


COMMENTARY

Cognitive consequences and constraints on reasoning about ritual

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The target article adds to the growing body of empirical work supporting the proposal that collective rituals facilitate the transmission of cultural ideas in a number of interesting ways. We agree with the authors’ proposal that the social stipulation and causal opacity of rituals are both important factors in preventing individuals from constructing their own accounts of a ritual event, and that they both enable rituals to effectively transmit cultural messages. However, we suggest that rituals, which are characterized as behaviors with high amounts of repetition, redundancy, stereotypy, and causal opacity, do more than simply open up space for authoritative interpretations of events. In addition to resource depletion, rituals have cognitive consequences rooted in the human capacity for causal reasoning that contribute directly to cultural learning.

Rituals behaviors, which we define as conventional, causally opaque procedures (Legare, Whitehouse, Herrmann, & Wen, in press), present a challenge to theoretical accounts of causal reasoning because they are both socially stipulated (Humphrey & Laidlaw, 1994) and not reducible to causal mechanisms (Bloch, 2004; Boyer & Liénard, 2006; Whitehouse, 2001). Even when rituals are explained in the context of a certain belief, there is often not an expectation of a direct causal connection between the ritual actions and outcomes (Sørensen, 2007).

We propose that rituals are unknowable from the perspective of physical causality because (1) they are not bound by the same kinds of intuitive physical–causal constraints that characterize non-ritualistic actions, and (2) they lack an intuitive causal connection between the specific action performed (e.g., synchronous dancing) and the desired outcome or effect (e.g., making it rain). Rituals intended to have particular effects (e.g., rituals promoting crop fertility or healing the sick) are not

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expected to do so by causal mechanisms that are transparent or even in principle
knowable (Legare et al., in press).

In addition to the proposal by Schjoedt and colleagues that charismatic
authorities socially stipulate ritual efficacy, we suggest that ritual efficacy is
interpreted in light of intuitive causal beliefs about action potency. In particular,
rituals used for problem-solving purposes reflect intuitive beliefs about causal
reasoning and the efficacy of goal-directed action sequences. Consider Tambiah’s
(1979) classic definition of ritual as practice: “Rituals are patterned and ordered
sequences of words and acts, often expressed in multiple media whose content and
arrangement are characterized in varying degrees by formality (conventionality),
stereotypy (rigidity) . . . and redundancy (repetition).” We propose that the char-
acteristics of ritual described by Tambiah (1979) are the product of an evolved
cognitive system (Atran & Norenzayan, 2004; Boyer & Liénard, 2006; Sørensen,
2007) of intuitive causal principles. Recent research on the evaluation of ritual
efficacy supports this argument. Legare and Souza (2012) found that both Brazilian
and U.S. adults rated problem-solving rituals as more effective when they contained
more repetition and multiple procedural steps. These findings suggest that beyond
ritualized actions’ contribution to cognitive depletion, the ritualized actions
themselves tap into a cognitive bias about the efficacy of causally opaque actions.

In addition, we argue that the causal opacity of ritualized behaviors acts as a
signal to learners that the event being witnessed is conventional rather than
instrumental, and ought to be learned as such. This work is rooted in the study of
imitative behavior, and new developmental work on ritual provides converging
evidence for this proposal. High-fidelity imitation in children has been linked to
quintessentially social concerns, such as encoding normative behavior (Kenward,
Karlsson, & Persson, 2011), affiliation (Over & Carpenter, 2011), shared experience
(Tomasello, Carpenter, Call, Behne, & Moll, 2005), and fear of ostracism (Lakin,
Chartrand, & Arkin, 2008; Over & Carpenter, 2009), rather than physical causal
learning (Lyons, Damrosch, Lin, Macris, & Keil, 2011).

We propose that cultural learning in humans may involve a ritual stance (i.e.,
seeking out a rationale for actions based on social convention) in addition to an
instrumental stance (i.e., seeking out a rationale for actions based on physical
causation). Recent work by Legare and colleagues (in press) substantiates this claim.
They presented children with action sequences that were either causally transparent
or causally opaque and found that imitative precision was higher, and innovative
actions lower, after causally opaque sequences. What distinguishes rituals from
instrumental practices cannot be directly inferred from behavior, but rather is a
matter of interpretation (see Humphrey & Laidlaw, 1994; Staal, 1990; Whitehouse,
2001). For example, the act of preparing a meal could be interpreted instrumentally
(e.g., to appease hunger) or ritualistically (e.g., to present as an offering to a deity).
Where such ambiguity exists, people may oscillate between ritual and instrumental
understandings or use both.

Whereas the authors suggest that causal opacity leads to low-level action parsing,
which in turn could account for imitative precision, Legare and colleagues (in press)
claim that construing a causally opaque action ritualistically triggers imitative
rigidity. A ritual stance is based on the attribution that an action sequence lacks a
physical causal goal and can be triggered by a number of cues, such as start- and end-
state equivalence and normative language (Legare et al., in press).
The target article makes a valuable contribution to the study of ritual cognition by proposing that certain aspects of ritualized behavior leave the meaning of those events open to cultural construction, thereby allowing for the transmission of cultural conventions. We propose that, in addition, ritualized behaviors are constrained by causal cognition and give rise to a conventional interpretation of events, allowing for the transmission of culturally specific behavioral patterns. Together these different levels of analysis provide evidence for mechanisms supporting the transmission of causally opaque cultural conventions.

References


COMMENTARY

What are we measuring?

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For Schjoedt and colleagues, religious rituals have features — emotion regulation, ritualized behavior, authority — that up- or down-regulate the cognitive system’s

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