

A Cooperation-Based Account of Social Scientific Knowledge

Scientific research is a group activity, and more specifically a *truth-oriented* group activity. Although social epistemologists have often claimed that scientific knowledge is a social construction, has also been suggested that the social dimension doesn't affect scientific knowledge (Goldman 1999). Bird's (2010) recent work is an example of veritistic social epistemology.

According to Bird, knowledge entails truth and is defined by the role it plays within the subject's cognitive economy, namely the role of input in and output of cognitive processes. The proper subject of social knowledge is a group. The composition of the group to which knowledge is attributed is determined by the functional integration between its members. Each member of a group, until she is functionally integrated in it, can properly say to know everything that is part of the group's social knowledge. Scientific research, as long as it is a group activity, results in the production of social knowledge.

While I agree with the veritistic approach endorsed by Bird, and with the epistemic relevance he attributes to membership, I criticize some aspects of his analysis, in particular the functionalism he endorses. More precisely, I show that the functional analogy doesn't account completely for the relation between social and individual knowledge, by demonstrating (a) that functionalism and Bird's argument against supervenience can't be consistently endorsed and (b) that social knowledge, by its functionalist definition, requires individual knowledge in its production. Then, I observe that Bird attributes to non-cognitive functional integration an epistemic relevance, and I argue that this attribution is unmotivated. These remarks show that Bird doesn't clarify why social relations have the epistemic power to make others' testimonies good evidence for individual knowledge of a particular statement. However, once we accept that social elements influence knowledge attributions and deny that scientific knowledge is nothing but a social construction, we have to explain why, and how, social relations such as membership of a group, can affect epistemic attributions.

My proposal is that the social relation of membership has an epistemic relevance because of a *shared intention* which holds together the group.

The notion of shared intention to which I refer is the one developed by Bratman (1992; 1993) in his research on cooperative joint actions. Scientific research is a joint action, and I also argue that it is cooperative in Bratman's sense. According to Bratman, cooperation is constituted by (1) the intentions of the individuals toward meshing subplans, (2) their realization and (3) a disposition to help.

My thesis is that this disposition toward mutual support binds together the members of the group, and that in truth-oriented activities mutual knowledge of this disposition gives epistemic relevance to membership.

In presence of a shared intention, the efficacy of other agents' actions is part of each agent intention and so each agent has a rational pressure to help the others, to act so to facilitate the realization of their subplans. In truth-oriented activities, one is committed to telling the truth in order to help other members. Common

knowledge of this commitment is a sufficient reason to trust the other members of the group: membership is a good reason to believe and so it can affect knowledge attributions.

This entails that there is social knowledge just in case that there is individual knowledge plus cooperation. Cooperation distinguishes a mere collection of individual knowledge from proper social knowledge: there is social knowledge just in case that there is cooperation between the individuals, whose background knowledge is coordinated in a system. The distinction between common knowledge and social knowledge also lies in cooperation. Indeed, there may be common knowledge without cooperation, for example when everyone keeps her individual knowledge secret. Absence of cooperation is explicated by the absence of a shared intention. Shared intention can be used to shed light on the issue of knowledge on trust consistently with the recognition of the epistemic disadvantage (Faulkner 2011). Membership to a group is a sufficient reason for individuals to trust each other member's testimony: in truth-oriented group activities there is not common knowledge of the background knowledge, but there is common knowledge of the shared intention and, so, there is also common knowledge of a commitment not to lie.

As an example of how membership affects knowledge attributions I analyze the difference between knowledge of a scientific claim by a scientist, and by a layperson.

A layman not only lacks the shared intention to cooperate in pursuing the truth-related common goal of scientific research, but also lacks the background knowledge that is necessary to understand scientific claims. Goldman (1999) observes that layperson's beliefs are somehow *derivative* from scientific practices, (Hardwig (1985) uses the expression "epistemic dependence"). I suggest that layperson's knowledge derives from scientific practice in the sense that she knows something different from the scientific claim: she can't know scientific statement p ; she can come to know a less technical statement, p_s , describing the accessible features of p . She may know p_s because its complete justification is: "The scientific community tells that p_s ". The authority of the scientific community is a good reason for laypersons to believe that p_s is true, because of the recognition of science's veritistic superiority (Goldman 1999), that is, because of common knowledge of science goal: layman's knowledge that p_s depends on experts' knowledge that p .

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