Guy Hoffman
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A Reading of
David G. Sullivan et al.'s
Intention Reconciliation in the Context of Teamwork:
An Initial Empirical Investigation

"Intention Reconciliation" describes simulation experiments performed on a population of rational agents working together to achieve a common goal. The research investigates the incentive of abandoning a team activity in favor of an individually motivated activity.

The experiments are structured around a team of agents working together on a group activity. This activity is defined as a set of tasks that is distributed between the agents, based on a variety of factors, such as availability. One important factor for task assignment is the reliability of the agent to perform a task based on its history within the group. This factor is herein called "Social-Commitment".

Decision making is based on an agent's incentive both based on its personal gain and its part in the group gain or cost. Forward estimation is also used in decision making.

In short summary, it is shown that the "Social Commitment" factor influences the average number of defaults in the group and increases overall income. This is to show that social commitment is a considerable positive factor in teamwork.

Personally, I did not find this paper particularly inspiring, and although the topic of social commitment is central to teamwork (in particular in humans), I hardly found an important contribution towards machine collaboration in this work.

Task scheduling as defined in Sullivan's paper seems to be a somewhat arbitrary angle of the collaboration problem, and the particular question of defaulting to a different activity is outright irrelevant to most scenarios of machine teamwork. I believe incentives to be more of a human-related field of study.

In addition, the model proposed is not very good: a group is not automatically negatively affected by an individual's default; using a rational forward expectancy based on the actual score is artificial and somewhat circular; and furthermore I did not understand the motivation behind varying the task density. More generally, I don't think simulations are the best tools to investigate real-world interaction scenarios.

Most importantly, though, the model for social commitment doesn't really capture what I understand to fall under that term. Social commitment is a central factor in teamwork, but task distribution based on reliability is only one, and probably not the optimal model for this concept.