

RITUAL COGNITIVE ECOLOGY: THE CONSTITUTIVE ROLE OF MATERIALITY IN A RITUAL AND RELIGIOUS COGNITION

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In agreement with 'the material turn' in the humanities and social sciences and development of extended conceptions of mind in cognitive science author argues that our cognitive capacities are shaped by material objects and other features of the environment institutionalized by cultural practices. It is suggested that the moods and behaviors catalyzed in effective ritual result from a 'mangle' of human and material agencies.

Conceptual framework and assumptions

Off-loading & Epistemic actions. To think is a painful process. Therefore our brains take every opportunity to rely on external prompts and delegate task units on external environments. All higher-level cognitive abilities such as memory, computation or decision-making are culturally appropriated actions with epistemic goals.

Active externalism & coupling. External features are part of (local) equipment playing a causal role in generating action. The mind and the environment act as a „coupled system“ (Clark 2008).

Cognitive impartiality. Problem solving performances takes shape according to **cost function** that accords no special status to types of operations, be they motoric, introspective or perceptual and also modes of encoding (Clark 2008).

Culture is a cognitive process that takes place both inside and outside our minds (Hutchins 1995, 2010). It is an adaptive process that accumulates partial solutions to frequently encountered problems. **Religion** is a type of culture that seeks to answer age-old human problems related to life and death; illness and pain; responsibility or motivation in life. By employing variety of cultural means, religion serves with answers that further motivate human behavior.

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Here I present three lines of research suggesting on a profound interconnection of materiality and cognition in ritual:



1. Materiality, cognitive effort and change of religious ritual: A case of Maha mantra chanting

Maha mantra chanting in *Gaudiya Vaishnava* tradition requires devotees to chant while counting all prayer beads on the necklace 16 rounds over the course of the day. This Meditation is a tricky practice because mind is “like a naughty child” and ...”it tends to wander off during the meditation”. In this practice, **Japa Mala** (prayer beads) is used as atool “... to keep your mind on the meditation practice”.

At certain point in time, some devotees replaced a traditional Japa Mala prayer beads by **mechanical clicker** and by that reformulated the task and ritual itself. In a computational sense this **newly installed device** enhances memory (it counts and remember quantity), and by that it **minimizes cognitive load** (Krátký 20120). It enhances computational abilities of an agent, however, it also **erodes the cultural form of ritual** by allowing distraction and shaping chanting towards purely routinized activity without desired sorts of moods and mental contents towards religious entities.

2. Material culture is structuring ritualistic behavior

Bell envisages ritualization is an activity temporally structuring space-time environment through a series of physical movements. (Bell 1992: 109–10). I propose to reverse a causal direction and study physical movements as a resulting behavioral structure causally linked to its context. **Ritualization then, better to be grasped as a systemic phenomenon that is only partially controllable by an agent.** It is spontaneous (Lang et al. 2016, Krátký et al. 2016), that is, partially non-controllable / non-deliberative action.

Considering (1) performance, movement, and bodily understandings in relation to (2) space and material culture offers a potential mechanism to to explore human agent, material culture and envi-

ronment as a stable system. Material culture then is both constraining and enabling ritual action by structuring and directing agent's movements according to objective aspects of this system – affordances. **Affordance** is an objective characteristic of agent and environment. It emanates from the interaction of organism and environment. Affordance is a non-representational information.



3. Materiality as a meaning mediating structure.

Religious systems are concerned with the problem of social coordination and motivation. Materiality serves as a mediating structure with a culturally desired sign content - **a material sign** contributing to the cooperation in large groups.

Materiality then is a **cultural technology** inducing certain types of motivations. We explore tendency towards prosocial acting when facing **materially installed agency cues** (Krátký 2016).

Religious environments are **populated by statues of saints** and other socially important persons, they are often constructed as monumental **awe evoking structures** (Ejova forthcoming). We speculate that such representations are partly responsible for the effect religious settings cast on human behavior.



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