

## Impact of and interaction between behavioural and economic decision support in electronic negotiations<sup>1</sup>

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### ABSTRACT

Mediation is an important extension of the traditional negotiation procedure for conflict resolution. It focuses on the support of the negotiation process in very conflicting negotiations without determining the outcome of the negotiations. Mediation has been shown to have positive effects on the rate of agreement as well as the satisfaction with the outcome in face-to-face negotiations. While mediation is a behavioral approach to support negotiators, the linkage of exchanged offers to distinct utility values represents an economic approach to support negotiations. The specification of user preferences allows among others the use utility values, the evaluation of feasible alternatives, the interpretation of the agreement space and the assessment of potential agreements.

While utility values have already been successfully used in electronic negotiation support systems, electronic mediation has not been implemented by now in such electronically supported negotiations.

We therefore aim at investigating (i) the acceptance of behavioral support in electronic negotiations and (ii) the effect of and interaction between economic and behavioral support on e-negotiation process and outcome dimensions. We conducted two empirical studies in which we combined the use of an electronic negotiation support system – *Negoisst*– with an e-mediation system – *vienNA*.

In a pilot study 130 subjects engaged in anonymous and asynchronous bilateral online negotiations. To test the acceptance of such an electronic expert system, users were free to use *vienNA* whenever they needed additional support. The pilot revealed a tendency that users of e-mediation indeed reach better agreements. Moreover, the expert system seems to be most effective when used in an early stage of the negotiation process. However, negotiators were actually reluctant to refer to the online expert system.

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Therefore, we conducted a follow-up study with 224 subjects in the winter term 2010. In this study we combined these two systems in four treatments differing in their availability of economic and behavioral support. Furthermore, this time subjects in a treatment with *vienna* were forced to use the mediation system at least once. While first results show only small difference in terms of agreement rates between these four groups, we can detect several differences due to the provided support. Subjects without economic support showed different communication behavior. Moreover, both approaches had an impact on objective negotiation outcome measures. While for example the use of the behavioral support showed a positive effect on the efficiency of the negotiation outcome, the economic support increased fairness in the final outcome. This difference in the support was also reflected in the post-negotiation questionnaires.

These first results already show that different philosophies in the support approaches have a major impact on objective as well as subjective dimensions of the negotiation process and outcome.