

Cazenille et al. (2025) Concept	NSIR (Sadownik, 2025) Application
Social Learning (Collective)	Item 1 (Kinship): Measures if the emergent "collective behavior" feels relatable to the user.
Signaling Systems	Item 3 (Mind Attribution): Validates if the user perceives the swarm's signals as a form of "internal thinking."
Adaptive Coordination	Item 8 (Reliability): Measures the social comfort that arises from the swarm's consistent, rule-based logic.
Unified Swarm Agency	Item 6 (Naming): Acts as a behavioral marker for whether the user "humanizes" the entire swarm as a single entity.