

Toward a Cognitive Science of Culture and Society

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What is social cognition?

Social cognition: Domain of cognition pertaining to organism's ability to interact socially with conspecifics and understand their interactions with each other, in the context of social institutions.

Unlike animals, vast variation in social repertoire across human populations: "culture." Children have to learn their culture.

Deep analogy to problem of language acquisition:

- Unlimited number of understandable sentences
- Requires combinatorial rule system in mind of language user
- Rule system not available to consciousness
- Rule system must be acquired by child with only imperfect evidence in environment, virtually no teaching
- Learning thus requires inner unlearned resources, perhaps partly specific to language
- Inner resources must be determined by genome interacting with processes of biological development
- Unlimited number of understandable social situations
- Requires combinatorial rule system in mind of social agent
- Rule system only partly available to consciousness
- Rule system must be acquired by child with only imperfect evidence, only partially taught
- Learning thus requires inner unlearned resources, perhaps partly specific to social cognition
- Inner resources must be determined by genome interacting with processes of biological development

Hence, as in case of language, all aspects of cognitive neuroscience come to bear on social cognition. PLUS comparative ethology and evolutionary psychology, based on parallels in ape societies.

Question: To what degree is social organization understood as such by participating individuals, and to what degree is it an emergent phenomenon (cf. ants)? Exactly what capacity should be ascribed to the individual? What is involved in the "social construction" of culture and language?

This is NOT the way culture is usually studied!

Formal/functional point of view: What are the abstract logical/formal/computational structures needed to account for the phenomena? For the moment neural architecture can't provide detailed enough answers. (Cf. similar problems with details of linguistic structure.)

The physical and social domains

Social cognition is a central system of cognition, alongside physical domain

Physical domain:

- Physical objects, located in 3-dimensional isotropic space

- Motion of objects in space

- Forces exerted by objects on each other

Natural objects: rocks, trees, rivers

Functional objects (artifacts): bicycles, tables

Animate objects: Ants, worms, rats, tigers – capable of unpredictable self-initiated motion (desires?)

Social domain:

- Persons, with whom we can have social relations (includes perhaps pets, but not mosquitoes)

- Not an isotropic space: “distance” measured by divisions of kinship, class, status, intimacy, etc.

- Social forces: persuasion, obligation, etc.

People occupy both physical domain (body) and social domain (mind/soul)

- Social domain alone: Spirits, ghosts, gods, souls that survive death

- Social identity (personhood) can (fictionally) survive reincarnation, body-switching

- Conceptual difficulty of materialist philosophy (body, no mind);

- discomfort with golems & humanoid computers (physical objects acquiring social identity)

Actions on social plane become observable only through physical instantiation.

Analogy to language: actions formulated simultaneously in terms of sound (phonology) and meaning, where the two planes are dissociable.

Social domain \neq Theory of Mind! We can attribute mental life to nonsocial animates, e.g. tigers.

Many aspects of social relations (e.g. clan membership and entailed roles) do not require Theory of Mind.

Some elements and relations in the social domain

Some issues: Sexual selection, dominance and altruism addressed by sociobiology and evolutionary psychology. Here: cooperation and competition, groups, framing, rules.

Cooperation: Based on Searle's "joint intention": "*We* intend to do Y, and my role in Y is Z." E.g. moving furniture, transactions/trades, contracts (including marriage), linguistic communication. Joint intention requires signaling offer of cooperation, signaling uptake (H. Clark). How do people do it? How do chimps and wolves do it? Joint *attention* as a precursor; also sexual behavior.

Joint intention allows possibility of defection and deception, hence might call in theory of mind, "cheater detection".

Competition as opposite polarity of cooperation: Joint knowledge of mutual desire to exploit one another. "Defection" = surrender? or joint decision to abandon activity

Groups: World is divided into members and nonmembers.

Axiom 1. If you are a member of my group, I will behave favorably toward you, e.g. I will be willing to cooperate with you, and I will expect the same from you.

Axiom 2. If you are not a member of my group, I will behave unfavorably toward you, e.g. I will compete with you, and I will expect the same from you.

This logic pertains to primate groups, teenage cliques, nations, professions, religions, social classes, etc.

Symptoms: feelings of pride in group, belief in superiority of one's group, loss of ego into group identity, events that reinforce group identity, e.g. coming of age ceremonies, marriages, award ceremonies, funerals, football games.

Group is conceptualized as "super-individual": can exert dominance, compete, form alliances. Members "inherit" relations from the status of group

Codes of conduct: set of normative principles, taken to be a *joint commitment* of members. Punishment for violating the code understood as collectively imposed by group.

Marks of group identity: dress, customs, language, systems of admission, principles of descent.

Presumption of (prototypical) purity. BUT humans identify with numerous overlapping and hierarchically arranged groups – source of conflict and outcast status for individuals of mixed descent.

How do children acquire this logic? Can it be disrupted by brain damage?

Something that's learned: intensity with which axiom 2 is applied (tolerance vs. intolerance)

Framing

Game is competition within larger frame of cooperation.

Bargaining is cooperation within larger frame of competition.

Team sports involve groups with joint intention of [competition within cooperation]; require very fast real-time reframing, forming of joint intentions, etc.

"Leakage" of frames: competition leaking out of game frame into overt hostility; cooperation leaking out of bargaining frame into affiliative bonding

Children understand all this perfectly by 10 years old!

Rules and other normative principles

Basic form:

"In frame F (or context C), you should (*or must*) do X (*or not do X*)."

More explicit:

"In frame F (or context C), if you do X (*or if you don't do X*), consequence Y of good (*or bad*) value to you will ensue."

- Game: Rules define space of action, breaking them incurs penalty or ends game.
- Obligation (including contracts, promises): Specifies action that holder of obligation is to perform for a beneficiary. If not fulfilled, beneficiary acquires *right* to harm holder of obligation.
- Legal code: Defines space of actions desired and/or sanctioned by group as a whole; rewards and punishments carried out by authorized representatives of group
- Moral/ethical rules: Certain actions specified as morally good or bad. Consequences include approval and trust of the community (reputation).
- Religious codes: Same thing, but consequences concern approval and trust by the deity or deities. Punishment by deity or by religious authorities

Many of these types of rules are expressed by *should, must, may, right, wrong*; indicates a conceptual similarity among them. BUT: important to keep them apart.

- Moral and religious codes are not identical (e.g. honor among thieves, desert hospitality)
- Promises have both contractual and moral dimensions
- Actions can have conflicting consequences (e.g. evil landlord foreclosing on poor widow; civil disobedience)

BUT: also important not to separate them too much, e.g. to separate morality from everything else as “special”.

- Cultures differ in what they consider morality (e.g. sexual mores, slavery)
- Social convention and morality are inextricably intertwined (e.g. Ten Commandments)
- Morality is connected to logic of groups (“Killing the enemy is good”; Jane Jacobs’s partly contradictory “moral syndromes” in every group)
- Human nature is not just a matter of the timeless and universal, but also the range of variation (compare to Universal Grammar)

Why are rules perceived as objective entities in the world, NOT imaginary? Why are moral rules conceptualized as timeless and universal?

How do children come to understand rules? What do they think fairness is? Etc. (Piaget) Brain deficits?

Science and politics

What is the source of moral/ethical values – once we take God out of the picture? Why can't we make up moral codes any way we want? Since Darwin, this is an important source of conflict between science/humanities and religion – especially current religious right in America.

Folk theory (Locke, Rousseau, Kant): People sat down and agreed on the “social contract”
Appears as a useful fiction in Rawls
Implausible except for legal codes. (Compare to language)

Dubious hopes for grounding morality in evolutionary psychology:

1. Should we condone sexual promiscuity by males because it's got an evolutionary game-theoretic basis?
2. Groups protect members from aggression – physical and economic.
Free market capitalism = bargaining = tamed aggression with no protection provided by group
Can evolutionary game-theoretic basis be invoked as argument against free market capitalism?

I think we have to take these issues seriously: it's in our territory more than any other part of cognitive science.

Goal is more to understand constraints and biases on forms of society than to offer moral judgments.

What's new: Using contemporary tools of cognitive neuroscience to investigate very old questions.