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Individual differences in cognitive processing of interdependency information. The influence of social values on the cognitive processing of information in interdependency situations and the reflection on the temporal aspects of decision-making.
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Summary

The present thesis describes research on the influence of social values on the cognitive processing of information underlying decisions in interdependency situations. The research is based on the assumption that the cognitive processes are reflected in decision times.

Chapter 1 introduces the interdependency situation by means of a real-life example. In this example, as in many other interdependency situations, the decisions in favour of own private interest are incompatible with the decisions in favour of the whole community. Situations like these are referred to as social dilemmas. Social dilemmas can be rationally approached from an individualistic or from a collective perspective. Individuals' own definition of rationality determines the value they attach to the various behavioral alternatives. These values govern their behavior.

Chapter 2 provides a description of social values and their assessment procedures. Social values or preferences for particular distributions of outcomes for self and other (McClintock, 1972) are defined by the weights individuals allocate to own and other's outcomes. The most commonly occurring social values are cooperation, in which positive weights to both own and other's outcomes are allocated, individualism, in which positive weights to only own outcomes are allocated, and competition, in which positive weights to own outcomes and negative weights to other's outcomes are allocated. Social values can be assessed on the basis of decisions in decomposed games. In these games individuals are assumed to weigh and to transform the given outcomes of the available alternatives into effective outcomes. Their decisions are based on these effective outcomes (Kelley & Thibaut, 1978), and reflect their social value. Given this transformation process it is assumed that individuals' social value influence the cognitive processes underlying decisions in interdependency situations.

Chapter 3 is focused on these social value related cognitive processes. First, prior research on cognitive processes in interdependency situations is described. Next, a short overview on research using response latencies (RLs) as a methodological tool to investigate individuals' cognitive processes is provided. This research clearly suggests that the social value related cognitive processing of information is reflected in RLs. Two models are outlined to explain the social value related RLs found by Liebrand and McClintock (1988). Both assume an influence of the transformation of the given outcomes and the nature of decision problems. The first model provides a pure cognitive explanation for the social value related temporal aspects of decision-making. This model assumes increasing RLs for cognitive processes with increasing

complexity. The second model provides a cognitive motivational explanation, and assumes increasing RLs for outcome distributions with decreasing utilities.

　　　Chapter 4 describes an experiment which tests the first model: A pure cognitive explanation for the social value related temporal aspects of decision-making. In this experiment RLs are registered for the performance of the arithmetic computations assumed to underlie the decision processes of individualists, cooperators and competitors. The experiment provides support for the transformation model. It demonstrated that performing the individualistic simulation took less time than performing the cooperative and competitive simulation. The experiment also demonstrated that RLs were influenced by the social value associated arithmetic computation and the sign of the digits. The results however deviated form the RLs as a function of social value and sign of outcomes in the Ring Measure of Social Values (Liebrand & McClintock, 1988). It is concluded that a purely cognitive explanation for the social value related temporal aspects of decision-making is not sufficient.

　　　Chapter 5 concerns a test of the second model, the cognitive motivational explanation for the social value related temporal aspects of decision-making. In three experiments the influence of social values on RLs are examined, making decisions in interdependency situations. In these experiments, the Ring Measure of Social Values is employed (Liebrand, 1984). The first experiment concerns the reliability of the social value construct and the RL effect. The second and third experiment investigates the generality of the RL effect across presentation of combinations of own and other's positive and/or negative outcomes and across the signs of own and other's outcomes (all positive vs. all negative). As predicted, RLs were shorter for individualists than for cooperators and competitors. Also the predicted interaction between social value and outcome distribution was observed. Cooperators' RLs increased as their joint outcomes decreased, individualists' RLs were longer when own outcomes were negative rather than positive, and competitors' RLs were longer when they were outcome disadvantaged rather than advantaged relative to other. These findings are consistent with the cognitive motivational expectation that (1) the transformations associated with differing social values require differing cognitive processes, and that (2) RLs are longer in avoidance-avoidance conflicts, in which the utility of the transformed outcome distributions decreases.

　　　Chapter 6 investigates the robustness of these RL effects. An experiment is described on the influence of the strategic analysis of Prisoners' and Chicken dilemma's containing positive and/or negative outcomes. The experiment showed that individualists' RLs were as long as those for cooperators' and competitors'. This finding is in agreement with the hypothesis that the importance of the strategic determinant of choices is social value dependent. Furthermore, longer RLs were observed when the situation should be perceived as an avoidance-avoidance conflict, in which the utility of the outcome distribution decreases. The effect for social value and outcome distribution on RLs however did not fully agree with the effect found in Chapter 5. The results suggest that other's control on the final outcomes influences the perception of the conflict. It is concluded that other's influence provokes an accommodation of utilities. This accommodation requires an accommodation of the

cognitive processes, which is re
decision-making.

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processes is explained by th
concludes by discussing the
some suggestions for future

cognitive processes, which is reflected in the social value related temporal aspects of decision-making.

Chapter 7 is centred on the type of influence of the other and the accommodation of utilities. Prior research has demonstrated that other's social value provokes an asymmetric assimilation of behavior (e.g. Kelley & Stahelski, 1978). In the experiment described in this chapter RLs are employed to investigate whether this asymmetric assimilation of behavior reflects an asymmetric persistency of social values. The results support the predictions. Cooperators as well as individualists assimilated their choices to others choices. This assimilation was also reflected in their RLs. Against prosocial others cooperators' and individualists' RLs increased for decreasing outcomes for both, but against nonsocial others both groups had shorter RLs when own outcomes were positive rather than negative. Competitors on the other hand did not assimilate their choices. Their preoccupation with the competitive aspects of the interdependency was reflected in their longer RLs for distributions in which they were outcome disadvantaged rather than outcome advantaged, regardless of others' choices It is concluded that the asymmetric assimilation of behavior is due to an asymmetric assimilation of utilities, and that the resulting asymmetric assimilation of the cognitive processes is reflected in RLs. The results on the ratings of other's behavior were consistent with previous findings (Liebrand et al. 1986). They provide additional evidence for the assumption that the cognitive processing of information is social value dependent.

In Chapter 8 covers a further examination of the most important results. The evidence for the cognitive motivational explanation for the social value related temporal aspects of decisions making and the support for the transformation model is evaluated. Furthermore, the influence of the strategic aspects inherent to the mutual control and of the varying perceptions of the choice situations due the mutual control is discussed. The asymmetric accommodation of behavior related utilities and associated cognitive processes is explained by the perceived reason for other's behavior. The chapter concludes by discussing the implications of the findings in the thesis and by offering some suggestions for future research.