

A safe space to vent: Conciliation and conflict in distributed teams

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Abstract: This paper considers the nature of conflict in relation to the environments within which distributed teams cooperate. Effective conflict management can bring great benefits to distributed teams, while inadequate conflict resolution strategies can incur significant personal and resource costs. The increased geographical, cognitive and emotional distances between members can stimulate and amplify conflict. Parties may display disinhibited behaviour (flaming) or may be reluctant to accept reconciliatory overtures (low trust). These factors can be attributed to the impact of communication technology on social structures that underlie interaction. Shifting to face-to-face meetings can be impractical or involve prohibitive cost, so it is important to establish how best to deal with conflict in technologically-mediated settings. Dispute resolution practitioners (conciliators) have evolved strategies and techniques to construct and regulate "safe-spaces"; settings that are conducive to finding creative solutions to entrenched conflicts. Building on interviews with expert conciliators, we discuss the potential for learning from the structure and constraints of conciliation environments in order to improve conflict management through technologies.

Introduction

Many interpersonal concerns affect people whose collective activities are supported by technologies. From time to time, conflict naturally arises in our dealings with others - it is a familiar part of the team experience. Friends and colleagues can boil over with frustration or anger, becoming prone to extreme outbursts of emotion. This 'venting' behaviour can have disastrous consequences for cooperative work, alienating colleagues and causing potentially terminal breakdowns in communication.

If managed effectively, conflict can be productive: team-members will improve their understanding of each other, plans may become more robust as problems are mitigated, and the team may develop strategies for dealing with future conflict. However, ineffective conflict management can compromise the team's activities: resources will be expended on servicing the conflict rather than constructively, on matters of value to the individuals and to the group as a whole.

Consideration of the setting and conditions of work, in terms of conflict management practice, can enhance co-operation. When people work together through technologies, such as email or videoconferencing systems, the factors introduced to conflict by mediating technologies must be accounted for. In this way, workable strategies can be formulated to maximize the potential benefits to teams and minimize the risks of negative outcomes. In this paper, we consider the connection between the environment created for people to cooperate and strategies that can help them to manage conflict.

We begin by describing conflict as an interpersonal process: how disputes arise and are perpetuated, along with strategies for their resolution. We then outline existing research that investigates characteristics of conflict through mediating technologies, to discover what strategies these theories propose for dealing with conflict in distributed teams. The paper goes on to consider the practice of 'conciliation', a rarified form of conflict management. This is used to outline strategies that practitioners use for resolving entrenched conflict. We then consider the question, 'how might conflict be managed in distributed teams?' Our investigation reports conciliators' experiences and concerns about their ability to deploy conflict-resolution strategies in a distributed environment. It also examines the way that conciliators' practice is affected by mediating technology. The findings of this investigation are used to provide guidelines for managing conflict in distributed teams.

Conflict and communication through technologies

Conflict is a natural periodic state of affairs to exist between people. The causes of conflict are complex and have been widely interpreted as: competition for resources, whether as remuneration or status (Deutsch, 1987); manifestations of power imbalances (Bush & Folger, 2005); or incompatible explanations of the other's behaviour (Winslade & Monk, 2000). However, it may be helpful to conceive of conflict as a process (Laue, 1987): conflict involves movement from the situational variables that create it, through behaviours that perpetuate it, to strategies for bringing it to an end.

Research in CSCW has shown that teams using computer-mediated communication systems face difficulties in managing interpersonal conflict. There is clear value in understanding how technologies might be used "to reach a solution that

preserves and builds relationships among group members" (Poole, Homes, & Desanctis, 1988, p. 228).

Early attempts to resolve differences of opinion using CMC focused on mechanisms for achieving consensus, and on excluding emotional issues. They relied upon the definition and imposition of schemes for structuring exchanges among parties (Flores, Graves, Hartfield, & Winograd, 1988; Poole, Homes, & Desanctis, 1988). Later work showed the difficulties in practice of formalizing collaborator states and actions. Attention has moved towards finding "malleable coordination mechanisms" (Schmidt, 1997, p. 142) that might serve as resources for situated action. Still more recently, the focus has shifted to defining constraints on the appropriation of collections of technologies as flexible support for collaborative work (Balka & Wagner, 2006; Dourish, 2003). It is necessary to create sociotechnical conditions within which teams can define their own norms for engagement through technologies. In terms of communication, technologies have been found to exacerbate interpersonal conflict and hinder conflict management practices (Hinds & Bailey, 2003). These findings demonstrate a need to move toward designing systems to support existing conflict management processes.

Conflict Management in Computer-Mediated Communication

Conflict encourages those involved to invest heavily in strategies that are designed to achieve their desired outcome and to mitigate the significance of their potential loss. This investment might be in terms of resources or of personal emotion. Once participants are heavily invested in a conflict, each tends to become committed to a particular defined outcome rather than exploring alternatives. Conflict is perpetuated by perceived power differences, necessitating an investment of resources in the outcome of the conflict.

To manage conflict effectively, these power and resource differentials need to be addressed (Coleman, 2000). Participants can then reach some lasting agreement as to the outcome of the dispute. This agreement, in broad terms, will be: recognition of dominance, avoidance, or resolution. In the dominance case, one party will accept that the other has been victorious, thus forfeiting their own invested resources, simply "cutting their losses". This outcome may result in resentment and hostility, potentially reducing the team's immediate operational effectiveness, undermining morale and sowing the seeds for future conflict.

Avoidance requires parties to the conflict to agree to disagree, or sidestep the conflict. These parties may still forfeit the resources they have so far invested and may have to work to avoid issues that trigger conflict. They will remain prepared to re-open hostilities should a similar situation occur. In a team setting, the potential for the problem to begin again depends on the centrality of the trigger issues

to collective objectives and also on the likelihood of parties encountering them in the lifetime of their collective activities.

Resolution is the third general form of agreement. Participants adopt a 'win-win' attitude to address their conflict. They identify shared goals and look at ways of pooling their resources to achieve this. To achieve a lasting resolution, parties will be willing to sacrifice some of the resources they have invested (Folger & Baruch-Bush, 1994).

The idea of a lasting resolution to conflict is the most appealing for the day-to-day running of teams, especially where there is a longer horizon for their collective activities. Resolution can be of positive benefit to the team, as hitherto unconsidered alternative plans and outcomes must be generated to move from the conflict stalemate. Jarvenpaa & Leidner (1999) found that one of the predictors of successful distributed collaboration was a "phlegmatic attitude to crisis" (p. 809). Teams that are able to manage crises such as interpersonal conflict are more likely to be successful. However, research into conflict in CSCW indicates that there are additional hurdles for distributed teams who wish to resolve conflict effectively.

Flaming

In a conflict situation, for one party to achieve their goal, others will be unsuccessful, thus forfeiting the resources they have invested. Awareness of this potential loss of resources further encourages parties to commit to a particular outcome. Behaviour may become more extreme as individuals seek to dominate or intimidate the other parties into capitulation.

Computer-mediated communication (CMC) has a propensity to escalate conflict, with less regulated emotional expression, or 'flaming', and greater polarization of opinion (Mabry, 1997). In this way, interpersonal communication can quickly become hostile and aggressive. Parties are likely to become entrenched in their position and a cycle of hostility will further escalate the conflict (Thomson & Nadler, 2002). If flaming has occurred, either on- or off-line, those involved in the conflict will have a negative view of the other, and will be disinclined to trust their intentions. This reduction in trust is further exacerbated when parties are interacting in a mediated environment.

Trust

Trust is constructed and experienced differently in distributed teams (Bos, Olson, Gergle, Olson, & Wright, 2002; Olson & Olson, 2000). Research shows that trust in others is reduced when parties do not perceive themselves to be co-located. This can result from a lack of personal information about the other party, or from the perception of a large social and geographical distance between parties.

The general reduction of mutual trust presents another problem for managing conflict in distributed teams. Their investment in a specific outcome at the ex-

pense of the other (and their perception that the other is committed to an outcome that will disadvantage them) will reduce their willingness to risk forfeiting these resources by trusting the other party. So, in situations of conflict, trust is already at risk. If the communication medium serves to further reduce trust, it will be difficult to encourage parties to engage in strategies designed to reduce conflict

To understand how these properties of technological environments can impact upon conflict and conflict management processes, it is necessary to consider more carefully those theoretical accounts that attempt to explain the roots of CMC effects.

Theoretical accounts of CMC effects

Researchers have examined the effects of CMC on relationships in both organizational and informal settings. Accounts of these effects focus on what the salient and significant aspects of communication might be, and how the presence of mediating-artifacts might impact upon them. All argue that the most compelling differences are to do with social information, not with objective matters (Spears, Lea, & Postmes, 2000).

Social Cues and Social Information

Early explanations of CMC effects, often referred to as ‘cues-filtered-out’ models (Culnan & Markus, 1987), focused on differences in the capacity of mediating technologies to carry social cues. The notion that CMC restricts the transfer of cues is associated with reduced social sensitivity. Specifically, this includes a reduction in interpersonal warmth, an increase in uninhibited behaviour, and more extreme attributions (Hancock & Dunham, 2001).

Studies also report a reduction in the ability of CMC systems to deal with uncertainty and ambiguity, and proportionally more task-focused talk. The reduced opportunity for leveraging social cues makes it hard to handle contentious communication. Conflict may be exacerbated by undetected misunderstandings, fewer opportunities to repair misunderstanding, and less effective attempts at repair, all feeding a spiral of increasing mistrust. They are also likely to encourage misunderstanding by reducing contextual information that parties may use to build common ground, enhance feelings of anonymity and reduce a sense of accountability.

However, these ‘cues-filtered-out’ models fail to adequately explain how social information might be leveraged to manage something as emotionally intensive as conflict.

Relational CMC

More recently, the emphasis has shifted from cue-transference, to the relational impact of CMC systems (Walther & Parks, 2002). Findings show mediated rela-

tionships to be: less socio-emotionally oriented; less inhibited (Joinson, 2001), and more prone to conflict escalation and risky behaviour (Thomson & Nadler, 2002). Conversely, CMC can encourage self-disclosure (Joinson, 2001); allow greater control over self-presentation (Walther, Loh, & Granka, 2005); and can helpfully reduce uncertainty (McKenna, Green, & Gleason, 2002).

CMC effects are likely to be moderated by: familiarity between the participants (Holton & Kenworthy-U'ren, 2006); user experience of various combinations of communication channels (Burgoon et al., 2002); and duration of joint activity and anticipation of future interaction (Walther, 1994).

Thus the specific impact of CMC on particular disputes may be highly variable. Where parties are heavily invested in a particular outcome, the situation cannot be characterized just in terms of technology effects and hence the success of conflict management is hard to predict without controlling relational factors.

Strategies for Managing Computer-Mediated Conflict

All accounts of the effects of CMC point towards conflict management problems for distributed groups. They attribute difficulties to: a) reduced social information; or b) an unpredictable interaction between the presence of the medium and a host of other variables. Therefore, existing models of CMC suggest that, for effective conflict management, it is necessary to move communication to: a) a richer communication environment; or b) a more predictable interaction of variables. Both of these recommendations would point toward face-to-face (FtF) communication being the most appropriate environment for conflict management.

However, given the nature of distributed teams, the costs and disruption associated with shifting conflict to a FtF setting may be difficult or impossible to bear. Team members may have little option but to attempt to deal with conflict through available technologies, such as in large and voluntary collective enterprises like Wikipedia (Kittur, Suh, Chi, & Pendleton, 2007). It would be of benefit to those who operate in CSCW teams to build a deeper understanding of the way in which communication can be managed under duress. In our attempt to understand how conflict management processes operate in a technological environment, we need first consider how conflicts can be managed effectively. To this end we examine the work of conciliation professionals.

The setting of conciliation

Conciliation is concerned with the resolution of entrenched conflict and revolves around the use of strategies for managing conflict. It introduces an impartial, and non-judgmental, third-party into a conflict situation (Wall & Lynn, 1993). All manner of circumstances will lead people to seek this kind of intervention, from employment disputes and community grievances, to marital breakdown. In each

case, they are acting in response to conditions which have made "unmediated" communication extremely difficult. The conciliator represents a medium for communication between parties, the intervention of which is intended to help them find a mutually acceptable resolution to their conflict.

Conciliation usually takes place with all parties co-present and in a carefully arranged setting. Conciliators have no vested interest in outcomes, nor do they have enforcing powers on any agreed outcome. They may not pass judgment on the behaviour of the parties in dispute. Their intervention is limited to influencing the progression of the dispute through their expert use of language and deep understanding of conflict processes (Kressel, 2000). Their reputation for impartiality and behaviour within the conciliation process provides the conciliator with their mandate for controlling the exchange: it is not a mandate for setting the agenda of the dispute itself. This mandate enables the conciliators to take the initiative in response to the situation. Their use of techniques and strategies is specifically designed to position themselves so that they may most effectively help parties resolve their conflict.

Reflection and positioning within a conflict

Conciliation is a practice-based discipline. Initial training may involve lectures and discussion, but the main focus is on the development of skills through practice. This has led to a tradition of role-play in conciliator training and development. Role-play and rehearsal are central to the practice both for ethical reasons and to promote reflective self-awareness. Throughout their career, conciliators are expected to continue training to improve their practice. This often takes the form of role-play or observations. The focus on practice and continual development encourages conciliators to think reflexively about the way that they deploy their skills and the impact that they have in a conflict. The techniques deployed by the conciliators are themselves designed to create an environment in which parties are encouraged to reflect upon and reposition their actions and attitudes. The aim of this reflection is to allow the conciliator to exercise reframing strategies that encourage parties to think about the conflict and the other party in new ways. They re-present information at intervals, serving as an active record of the key steps in transforming the conflict. The distance between the two parties is progressively reduced, encouraging a willingness to share or relinquish some of the resources invested in a particular outcome.

Conciliation settings, strategies and techniques

Conciliators begin by structuring the physical environment and preparing parties for the conditions they must observe whilst engaging in this special form of communication. These strategic preparations are used to create a safe space in which parties feel free to express themselves without fear of committing to an

outcome. Secondly, they work to improve communication, by encouraging parties to listen to what the other is saying and address their own behaviour. Thirdly, they encourage parties to recognize the other's interests. The techniques used by conciliators to pursue these ends include: 1) reframing - subtle changes in the language used invite parties to view situations and behaviours from a different position, thus encouraging parties to move from their heavily-invested positions; 2) control over the floor or the topic - this ensures that irrelevant power differences between the parties can be mitigated to ensure that any agreement reached is fair; and 3) demonstrating listening behaviour - this encourages parties to be open and honest about their interests, desires and resources. It also encourages them to 'vent', which in turn helps them to feel as though their concerns have been heard. Before deploying these techniques, conciliators reflect on the situation, drawing on their experience of conciliation practice to decide when it is necessary to shift from one to another.

In this section, we have argued that conciliation involves the creation of a setting in which communication may be structured in particular ways. We consider that conciliation functions as a kind of mediation environment or setting. Parties for whom trust has been seriously undermined are given mechanisms for coping with lack of trust. These include the opportunity for emotional venting, by altering the nature of communication exchanges in a way that is distinct from their communication in the 'real-world'.

Studying conciliation in CMC conflicts

It is apparent from CMC research that, in situations such as conflict, the effects of the medium are likely to be profound. The changes in interactivity, the paucity of social cues or information, the increased physical and cognitive distance, are all likely to exacerbate conflict. For a conciliator, the impact of these properties of the communication medium is likely to be a reduction in the efficacy of their practice - their ability to reflexively assess the appropriateness and impact of techniques and strategies may well be distorted by the medium.

Conciliation has a successful track-record in transforming entrenched conflict into a manageable form of dispute. We wanted to assess the potential of mapping the structures of conciliation settings into technological mediation settings. This would help to uncover ways in which properties inherent in a technological environment can be leveraged to aid conflict management processes. To this end, we report an investigation of the potential for adapting conflict management techniques and strategies to distributed environments. First, we discuss professional conciliators' experiences and concerns about the use of CMC in their practice. We then describe how a highly experienced conciliation professional followed up their interview by conciliating two conflicts using a video-mediated communication system.

Conciliator experiences and attitudes

Twelve expert conciliators practicing in the UK were interviewed as part of a study to develop a Grounded Theory of conciliation (not reported here). Grounded Theory (Glaser, 1978; Glaser and Strauss, 1967) is a qualitative method which does not presuppose any theoretical assumptions. We adopted this approach because it is suited to the development of formative accounts of phenomena of investigative interest. Analytic categories are developed with direct reference to the data gathered by the analyst, guided by the principle of parsimony. Relationships between these categories are used to develop a theory about the phenomenon under investigation.

All subjects are active professional conciliators, together representing more than 90 years' experience in conflict resolution practice. Between them their experience covered the majority of domains of conciliation (family, community, neighborhood, business, domestic violence, victim-offender, employment, divorce). In the UK, videoconferencing is not currently used by professional conciliators. However, telephone and email communications are used extensively to manage cases and are incorporated into dealings with clients at each conciliator's discretion, and with the express agreement of the clients concerned.

Method

Interviews were semi-structured with open-ended questions. These aimed to elicit their concerns and goals with regard to the process of shifting conflicting parties out of entrenched positions. Questions also prompted interviewees to provide grounded (case-based) accounts of the various techniques they apply in their conciliation practice. We asked them about their motivations in deploying the techniques they described, and their reflections on the impact of the technique in question. They were specifically asked for their views on the way that mediating technology might affect their conciliation practices.

Analysis

The interviews ranged from 30 minutes to 90 minutes in length and were conducted over the telephone or in person at the participant's place of work, depending on geographical and time constraints. Each interview was transcribed and the transcripts subjected to an analysis in accordance with a Grounded Theory method. Our intention was to construct an account of conciliator concerns about the use of mediating technologies, based on the identification of common concerns. In this way, conciliators' comments about the use of technologies were grouped into three separate categories: 1) use of cues; 2) moderation of presence; 3) experience differentials.

1) Use of cues for inferring underlying concerns

All conciliators raised the issue of non-verbal cues for conflict management. The ability to detect and to draw out the implied meaning and inter-party significance of literal statements is a central element of the conciliator's work. Conciliators must have confidence in their ability to properly reflect these underlying meanings in their own use of language, to acknowledge and "surface" the concerns of each party. Conciliators are adept at deciphering the relationship between what is said, how it is said and what is left unsaid. This assessment then influences the strategies and techniques that the conciliator chooses to deploy.

Conciliators rely on various cues and gestures to infer understanding and to communicate information. In conciliation, this is a reflexive activity: the conciliator must monitor what one party does, what the other does in response, and how the first party consequently moderates their behaviour, all in relation to their own conciliation activities. Responses from the conciliators indicated that this was dependant upon having all of the behavioural information present in the interaction. CMC was perceived to reduce the transmission of significant social cues, and would therefore have an impact upon their practice, as the following quotations demonstrate:

The lack of gestures and body-language make it difficult to understand their true meanings . . . you have to keep checking that they understand. (Conciliator 10: 13 years' experience)

There may be a loss of body-language . . . It may also be hard for one party to see the effect that their words have on the other party. (Conciliator 9: 4 years' experience)

Conciliators discussed the way that CMC distorts or retards the transfer of cues. The specific worry for conciliators was that this potentially restricts their ability to demonstrate listening behaviour, encouraging parties to reflect upon their own behaviour. Without this reflection, parties will fail to recognize how they are presenting themselves and are understood by the other side. Self-recognition and rebuilding a viewpoint on the conflict are critical for moving towards a productive outcome. Any threat to reflection is potentially serious as it is the basis for parties to move from their heavily-invested positions.

However, by the same token, retardation of the process can be viewed as having some potential for positive effects. The asynchronicity of text-based conciliation can positively encourage reflection before parties communicate.

The time lapse may mean that clients will reflect on their response, or provide a considered response. (Conciliator 7: 13 years' experience)

A more considered response may prevent parties from reacting destructively in the heat of the moment. If the medium encourages reflection, and the conciliator is able to instigate reframing strategies, the conflict may be progressed.

This observation contrasts with the 'flaming' literature, and may be explained by the lack of anonymity that exists in established distributed teams and the kind of conflict that would arise in such situations. This paper is concerned with conflicts amongst people who know or have some established and demonstrable rela-

tionship with one another. The dynamics of accountability are very different in these situations than for those who only know one another as a collection of nicknames in cyberspace and without consequence beyond it.

However, it is interesting to note that there is a relationship between qualitative experience of social cues and the degree to which the conciliator is able to encourage reflection. In a face-to-face setting the conciliator is able to encourage direct and explicit reflection, alongside 'venting' behaviour. In a cues-filtered-out environment, such as text-based communication, reflection may also occur, but the conciliator is less in control of its duration and focus. This raises concerns for conciliators about the appropriateness of the use of CMC in certain disputes. To successfully leverage the reduction of cues afforded by technology, it will be necessary to consider the stage in the conflict management process at which CMC technologies might be deployed.

2) Moderation of presence

The second concern reported by conciliators is a reduction in presence or a sense of being there. One of the aims of conciliation is to develop a working relationship between parties. When people are in conflict, they will tend to have a very polarized view of the other. The conciliator will seek to alter this by encouraging parties to view each other in fuller, more social terms. This requires a sense of presence. The conciliators interviewed for this study believe that there is something inherent in CMC that reduces this sense of presence and thus impacts on their role.

When parties are together in a room . . . responsibility is on people in the room, you are saying 'these are your problems' . . . they need to take the decisions away and make them work . . . [in the real world] they must learn to deal with each other. (Conciliator 5: 20 years' experience)

The conciliator must encourage parties to view each other as social individuals. This then encourages them to listen to the other parties' concerns and consider the impact of their own actions upon them. Without the ability to engender presence, the parties may remain distant, and not be encouraged to work toward a shared resolution. Conciliators felt that there was something significant in the parties committing to meet together in the same room that enabled them to practice conflict resolution. The lack of presence engendered by CMC could inhibit parties from developing the level of commitment necessary to engage in the difficult, but necessary activities of reflection. This is echoed by:

"It's a little bit safer on video – you haven't got so much to lose." (Conciliator 1: 9 years' experience).

However, conciliators also indicated that, in some instances, a reduction of physical presence is beneficial or even necessary. In situations of high-conflict or extreme power differentials, such as domestic violence, "shuttle mediation" is used by conciliators for precisely this reason. The sense of distance engendered by CMC may create a useful environment for encouraging parties to communicate.

It might be a useful tool for kick-starting the process . . . if there is something getting in the way of parties coming together [for example] threats of violence. (Conciliator 6: 13 years' experience)

So, level of presence may be something that conciliators are able to deploy to alter power differences in useful ways. The relationship between power and presence is something which is not prominent in the CMC literature but which conciliators have indicated is highly salient for conflict management strategies.

3) Experience and power differentials

Conciliators discussed the effect of differences in level of experience and familiarity with conflict environments. The effective use of CMC systems requires a skill set that may not necessarily be assumed as equal for all parties. Conciliators must address any power differences that are hindering parties from reaching resolution. They felt that experience differentials of CMC have a significant potential to skew these power differences in unpredictable ways. Those more familiar with the medium might be more comfortable with the changed body language, or other differences to FtF communication.

People can hide behind technology . . . they are adept at presenting themselves through technology. (Conciliator 3: 6 years' experience)

Similarly, the environment in which they are situated for the interaction also may distort the conciliator's practice. Conciliators try to bring the disputants together in neutral territory, and exercise control over who is able to attend. This ensures that the conciliator is highly aware of all of the stakeholders and determinants of conciliation with which they must contend. Differences in the communication environment bring with them the risk of divorcing the conciliator from this degree of control. They do not know who might be 'off-screen', or on which resources the parties might be drawing in their local environment.

The presence of others also changes behaviour . . . [the conciliator] does not know who's off-camera. (Conciliator 4: 3 years' experience)

From this, it is evident that the use of CMC results in a change in the information that the conciliator is able to use. This increases their uncertainty about the reasons behind parties' behaviours, making it difficult for them to accurately predict or ascertain the motivations behind an individual's observed behaviour.

Here we can see that the introduction of uncertainty can exacerbate concerns about power and experience differentials. For effective conflict management, conciliators require an awareness of the salient power differences in the interaction. They then attempt to address these in a way that encourages parties to use them cooperatively rather than competitively. If the conciliator is uncertain about those resources the parties possess and have invested in a particular outcome, they will be unable to confidently address these differences. This uncertainty may erode parties' trust in the conciliator to effectively manage the conflict.

Implications

CMC is likely to have a very real impact on the identification and resolution of conflict in distributed teams. The above examples demonstrate that conciliators are reluctant to use CMC for their practice because of its unpredictable effect on communication. Conciliators need to be sure that they are able to deploy their strategies and techniques in an effective manner. The issues they raised echo findings in the CMC literature, but with an important difference that connects propensity to flame with accountability that extends beyond the mediation environment. CMC can be instrumental in altering power differentials. It can also affect the availability and interpretation of social cues, inhibit parties from fostering a sense of presence, and exacerbate communication problems such as misunderstanding or misattribution. In normal circumstances, these may have an impact on the way that participants co-operate. In groups where there is a high potential for conflict, these traits of the medium are likely to have a significant affect on the ability of the group to manage their co-operation effectively.

Perhaps one of the more interesting findings about the conciliators' perceptions of CMC is that it could foster both positive and negative behaviours in conflict. They suggest that properties of CMC that may cause difficulties in one situation may be constructive and beneficial in others. The primary factor, moderation of presence, can have positive or negative consequences for the both the conciliator and for conflict management. This is congruent with relational accounts of CMC, but with a twist: too much presence can be destructive.

However, it appears that the impact of CMC technologies is more complicated than simply exacerbating existing tensions. These findings of the interview-study go beyond some of the existing CMC theories. They offer novel insights into relationships on three levels: social information and reflection; presence and power displays; and uncertainty and power differentials. Control over the availability of social information is instrumental in promoting effective reflection. Control over presence makes it possible to moderate displays of power such as physical intimidation and dominance behaviour. Uncertainty must be responded to so that parties do not retrench into their initial power-differentiated positions.

Follow-on study: Adaptive video-mediated conciliation

The findings from the above interviews suggest that a number of factors combine to shape the way parties in conflict respond to one another, notably the ability to moderate presence, to resolve uncertainties, and the opportunity to reflect on the ongoing conversation. The operation of each of these factors is linked to a recognized element of conflict management processes: interpretation of social information, display of power and moderation of power differentials. All three must influence the way that the conciliator deploys, and parties react to, conflict management techniques and strategies. Our interview data was limited in terms of the

insight it could offer on how these factors dynamically interact. We wished to gain insights into how an experienced conciliator might dynamically adapt her practice to deepen our understanding of the expressiveness, presence and control categories of action. To this end, we augmented our interview data by setting up two special video-mediated role-play sessions with one of the conciliation professionals who had participated in our interview study.

Setting and method

We installed a small multi-party video-mediated communication (VMC) system between three separate and sound-isolated rooms. The system used a dedicated LAN bridge to connect three personal computers running Apple 'iChatAV' full-screen on 17" monitors. Sessions were recorded directly from iChatAV via a third-party application.

Two role-play conciliations were performed. As discussed earlier, it is important to note for the validity of this investigation that role-play is a familiar and established element of conciliator practice and continuing professional development. Professional actors were employed to play the conflicting parties in order to mitigate the possible effects of using the role-play method. The role-plays differed in terms of the content and intensity of conflict (low and high conflict). The actors prepared for their roles with character descriptions and a story briefing. The conciliator had over 12 years' experience in a variety of conciliation domains and is considered expert within her community of practice. She trains new conciliators and runs professional development courses, as well as serving as a conciliator in a variety of domains. She is used to operating in unfamiliar environments and to reflecting on the effects these have on her practice.

Each role-play was run by the conciliator as they would a 'normal' conciliation within a 40-minute meeting slot, but an interview followed each session.

Analysis and findings

The conciliator's post-session remarks were cross-compared with statements under the analytic categories derived from our interview study. Audio transcriptions were prepared from the iChatAV recordings and used to contextualize these remarks. A report was prepared to summarize them and then sent to the conciliator for validation. The report identified differences between conciliator perceptions of the medium and their experiences. We noted those changes that conciliators could not overcome, alongside those which added advantages to the conciliation process. The conciliator felt she was able to take steps to adapt to the limitations of the medium, and even to use its properties to her advantage. Quotations are taken from the post-session interviews.

She found it difficult to understand parties' intentions due to the reduction or distortion of social cues. The conciliator drew attention to the way that the medium hindered her ability to identify and create a shared understanding between

parties. She “didn’t trust parties’ understanding so much”. This statement reinforces our earlier observation that parties must be able to agree that they have understood something and that additional conversationally relevant actions serve to compliment and confirm this understanding. The conciliator was concerned that there was “nothing else to convey understanding”, again reflecting the importance of cue usage to ensure that parties are developing an appropriate understanding of the conflict and of each other.

This finding is important because it opens up the nature of uncertainty as a multi-faceted problem in conflict. Uncertainty applies to the immediate understanding of the specific points each party is making. It also applies to the uncertainty with which they make their points, i.e. the degree to which they might be prepared to shift their positions. Furthermore, it applies to the global understanding of the degree to which trust among parties has been re-established. From the conciliator's viewpoint, it is necessary to be clear about degrees of uncertainty because they are material to progressing the conflict.

Similarly, the conciliator felt that it was: “not as easy to make things visible”. In this instance, 'visible' is not to do with video but about raising the salience of issues in the discussion. The conciliator had difficulty in drawing parties’ attention to various aspects of the interaction or process that would help to move parties through the conflict. A technique she used was to suggest that certain issues be temporarily sidelined, allowing the focus of the dispute to move in a more productive direction. She felt that parties did not trust that the issues they had raised would be dealt with later, inhibiting her use of this technique. In the video transcript, a participant continually raised an issue despite advice to move on. In an FtF setting, the participants may have seen the conciliator make a note of the points as they were raised. Without this information being conveyed, parties may feel that they are becoming lost in the issues, and be unable to know when an understanding has been reached. This offers one way that the limitations of the medium can be overcome – through explicitly verbalizing her actions.

For the conciliator, this affects their practice. They can no longer be sure that a participant is reverting to an issue because it has suddenly become salient, or if they feel that it has been forgotten and they wish it to remain on the list. In this way, CMC can distort trust in the understanding that parties feel that they share. This combination of effects forced the conciliator to: “have to spell out what was understood.” In situations of conflict, parties may be reluctant to expend the effort to do this, stalling the dispute. However, by the same token, an impetus to make certain points in the process explicit could be helpful. Rephrasing to promote reflection on the framing of the conflict is absolutely central to the business of discovering creative resolution perspectives.

The conciliator also discussed the presence theme. The medium’s ability to engender an appropriate level of presence has a direct impact on their role, in terms of the control strategies they deploy and the emotion experienced by the other

parties. In this study, the conciliator felt that the presence of the medium reduced the propensity for parties to start 'venting', i.e. uncontrolled emotional outbursts. Venting is considered to be an integral part of conflict resolution, provided that it occurs in a controlled environment. If parties do not feel that the medium engenders a suitable degree of presence, they will not feel engaged with the other and therefore be disinclined to start 'venting'. The conciliator adapted to this in terms of the control strategies she used to engage the parties and to draw out their concerns. She reported that her interventions were perceived to have a greater effect. When parties did begin to vent, "the level of conflict ramped up quickly". However, once the conciliator deployed conflict management techniques, the conflict "settled down much quicker than expected". This demonstrates that the conciliator's techniques may have more of an impact in a technologically mediated environment.

A conflict management technique for situations of high-conflict, is to "get them [the parties] to talk directly to you [the conciliator]", including establishing mutual gaze. In doing this, the other party gets to hear how their actions have affected someone else, without it being viewed as a direct threat. It is a presence moderation technique for use within an FtF setting. In VMC, if someone talks directly to the camera, both parties will have a sense that they are being directly addressed, since they both 'share the same eye' in the form of a single camera. This makes it difficult for one individual to directly address another individual in this way. Therefore, it is likely that the social cues appropriate for interaction with the conciliator, rather than the other party, will be more salient. Parties are unlikely to vent *directly* at the conciliator, so will be less likely to vent overall.

Despite the difficulties reported above, and given the adaptive responses to manage the interaction between parties, the conciliator's overall view of the process was that it was: "not as hard or as different as I thought it might be. It wasn't wildly different." This does not invalidate the concerns raised in the interview study but suggests that managing conflicts through technologies is a matter of refinement rather than an entirely alien process. The changes we observed demonstrate that the conciliator was able to alter her practice to moderate the impact of the medium. In other words, the strategies and techniques deployed by the conciliator can translate to a CMC environment.

The hyperpersonal model of CMC (Walther, 1996) argues that a reduction of social information attunes parties to the cues that they do receive, and consequently makes them 'work harder'. The conciliator's interventions are intended to reinforce parties' perceptions of one another as legitimate social agents. According to the hyperpersonal model, the individuating strategies employed by the conciliator should have a greater impact, because of the lack of contradictory information. However, it may be that parties to a distributed conflict will have 'further to go'. If the conflict has arisen or been conducted on-line, then instead of a hyperpersonal relationship, the parties may have developed a 'hypercritical' rela-

tionship: the reduced social information that they have received during the conflict has led to parties developing and reinforcing a negative picture of the other. This increases the importance of effective conflict management at an early stage.

Extrapolating from our investigation, we can say that the use of conflict management techniques could be more effective in environments where social information is sparse. However, this suggestion must be tempered by the conciliator's concerns about the degree to which any settlement would be lasting. The conciliator was concerned that their control techniques led to a general 'lack of venting'. If indeed they were unable to vent effectively, feelings of frustration would follow that they hadn't been able "to have their say". Venting certainly seemed to work differently compared to the conciliator's experience of other role-plays and in other settings.

Our investigation indicates that there is potential for elements of strategies and techniques employed by a conciliator to be utilized in distributed team settings. However, the concerns raised by conciliators about the impact of CMC on their practice are significant. The evidence suggests that attempting to translate these practices to the new setting requires a combination of the unique properties of CMC and special organizational facilitation in terms of the status and progression of conflicting talk. We now turn our attention to the implications of our investigation for helping to manage conflict in distributed teams.

Discussion

Technological mediation can exert a powerful influence on conflict processes. Distributed collective activity can be conducted in formally constituted teams or informal groups of people with common interests. In either case, members must work to create sociotechnical settings for their communications. These settings must be conducive to establishing outcomes that are consistent with their concerns. In this paper, we have addressed the particular challenges that people face as they attempt to manage conflict in such settings. Our discussion has framed conflict management as a part of the additional effort to be expected when working in collaborating groups. As such, we have focused on the process side of conflict; namely, the necessary conditions and strategies for moving from states of outright hostility through to some form of agreement.

Accounts of media effects broadly suggest that an appropriate response to conflict is to shift to 'richer' media, or to abandon mediation altogether in favor of familiar FtF confrontations. However, distributed individuals who are engaged in collective activity are often obliged to cooperate within the constraints of the media at their disposal. We have argued that much can be learnt from conciliation professionals about managing conflict. Conciliators focus on the conditions that come together to create an effective setting for contentious communication to take place. The limits of "more bandwidth" as a solution are all too apparent when

even the gold standard of co-present communication is insufficient in itself to resolve conflict. We have shown how conciliators work to create a setting for finding resolutions. For conciliators, a setting is at once a safe, neutral space and also a platform to exert control and direct attention towards new accounts of antecedent behaviour and so to new possible outcomes.

For distributed teams, the main challenge is to create a setting that properly fosters attention on what and how things are said, even when they are said harshly. The setting must support the tentative process, exposing values and finding mutually satisfactory new perspectives on the power and resources at stake. Accountability must be preserved so that confidence is built in proposed actions. However, the way in which accountability is preserved must be selective: judgment must be reserved and delayed sufficiently to disambiguate emotional and objective statements. Individuals need to communicate their concerns and depth of feeling to others, to feel that these concerns have been properly acknowledged. They can get more frustrated and entrenched in their positions when they can't actually let their anger out. "Venting" is necessary but comes with the attendant risk that it will amplify the antagonism of other parties unless the setting is designed to cope with the legitimacy of emotional outbursts.

Being on- or off-record is an organizational decision, not a product of technological design. Mediating technologies can always be used to create a record of communication, whether the value of communication history has been a central design concern (as with email) or is more of an afterthought (as with instant messaging). This suggests a tension in technology choice: in high conflict, conciliators say that venting is most productive when it is off-record, but conciliators also say that parties have an equal need to take time to reflect on mutual positions and values. We are confident that in extreme cases, it would be beneficial to make use of an access-controlled and separate communication environment to that used for other team communication. The very fact of its separateness could underline the special status of things that are said within, i.e., in an invite-only chatroom. We are less confident about the politics of migrating a dispute, where the dispute has emerged in a 'normal' channel but must be moved across to a nominated 'safe space'. Migration would at least require the explicit agreement of the conflicting parties. There are significant challenges still to be met in understanding how relational communication can cope with the generation and usage of technological expressions of dissent and confrontation. More research is needed to see how to preserve relevant emotional and accountable context whilst maintaining the safety of the safe space, in order that productive reflection on statements and records of talk may take place.

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