

Intention Retrieval with a Socially-supported Belief System

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Abstract. This paper proposes a dynamically-changed knowledge system. Each belief in the system has a component reflecting the strength of support from other people. The system is capable of adapting to a contextual situation by means of the continuous revision of belief strengths through interaction with others. As a paradigmatic application of the proposed socially-supported belief system, a parser was designed and implemented in CLOS. The parser outputs (a) speaker intention, (b) conveyed meaning, and (c) hearer's emotion.

1 Introduction

A language user's belief structure is one of the important cues for 'proper' utterance interpretation. In this paper, we defined the belief structure as a knowledge structure with a degree of subjective confidence. To understand an utterance 'properly' means to infer 'as exactly as possible' what the speaker intends to. Of course, contextual information is also important to proper utterance interpretation. However, we often cannot properly interpret utterances even when provided with considerable contextual information. Reference to the belief structure enables an utterance's meaning to be properly interpreted with little or no reference to the situation. For example, when the speaker utters "*This dish tastes good.*" there are possible interpretations for the hearer, such as "*Father thinks mother has cooked a good meal and praises her.*" or "*A man thinks the restaurant has served a good meal and requests one more.*" To retrieve the speaker's intention, the first interpretation is automatically decided in the speaker's mind by referring to his/her belief. In analyzing such phenomena we focus on the role of each language user's belief structure and propose that the belief structure is built up by reflecting the other people's beliefs through social interactions.

2 How to Treat the Proper Context

Although contextual information is considered as essential for utterance interpretation in traditional pragmatics, the problem how the hearer infers the appropriate context of