atypical, and improbable. The conflict can appear only after a thematic analysis (cf. Chapter 11). Such an analysis can take the beggar as theme and locate him either outside the property of having money (*not F*) or inside it (*F*). There is a manifest logical incompatibility between the two terms.

However, doing a thematic analysis of the situation is not enough to create a cognitive conflict. What is also required is that the terms of the conflict should have a degree of necessity. The necessity of a term *F* is the propensity of the subject to believe or desire *F* at a particular moment.[2] In the case of the beggar, the perception and the associations it brings to mind are strong enough to confer significant necessity both to *F* and to *not F*, thus setting up a cognitive conflict. In a model which I recently proposed (Dessalles 1998a), a cognitive conflict is represented thus: $(F, n_1) \uparrow (not\ F, n_2)$. The arrow represents the incompatibility and n_1 and n_2 represent the respective necessities of *F* and *not F*. The incompatibility is a consequence of thematic segmentation; but the conflict is experienced because n_1 and n_2 have significant values. We may define the intensity of a cognitive conflict as the product $n_1 \times n_2$. Thus, if n_1 or n_2 should happen to have a negligible value, the conflict disappears even though the incompatibility persists. This is how the search for solutions to cognitive conflicts is conducted.

15.3 The recursive nature of argumentation

Resolution of cognitive conflicts

The argumentative mode would not be a conversational form in its own right if it depended solely on the identification of cognitive conflicts. Argumentation, so widely practised by conversing human beings, grows out of the participants' collective efforts to find a solution to the cognitive conflict that they share once a subject is raised. To understand what it is in the biology of human beings that impels them to share cognitive conflicts

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[2] The 'necessity' is related to the idea of propositional attitude, which is used particularly in philosophy of language. However, the idea of necessity is richer than that, since it includes the idea of truth, which many philosophers of language see as ontological rather than epistemological and which they therefore exclude from any cognitive approach such as the one concerning propositional attitudes.