

From Extended Minds to Group Minds

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ABSTRACT

Thesis & Objective

Our remarkable talent to create and co-opt environmental resources into our problem-solving routines has sparked the claim—known as the *extended mind hypothesis*—that some episodes of cognitive processing are literally distributed across brain, body, and environment (Clark 2003). Since much of distinctively human cognition occurs in groups, the notable bias of this hypothesis to view cognition as an essentially solitary (albeit extended) activity is misplaced. I re-deploy the conceptual framework of cognitive extensions to revive the *group mind hypothesis* that some groups have cognitive properties of their own which differ from those had by their members.

The social dimension of cognitive extensions

		Origin of extra-neural resource		
		<i>natural</i>	<i>cultural</i>	
Functional permanence of organism-environment coupling	<i>temporary</i>			Individual epistemic action
	<i>repeatable</i>			
	<i>permanent</i>			
		<i>natural</i>	<i>cultural</i>	Collective epistemic action
	<i>temporary</i>			
	<i>repeatable</i>			
	<i>permanent</i>			

The principle of *social parity*

If, as a group confronts some task, the social and/or material organization of this group plays a functional role *R* in a process which, *were* it to go on in the head, we would accept as a cognitive process of an individual, then that group *is* (for that time) instantiating the cognitive state-type which plays *R* for the corresponding behavior of individuals.

1. Social organization is part of the cognitive architecture of groups

Social parity derives from the functionalist thesis that mental states/processes are type-identified in terms of the causal role which they play in the behavior of a cognitive system, and hence cannot be reduced to whatever “stuff” (individual or collective) by which they are realized. To illustrate the distinctive cognitive roles that various social coordination mechanisms can play for group behavior, I canvass recent empirical studies of innovation propagation, path formation, and transactive memory. Functionalism implies that the hypothesized mental states of groups are determined by, but cannot be reduced to, the psychological states of individuals—even when they are considered together with non-psychological facts about their social (and material) organization.

2. Group minds have representational capacities of their own

The *distributed-cognition* approach (Hutchins 1995) has been used to analyze collaborative work practices as heterogeneous information-processing systems that are distributed over people, artifacts, internal and external representations; and that operate under rich social and organizational constraints. By applying naturalized theories of intentionality to such work groups, I show that collectively manipulated external representations are apt to function as vehicles of intrinsic group-mental content that is not merely derived from the mental representations of individual members. Moreover, an interesting pattern starts to emerge: our intuitions concerning the “intrinsic vs. derived” content of a given representation *R* appear to shift with regard to the behavior that *R* is invoked to explain—whether it is the behavior of an individual or a collective.

3. Attributions of intentionality to collective systems are robust

Dennett-style instrumentalists might object that we merely treat groups *as if* they had mental states to make them predictable—a *rationalizing assumption* which has only *heuristic* value. However, a closer look at attributions of collective intentionality in historiography, rational choice models in economics, workflow studies, and collective decision theory defeats this objection. First, attributions of collective intentionality remain robust in light of substantive rationality failures; second, when the predictions actually work, groups act rationally *because* the attributed states are causally relevant.

Literature

Theiner, Georg. (forthcoming), *From Extended Minds to Group Minds*. Frankfurt/Main, Oxford, New York: Peter Lang. (= Ph.D. Dissertation, Departments of Philosophy & Cognitive Science, Indiana University Bloomington, 2008)