

A Reading of
Michael E. Bratman's
Shared Cooperative Activity

Bratman's paper sets out by defining the features that constitute Shared Cooperative Activity (SCA). These are: *mutual responsiveness*, *commitment to the joint activity* and *commitment to mutual support*. The author then continues to try and characterize what sort of actions and intentions on the agents' side will result in SCA.

First, an agent needs to have an intention favoring the joint activity. Secondly, this joint activity must be characterized in cooperatively neutral ways (a distinction that I find somewhat superfluous). Next, Bratman adds *meshing of subplans* to the equation: the SCA is intended in accordance with individual subplans that mesh. Finally, a condition of communication ("It is common knowledge between us") and of mutual support is added.

The idea of mutual support is, naturally, a fragile one, since it encompasses cases in which mutual support comes in exchange for executing one's own subplans. Bratman chooses to modify his demand for mutual support to one of *minimally cooperative stability*, indicating that there is a commitment to help in some cooperatively relevant circumstance.

Bratman's deep excursions into semantic philosophy are forgivable, since he does raise some very important issues. Personally, I do not subscribe to the view that one can intend someone else's actions, but admittedly this might be simply a phrasing difference. The issues the paper raises should just be viewed as they are, rather than trying to define them precisely. With that in mind, I found the following ideas extremely valuable (and in a way they are three aspects of the same requirement):

1. Mutual Responsiveness - and, of course, the communication that this demands. Adjusting one's actions and intents according to changes in the collaborator's actions and intents is crucial to joint activity. These changes must be communicated and detected.
2. Mutual Support - to me this is an extension of the above. It is a sub-case in which one will take on actions that have as their sole purpose the support of the other agent's intents.
3. Meshing of Subplans - This is not only important as a pre-requisite for SCA, as put in the paper, but is a very important factor in the dynamic maintenance of SCA, adjusting the subplans in a way that they still mesh, even after external and internal factors change the current state of affairs.