

# Negotiation for Concern Alignment in Health Counseling Dialogues

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## Abstract

‘Concern Alignment in Conversations’ project aims to elucidate interplay between rational agreement seeking and affective trust fostering in conversation. The project is based on empirical analyses of real life conversation data in medical counseling domain, and development of computational models.

**Trust-related dialogue acts:** Identify dialogue acts performed by conversational participants that contribute to ‘affective solidarity.’

**Agreement/Trust interrelationship:** Identify relationships between rational agreement seeking and affective trust fostering.

**Mapping:** Devise a mapping between surface linguistic acts and trust-related dialogue acts.

## 1 Introduction

Conversational interactions in real life, in many cases, are purported to form a consensus on something among conversational participants. Consensus can be conceived as a formation of shared commitments on certain choice of future joint actions by a group of people. However, process is as important as outcome in consensus-building. Consensus decision making process should be collaborative and participatory so that ‘consensus seeks to improve solidarity in the long run’ and participants ‘shape it into a decision that meets the concerns of all group members as much as possible’(wikipedia, ). This affective process, which eventually leads to fostering of trust, is in parallel with the rational process of seeking agreement. ‘Concern Alignment in Conversations’ project aims to elucidate this interplay between rational agreement seeking and affective trust fostering processes in conversation, based on analyses of real life conversation data.

## 2 Research issues

**Descriptive concepts:** Identify the descriptive concepts needed to adequately capture the processes in which conversation participants work together to promote ‘affective solidarity.’

## 3 Concern alignment model

We picture a consensus decision-making process as consisting, conceptually, of two parts (Fig.1)(Katagiri et al., 2011; Katagiri et al., 2012). First, once a group of people are placed in a situation in which they need to make an agreement on their joint course of actions (*issues*), they start by expressing their value judgments on properties and criteria on actions each considers significant (*concerns*). After they share their concerns, they start proposing and negotiating on concrete choice of actions (*proposals*). When we decide on which restaurant to go for lunch, we first discuss on what restaurant properties we put most priorities, e.g., price, location, cuisine etc. We, then, start talking about actual restaurants.

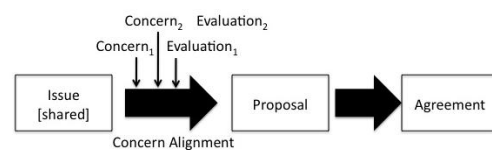


Figure 1: A schematic diagram of the concern alignment process

## 4 Dialogue data & analysis

### Data

We chose dialogues in medical counseling sessions where people diagnosed as obese (metabolic syndrome) see expert nurses to get advises on their daily life management. Screening and counseling for obese people have been mandated by the Japanese government, and counseling services are now regularly offered by many hospitals. The patients are often reluctant to follow nurses' advices, and it is important for nurses to establish rapport with patients to enforce their advices. We have collected a total of 9 sessions, about 5 hours of dialogues on video. All the sessions were transcribed.

### Analysis

We have observed several dialogue acts for concern alignment.

**Concern introduction:** Since an issue has mostly been shared in our setting, e.g., deciding on plans to counter the patient obesity, nurses and patients express their concerns in the form of broad category of actions to take, e.g, whether to reduce calorie intake, to increase exercise, to stop smoking or to rely on other methods.

**Evaluative responses to concerns:** Once a concern is introduced, the interlocutor expresses a positive or negative evaluations of it. The expression can be either linguistic or non-linguistic. Negative expressions often take the form of expressing conflicting concerns.

**Incremental alignment:** When a concern is positively evaluated by the interlocutors, they can now proceed to discuss more concrete proposals based on the shared concern. When a concern is negatively evaluated, they have to negotiate. The negotiation often takes the form of focusing, e.g., introducing a related but slightly modified concern. Figure 2 is an abbreviated excerpt showing a focusing type incremental alignment, in which initial concern of 'eating less' was rejected by a counter introduction of 'bicycle,' which is modified by 'commute,' which leads to a proposal of 'bicycle commute.'

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- A Body weight reduction, reduction of fat, is effective in many cases. So, you should consume about 230 kCal a day, maybe, by eating a little bit less than now, I think.
- B Uh huh.  
...
- B I hear people talk about walking, but how about bicycle?
- A Bicycle is of course fine. ... Do you ride a bicycle?
- B Well, not much exercise. I commute by car.
- A Uh huh.
- B I wonder how long it takes on foot to my office.  
...  
It takes more than 30min., so I think it's a bit too much for commute.
- A Yeah, Well, it'll getting cooler
- B Yeah  
A in the morning and at night.
- B It would be nice if I can exercise by bicycle, maybe.
- A Yes. Do you get back home early or late?
- B It's late.  
...
- A Then, if it's OK for you,
- B uh huh
- A how about bicycle
- B Bicycle
- A commute?
- B I think I will try bicycle commute.
- A Yeah, that will be good.
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Figure 2: Concern alignment by focusing.

## References

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