

## Concern Alignment in Consensus Building Conversations

**Yasuhiro Katagiri**

Future University Hakodate, Japan  
katagiri@fun.ac.jp

**Katsuya Takanashi**

Kyoto University, Japan  
takanashi@kyoto-u.ac.jp

**Masato Ishizaki**

The University of Tokyo, Japan  
ishizaki@iii.u-tokyo.ac.jp

**Mika Enomoto**

Tokyo University of Technology, Japan  
menomoto@media.teu.ac.jp

**Yasuharu Den**

Chiba University, Japan    Advanced Institute of Science and Technology, Japan  
den@cogsci.l.chiba-u.ac.jp    yosuke.matsusaka@aist.go.jp

**Yosuke Matsusaka**

### Abstract

A picture of conversational consensus building is presented based on the idea of concern alignment, where individual preferences and values are incrementally and mutually adjusted between conversational participants. An analysis of concern alignment in conversation data on the topic of group travel planning is presented in terms of presentation, evaluation and modification of individual concerns.

### 1 Concerns in consensus building

Consensus is a part of common ground created in dialogues (Clark, 1996). Research on grounding has mainly been concerned with process of information sharing (Clark and Schaefer, 1989; Traum, 1994; Bunt, 2006). Common-sense picture on consensus building distinguishes two components (Wikipedia, ): the process of seeking and reaching an agreement and the process of ‘seeking and establishing group solidarity of beliefs and sentiments among participants.’ A shared plan with its concomitant idea on division of labors is the central focus in the former, whereas negotiating values and preferences of participants constitute the latter. Success in establishing group solidarity is often important in working out reasonable compromises.

We call individual values and preferences of conversational participants as their *concerns*. For example, in the case of choosing a restaurant for dinner with your partner, you might propose a sushi place Jiro in Tokyo, because you are interested in Michelin starred restaurant experience. Your partner, on the other hand, might be partial to Italian foods. So, you have a concern for good reputation, whereas your partner has concern for cuisine types.

### 2 Dynamics of concern alignment

Concerns are presented, evaluated and adjusted incrementally in the process of consensus building. These incremental steps function as a preparatory process for the core agreement making, as they set the stage for the exchange of proposals to be considered by establishing a common ground among participants on their relative evaluative attitudes toward possible proposals. Incremental concern alignment also contributes to the maintenance of group solidarity, thereby providing collective motivational support for the consensus outcome.

Following dialogue functions can be distinguished for the purpose of concern alignment.

**Presentation** Each participant expresses their concerns by introducing issues to be considered in working out the contents of agreement.

**Question** Participants may solicit other participants to express their concerns by questioning them, particularly in situations where participants have socially determined asymmetric roles such as purchase transaction dialogues.

**Evaluation** Concerns, once introduced, are subject to evaluation by other participants. They can be ignored, or positively/negatively evaluated. Concerns positively evaluated will likely be promoted to the aligned status, or be subject to further elaboration. Concerns negatively evaluated, as well as those ignored, will be demoted and dismissed unless modifications are presented.

**Contestation-elaboration** Participants may modify the concerns by elaborating or countering them in an attempt to find a better alignment or a reasonable compromise among participants.

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*C* Then, you know, how about camp? Did you do camping recently? It wasn't overnight stay, was it?

*G* No overnight.

*C* You pitched a tent?

*E* Yes.

*C* Is it OK? Is it OK for you, *B*?

*B* I can't stand it.

*C* Absolutely out for you?

*B* Well, maybe not absolutely, if I can bathe, then I will be fine.

*C* Oh, OK.

*G* Usually there's a hot spring in such places.

*C* Is it right?

*E* I would prefer a clean place.

*B* Clean place?

*E* Sometimes, there are lots of bugs and such in a toilet.

*B* Whoa, I hate it.

*E* I can't stand that. I, too, hate bugs.

*B* Just walking with a flashlight, and bugs come suddenly out of nowhere.

*D* Whoa, I hate it. I hate it.  
...

*C* OK, then, we should go for booking a lodge.

*E* Yeah.

*C* No tent, maybe a cottage.

*G* Cottage, they should be super clean, maybe.

*C* Yeah.

*G* A cottage has everything, like TV, fridge, ..

*E* That would be wonderful.

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Figure 1: Instances of question, evaluation and modification of concerns.

**Respect** Once a reasonable set of concerns are worked out, participants indicate respect for those concerns by making concrete proposals to be considered for an agreement.

### 3 An analysis of incremental processes in consensus building

We analyzed 30 min video recordings of a multi-party conversation, in which 3 male and 3 female Japanese university students are discussing on a plan for out-of-school lab seminar in summer. Audio-video capture was done by a multi-party conversation capture device MARC(Asano and Ogata, 2006).

Fig. 1 shows an example flow of concern alignment through introduction, evaluation and modification of concerns. First, Speaker *C* introduces a concern 'camping' in the form of a question, which is then countered with a negative evaluation 'I can't

stand it' by *B*. However, when contested with a further inquiry 'absolutely out for you?' *B* elaborated on the concern 'camp' with another additional concern 'bath.' Then, Speaker *E* added another concern 'a clean place (no bugs),' which is enthusiastically supported by several participants, *B*, *D* and *E*. In view of these additional concerns and their evaluations, Speaker *G* finally comes up with a further elaborated concern 'book a super clean cottage in a camp place,' which is supported by *C* and *E*.

This development of concerns is a process of integration of concerns presented together with their evaluations expressed by various participants. Through this negotiation process, participants adjust their views with each other on the relevant concerns that should be taken into account in order to work out a reasonable agreement

### 4 Fostering trust

Enfield (2006) pointed out strong relationship between informational and socio-affiliational functions of common ground. Significance of the process of concern alignment lies in that it creates cumulative histories of both fulfilled instances of expectations. The expectation that others will recognize and respect one's concerns, the expectation that others will select actions that respect one's concerns, and the expectation that those actions will succeed in establishing the intended effects. These expectations are the driving forces for fostering trust among dialogue participants.

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