posits that the lack of visual individuating cues in CMC diverts individuals' attention from idiosyncratic characteristics of group members, depersonalizing perceptions, and making people susceptible to identification with whatever group is salient, whether an ad hoc activity group or some wider social category (Lea, Spears, & de Groot, 2001). These effects have been predicted to be even greater when participants are confronted with, or are aware of, ingroup/outgroup comparisons (Lea et al., 2001; Postmes & Baym, 2005).

The Downside of SIDE

Notwithstanding the numerous results that SIDE has generated in certain settings, several problems emerge with respect to the model's findings and conceptual orientation that make it difficult for applied research on intergroup contact and prejudice reduction. We return to the notion that for intergroup contact to reduce generalized prejudice, participants must remain cognizant that a partner is a member of an outgroup. SIDE research has frequently failed to support ingroup/outgroup effects. Experiments involving cues to contrasting nationalities, rival university memberships, or other relatively well-defined social categories in which participants were embedded and which were made salient in the course of a study, have not produced predicted intergroup/subgroup effects in many cases (e.g., Postmes et al., 2002; Tanis, 2003). For instance, Lea et al.'s (2001) groups did not experience the expected ingroup favoritism when English subjects were led (falsely) to believe that

some of their CMC partners were German. Only when experiments switched from actual human CMC interactions to the use of prefabricated scripts to represent the "other's" comments (e.g., Postmes et al., 2002) have these studies overcome the propensity for participants to relate as a whole.

SIDE research may appear promising if one interprets these null intergroup findings to suggest that CMC groups will achieve stronger ties than groups whose members see each other or their photos. Indeed, SIDE frequently shows that with very little prompting, visually anonymous online groups cohere better than groups whose members see each other or their pictures. It has been to this capacity of CMC that others have referred when considering the SIDE model's potential to foster solidarity in a CMC group comprised of otherwise distinct constituents (e.g., Amichai-Hamburger & McKenna, 2006).

However, most of the SIDE studies in which visually anonymous CMC groups achieved strong social identification generally did not employ groups composed of different offline constituencies, and it is not clear how well SIDE effects may obtain under such circumstances. Researchers must take care not to simplify whole-group identification findings as though they represent the potential of subgroups to overcome intergroup identifications. Moreover, among the few studies that did employ groups comprised of diverse subgroups, results do not clearly favor social identification rather than interpersonal dynamics, as SIDE proposes. Rogers and Lea (2004) attempted to reinforce social identification among groups comprised of English and Dutch students over several weeks. Although interpersonal attraction scores increased over time, social identification scores declined slightly. Another recent experiment demonstrated that when a subgroup member was prompted to enact very friendly or unfriendly communication within CMC groups, other participants evaluated the actor individually rather than temper their judgments on the basis of whether the actor was an ingroup or outgroup member (Wang, Walther, & Hancock, 2009).

Indeed, although social identification theorists often eschew the role of interpersonal factors in online groups, social identification dynamics may be most potent when they magnify or interact with interpersonal factors. For example, Walther (1997) employed English/American student groups who met for long-term or short-term associations—which triggers alternative interpersonal orientations—experimentally crossed by prediscussion social-identification or interindividual perceptual primes. An interaction of these factors affected group members' liking, group effort, and even ratings of their partners' putative physical attractiveness. Main effects of the group versus individual identification prime were not significant, and the interaction effects did not affect group attraction rather than interpersonal attraction scores. This example suggests that the greatest value of SIDE may lie at the intersection of social identification and interpersonal effects, but it does not reinforce the social identification approach strictly speaking.

Attraction in SIDE. The social identification tradition argues that social attraction differs from interpersonal attraction. Depersonalized interaction leads to social

attraction toward an abstract group prototype, in contrast to interpersonal attraction, which reflects the affinity between individual group members (see Lea et al., 2001). According to SIDE, CMC promotes attachment to a group as a whole. Thus, even if SIDE dynamics obtained in a group comprised of interethnic subgroups, it does not follow that the affective response would transfer to the individuals (or their constituencies) that comprised the subgroups rather than simply to the specific local group itself. For prejudice reduction, contact hypothesis research stipulates that interaction must foster both individual attraction among those who are involved in contact and awareness of the outgroup memberships of participants (Hewstone & Brown, 1986). Depersonalized attraction to the unique specific group or to some categorical ingroup as a whole seems not to fulfill either stipulation. In sum, it is not clear that the SIDE model alone offers the most fruitful theoretical approach to the applied concerns of improving relations among interethnic rivals in CMC groups. With what may it be complemented or synthesized?

Alternative Approaches and Alternating Orientations

Recent research suggests that CMC facilitates relationships when there is great within-group diversity rather than salient intergroup distinctiveness. Krebs, Hobman, and Bordia (2006) demonstrated that CMC mitigated a lack of trust among people of different ages relative to face-to-face groups. Using experimental groups with a variety of diverse characteristics among their members, they found a positive association between birthplace dissimilarity and trust in CMC, but not face-to-face groups. Although promising with respect to CMC groups overcoming members' diversity, Krebs et al.'s findings were obtained among college students at a single university rather than across divergent geographic locations or other identifiable subgroups.

A field study among virtual groups within geographically distributed organizations provides more dramatic findings about how diversity leads to cohesion across expected barriers. Mortensen and Hinds (2001) used conventional perspectives on the lack of nonverbal cues in CMC, and research in diversity and conflict, to predict that greater use of mediated communication, more demographic diversity, and increased geographic distribution all cause greater conflict and poorer performance in global, virtual teams. Contrary to these predictions, significant correlations indicated that (a) the greater use of CMC, (b) the greater the demographic diversity of the team, and (c) the greater the geographic dispersion of group members, the lower was the level of interpersonal conflict, and the greater was the groups' performance. It appears that the fewer things virtual team members have in common, the more its members bond around communication about their work.

Equally promising are the results of Polzer et al.'s (2006) study of conflict among CMC groups with different levels of "configural dispersion"—the degree to which members of a virtual group are distributed across locations, from six members in one place, to three members in two places each, to two members in three places each, to six members in six different locations, in online groups that completed several tasks

over seven weeks. They found that completely collocated groups experienced the least conflict, and that groups with two geographically separated subgroups experienced the most conflict, consistent with conventional notions of ingroup/outgroup hostility. However, although social identification might lead to even greater antipathy when one subgroup is outnumbered by two other subgroups, greater configural dispersion of subgroups rendered the opposite effect: Groups of six members divided into three geographic subgroups experienced less conflict than two-subgroup groups. Moreover, virtual groups whose members were completely distributed among six different locations experienced even less conflict. It is likely that ingroup/outgroup dynamics were so diluted among more and more subgroup locations that group members attuned to one another interpersonally instead. Regardless of identifications, it appears that an online group comprised of three (or more) subgroups has a greater likelihood of good relations than an online group comprised of two constituencies.

Interpersonal Effects in Virtual Groups

When intergroup perceptions do not occlude interpersonal factors, a number of variables that affect interpersonal relations within virtual groups come into play. These factors may be particularly valuable in addressing the contact hypothesis' requirement for the development of interpersonal relations with outgroup members in order to reduce intergroup prejudice.

Focus of Discussion

Efforts to encourage peaceful friendship through mere contact (see for review Kadushin & Livert, 2002), online or offline, may be more fragile if conversations focus on self-conscious intergroup differences rather than when they focus participants on some external topic, e.g., a superordinate goal under which to bond in their efforts. If CMC focuses on some task, it appears that participants get to know each other interpersonally in the messages that both conduct and accompany the task. In asynchronous task groups, over time, the content and style of CMC responses change, and participants also exchange off-task comments that facilitate interpersonal relations (Walther, 1995). A study that compared CMC dyads who were either instructed to get to know one another or to work on a decision task found that those with the decision-making task exchanged moderately deeper self-disclosures and personal questions than those who were instructed to get to know each other (Tidwell, 1997). It seems that having a job to do heightens rather than dampens CMC users' efficiency in learning about their partners. These findings suggest that focusing interethnic CMC groups on some external task may not only reduce attention to divisive intergroup differences but also promote interpersonal relations. As Austin (2007, p. 156) observed about the use of CMC in schools in Northern Ireland,

> ICT (Information and Communication Technology) is contributing to the broad citizenship agenda, both locally and globally . . . not by predetermining that joint work should necessarily be concerned with human rights, democracy or pluralism (though schools quite often choose to do this); it is rather that the structured use of

> ICT facilitates collaborative work, and the process of working together on a joint enterprise opens up opportunities for respecting difference and celebrating diversity.

Failure and Blame

Active direction is needed to avert the otherwise negative consequences that can result from virtual groups' likely initial problems. Working in groups is not easy under the best of conditions. Working online with strangers and adapting to the alterations in communication codes and timing that distinguish CMC from those of face-to-face groups often leads to coordination problems and suboptimal results, with potentially harmful effects on intermember relations. When problems occur, members of virtual groups tend to blame their remote partners, even for their own lack of involvement and poor performance (Walther & Bazarova, 2007). Research provides some antidotes to this proclivity toward scapegoating. First, by repeatedly cuing participants to look for external, situational issues that may affect colleagues' behaviors, dispositional attributions decline. Alternatively, as Walther, Boos, and Jonas (2002) explored, distributed, international groups fare better if participants are first provided an initial online experience involving only geographically colocated and previously acquainted partners. In this research, practice groups approached tasks similar to those which distributed groups would later undertake, and even though they could feasibly meet face-to-face, they were restricted to online interaction. When these colocated groups had problems, they were unable to scapegoat unknown remote partners, and were more amenable to guided reflection about their adaptation failures and methods for improvement. Subsequent sessions with distributed partners reflected more cooperation, greater effort, and more harmonious relations.

Time

A good deal is known about the importance of time in the development of online relations, and findings have been summarized in several sources (e.g., Walther, 2006). Briefly, it takes a longer time to learn about partners online than in face-to-face settings. Ad hoc, short-term online groups are infamous for insults and negative relations. Members of CMC groups get to know each other comparatively better, and like each other more, when they communicate over at least two tasks spaced out over at least two intervals or over three days (e.g., Hobman, Bordia, Irmer, & Chang, 2002; Wilson, Straus, & McEvily, 2006) or longer (e.g., Lee, Sim, Trevor, & Detenber, 2004). In asynchronous online interaction, timely responses to others engender positive interpersonal evaluations, whereas inordinate lags lower interpersonal assessments (Kalman & Rafaeli, 2008).

Interaction Patterns Can Be Managed

Several studies have identified communication patterns that lead to intermember liking, trust, and more effective group products. For instance, Weisband and Atwater (1999) found a correlation between the frequency of a member's task-related

messages and the degree to which other members liked the contributor in CMC groups, but not in face-to-face groups. Jarvenpaa and Leidner (1998) reported effects of communication on trust in global, virtual teams comprised of six to eight business students from universities in several countries. Analysis of the groups' six weeks of messages revealed that the most trusting and high-performing teams were sociable, exchanged intensely frequent messages, showed interest in other members' responses, showed initiative, provided substantive feedback to one another, and notified others of their expected participation periods or absences. Groups with the least trust showed little initiative and exchanged little social content. Groups with moderate trust levels had infrequent and primarily task-focused communication, with a disproportionate level of messages establishing rules and procedures.

Another study sought to determine whether such facilitative behaviors could be managed rather than left to emerge ad hoc. Walther and Bunz (2005) articulated six "rules of virtual groups" and assigned two of these rules to virtual groups comprised of students from two universities. Some groups were required to communicate frequently. Other groups were required to multitask, i.e., whenever a member posted a procedural suggestion s/he also had to post a message contributing content to a group research paper. Other groups were not required to follow any particular rule in developing their research papers, but all groups were encouraged to follow all six rules, including these: get started right away, overtly acknowledge others' messages, be explicit about what you are thinking and doing, and set deadlines and stick to them. There were clear grade incentives for members' adherence to a rule among those groups assigned one. Results showed that groups who were assigned to one of the rules observed all the rules to a greater extent than groups with no rule-following incentives. Moreover, the level of adherence to each of the rules produced very strong correlations with trust, self-rated performance quality, and (with the exception of one rule) outside evaluation of the quality of their work.

Multimedia

Despite the relative ease by which CMC users can now use video or photos to see one another, in addition to plain-text conferencing, there is no clear research-based support for exchanging participants' photos or videos. When virtual groups have no choices over which media they can use, their use of plain text conferencing achieves as much psychological closeness and satisfaction as do groups using multi-cue communication systems or face-to-face meetings (Walther & Bazarova, 2008). The ostensible benefit of visual cues is particularly low when long-term text-based collaborations are available and/or communication is primarily task-focused (Gergle, Kraut, & Fussell, 2004; Walther, Slovacek, & Tidwell, 2001). This is not to say that participants do not desire seeing one another, and may wish to Google or check Facebook for others' images. Indeed, seeing partners' photos does increase attraction and affection for short-term, single-episode distributed groups. However, distributed groups build more favorable impressions and relationships over time without photos, and seeing one another's pictures at later points can actually decrease attraction and

affection toward partners (Walther et al., 2001). The introduction of real photos operates as a violation of expectations (Ramirez & Wang, 2008). Contemporary Internet applications like Facebook readily facilitate photo exchanges, but elements in its environment can lead to distorted perceptions of its users. If a profile owner's friends' pictures are unattractive, for instance, the profile owner is perceived as less attractive (Walther, Van Der Heide, Kim, Westerman, & Tong, 2008), and if one's friends' "wall postings" portray a profile owner in unappealing terms, these comments have more weight than owners' claims to the contrary (Walther, Van Der Heide, Hamel, & Shulman, 2009). It may be that the occlusion of visual information allows virtual group participants to develop impressions of their teammates as both members of some other subgroup as well as individual colleagues, which Hewstone and Brown (1986) argue is critical for reducing prejudice.

Conclusions and Examples

The implications to be drawn from this review are that certain stylistic and functional forms and patterns of communication enhance virtual group members' interpersonal outcomes within groups comprised of subgroup factions. These behaviors appear to emerge ad hoc in some settings, but they are also subject to applied management by facilitators.

There is disagreement among scholars about the degree to which intergroup contact benefits the reduction of prejudice when relational dynamics shift from intergroup to interpersonal encounters. More research on the duality of identifications in interacting groups over time is needed, as well as the development and testing of strategies to promote beneficial multiple identifications across interpersonal and intergroup levels. Formative conceptual work has begun in Wright, Aron, and Tropp's (2002) initial development of self-expansion theory, but fully articulated models with practical applications to online settings await further development.

At the same time, applied research reflecting a number of the principles identified here has begun in Israel, with promising initial results. Hoter, Shonfeld, and Ganayem (2009) report on virtual groups they have implemented in hybrid online/offline educational technology courses. The authors of that report instruct student teachers in Israeli teachers' colleges, which are attended by religious Jews, secular Jews, or Islamic Arabs, respectively, constituencies which largely reside in separate geographical locales and attend different educational streams. "In the normal course of things," the authors report (p. 2), "students from different educational streams seldom have the chance to meet or interact."

Hoter et al.'s (2009) approach reflects that there are not two salient groups in Israeli society, but at least three, which allows their methods to capitalize on dynamics reflected in other, experimental research. There is significant antipathy between religious Jews and secular Jews in Israel, just as there is between these two groups and Arabs. Consequently, between the combined course enrollments among Hoter et al.'s courses, online groups of six students are comprised using pairs of students from each of the three types of college. These arrangements reflect the configural dispersion

findings from the Polzer et al. (2006) study reviewed previously, that six-member groups of two members from each of three locations produced less conflict than six-member groups with two subgroups of three members. They have expanded the scope to include nine colleges, yet each virtual group is comprised of six members who collectively represent colleges from three disparate religious orientations. The student-teachers in those groups work through a number of collaborative projects focusing on the pedagogical use of technologies in primary and secondary education, and they do so communicating via asynchronous computer conferencing and chat. Later in the term, they add videoconferencing and eventually a face-to-face meeting among participants.

Participants' qualitative responses to these experiences indicate that many of them form strong bonds with their fellow group members. Among their comments, they appear to value their newly developed empathy and look forward to the carryover they expect it to have in their own future assignments teaching schoolchildren. They also reflect awareness of the transformative capacities of Internet communication that allowed them to experience things differently. "As the course progressed, many participants emphasized the importance of the initial contact through the Internet, rather than face-to-face meetings, as this allowed them to feel less threatened . . . and enabled them to be more open and frank with each other" (Hoter et al., 2009). Thus, the research to date appears to reflect hyperpersonal dynamics and outcomes of CMC use in this challenging setting. Additional research is underway to investigate more formally the identification processes, impression development, and stereotyping change over time that accompany these apparent shifts in attitudes and relational states.

These examples and the accompanying suggestions are intended to support the application of virtual group arrangements involving contentious constituents, in educational contexts or on other tasks of members' interest. While such groups focus on topical issues, they may be coached into successful interaction patterns that improve relations, which may at some point become the focus of overt reflection. Research should continue to work in these directions: (a) to identify contingencies that affect relational dynamics in distributed groups which may apply to ethnopolitical adversaries, (b) to seek partnerships and additional knowledge among institutions or entities that are developing or sustaining online dialogues of this nature, and (c) to develop designs for the modification and study of such dialogues in hopes of both extending theory and achieving applied relational outcomes of immense potential importance. This work endorses the assertion that "social interaction on the Internet . . . has the potential to provide a basis for the creation of a more understanding and more accepting people" (Abdulla, 2007, p. 151), provided that online interaction reflects facilitative communication patterns. The challenge is to navigate the dangerous shores of (1) bland idealism that putting different people in online contact is sufficient to achieve positive relations, or (2) uninformed skepticism about the inability of Internet communication to foster meaningful relational adjustments.

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