

Lydia Ould Ouali¹, Charles Rich² and Nicolas Sabouret¹

¹ LIMSI-CNRS, UPR 3251, Orsay, France
Université Paris-Sud, Orsay, France
{ouldouali, nicolas.sabouret}@limsi.fr

² Worcester Polytechnic Institute
Worcester, Massachusetts, USA
rich@wpi.edu

1 Interpersonal relationship

Social relationship and its effects on behavior lies at the heart of social science. It was proved that understanding interpersonal relationship is crucial for social cognition [3]. Most of the literature that get interested in the conceptual analysis of interpersonal relationship have agreed that the essence of relationship appears in the nature of interaction that occurs between relationship partners. Moreover, social relationship is a dynamic system that may develop and change continuously over interactions [3, 4]. Communication between relationship partner will grow in stages from the initial interaction where partners share superficial information to a more deeper relationship where partners can share more personal information. Therefore, the social relationship of partners affects their behavior and their strategy of dialogue.

2 Representation of interpersonal relationship

The aim of this section is to relate the work of N.HASLAM who get interested on the mental representation of social relationship. In summary, there are three different representation in the literature.

The first is the dimensional representation. It is the most common representation that consists on represent relationships in a dimensional circle (c.f wiggins model). Therefore, any relationship can be situated and valued in this *continuous* dimensional space.

The second representation is the lawful representation. Laws are defined in the same circle's dimension of affiliation and control. The main difference with the dimensional representation is that laws try to make discrete prediction about the other behavior. For each behavior, complementarity and symmetry make discontinuous prediction about the the other interact behavior.

Finally, categorical representation make a discrete prediction on which kind of social relationship are well performed. In addition the categorical representation focus only on local prediction (prediction in a small region within a dimensional scheme).

Dimensions	Laws	Categories
Continuous	discontinuous	discontinuous
Local	Global	Local

2.1 Dimensions of interpersonal relationship

The definition of dimensions was widely studied under different labels. However, we distinguish four dimensions that are always used for the representation of interpersonal relationship.

Dominance and power Scholars from different fields converge to define power as the ability to influence the other behavior [4]. Power may be latent (Komter, 1989), which is in contrast with the definition of dominance which is inevitably manifest (Dunbar, 2004). It is an asymmetric variable in which one interactant's assertion of control is met by acquiescence from another (Rogers-Millar & Millar, 1979).

Familiarity In Svennevig's relational model [4], the definition of familiarity is based on social penetration theory (Berscheid and Reis, 1998) which describes the grades of relationship evolution through mutual exchange of information both in depth (superficial information to personal and intimate information) and breadth (from narrow to a broad range of personal topics).

Affect This dimension represents the degree of liking that have one interact for the other. This dimension allows interactants to create personal attachment and improve the relationship of interactants [2]

Solidarity The solidarity dimension is in the opposite of power dimension. It is a symmetrical dimension where two individuals share equal obligations and rights [4]. It is identified as like-mindedness [1] where interactants have the same behaviors and share for example the same preferences.

2.2 Dialogue utterances

The first utterance is related to the expression of preferences. One of the behaviors that shows up during the last experiment is that depending on the role of individual in relationship, he will introduce a discussion on preference in a particular way. For example, a powerful person will explicitly talk about its preference. In the contrast a submissive person or individual that shares affect will ask the other if he shares the same preferences.

- StateStrongly.Preference(*Pref*): I really like *Pref*!
- State.Preference(*Pref*) : I like *Pref*
- Ask.Preference(*Pref*) : Do you like *Pref* ?
- Propose.Preference(*Pref*): I think that *Pref* would be great.
- ProposeStrongly.Preference(*Pref*): *Pref* is the best choice for you.
- Accept.Preference(*Pref*): Okay, let's choose *Pref*.
- AcceptStrongly.Preference(*Pref*): Yes of course. *Pref* is a great choice.
- reject.Preference(*Pref*): Sorry, I would choose something else.
- AcceptStrongly.Preference(*Pref*): I really don't like *Pref*. I'd rather prefer something else.

References

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