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Original Article

Ritual increases children's affiliation with in-group members☆

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ABSTRACT

This study examined the impact of ritual participation on children's in-group affiliation ($N = 71$, 4–11-year-old children). A novel social group paradigm was used in an afterschool program to test the influence of a ritual versus a control task on a measure of affiliation with in-group versus out-group members. The data support the hypothesis that the experience of participating in a ritual increases in-group affiliation to a greater degree than group activity alone. The results provide insight into the early-developing preference for in-group members and are consistent with the proposal that rituals facilitate in-group cohesion. We propose that humans are psychologically prepared to engage in ritual as a means of in-group affiliation.

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1. Introduction

Recent convergent developments in cognitive science (Legare & Souza, 2012; Rossano, 2012), social psychology (Norton & Gino, 2014; Swann, Jetten, Gómez, Whitehouse, & Bastian, 2012; Vohs, Wang, Gino, & Norton, 2013; Whitehouse, McQuinn, Buhrmester, & Swann, 2014) and evolutionary anthropology (Atkinson & Whitehouse, 2011; Boyer & Liénard, 2006; Ruffle & Sosis, 2007) have opened up new avenues for research on ritual, a psychologically understudied yet pervasive feature of human social group cognition and behavior. Rituals, which we define as conventional, causally opaque procedures, are uninterpretable from the perspective of physical causality because they lack an intuitive or observable causal connection between the specific action performed (e.g., synchronized dancing) and the desired outcome or effect (e.g., making it rain) (Legare & Souza, 2012, 2014; Sørensen, 2007). The dearth of psychological research on this topic is striking given that ritual is a universal cultural phenomenon and has been the focus of extensive anthropological inquiry. Anthropologists have long proposed that rituals demonstrate commitment to in-group members by signaling group member identity, promoting interpersonal bonding, and creating shared beliefs (Humphrey & Laidlaw, 1994; Rappaport, 1999; Whitehouse & Lanman, 2014).

There is substantial evidence that humans have evolved a variety of psychological adaptions for group living (Caporael, 1997; Kurzban & Neuberg, 2005; Richerson, Boyd, & Henrich, 2003; Tooby, Cosmides, & Price, 2006). Social group cognition is a developmentally privileged process that occurs very early in human development (Killen & Rutland, 2011). Young children are well prepared to become social group members (Diesendruck & Markson, 2011; Legare & Watson-Jones, 2015; Rhodes, 2012). Some social categories are highly essentialized by young children (Gelman, Heyman, & Legare, 2007; Hirschfeld, 1996), especially those categories with high evolutionary functionality (Diesendruck, Goldfein-Elbaz, Rhodes, Gelman, & Neumark, 2013).

The early-developing propensity for social categorization is strong. Novel group membership activates in-group biases in adults (Billig & Tajfel, 1973; Diehl, 1990; Tajfel, 1970; Tajfel, Billig, Bundy, & Flament, 1971; Tajfel & Turner, 1985) and children (Abrams & Rutland, 2008; Dunham, Baron, & Banaji, 2008; Nesdale & Flesser, 2001; Rhodes, 2012). Young children placed in novel social groups (i.e., based on t-shirt color) have expectations for in-group reciprocity, positive behavioral attributions for the in-group, and preferences for in- over out-group members (Dunham, Baron, & Carey, 2011). Young infants are also biased to interact more with in-group members (Kinzler, Dupoux, & Spelke, 2007). Infants have expectations that group members will act similarly (Powell & Spelke, 2013) and imitate in-group members more frequently than out-group members (Buttelmann, Zmyj, Daum, & Carpenter, 2013).

Children readily learn and adhere to the conventions of their social groups (Heyes & Frith, 2014; Kalish, 2005). Young children comply with social norms (Diesendruck & Markson, 2011) and engage in normative protest when rules are violated (Rakoczy, Warneken, &

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Tomasello, 2008). By 4-years-old, children attribute conventional knowledge selectively to in-group members (Diesendruck, 2005). Young children also expect group members to behave in conventional ways (customs, traditions, and etiquette) and distinguish between conventional and moral rules (Killen & Rutland, 2011; Smetana, 2006; Turiel, 1998).

Much of cultural learning is motivated by affiliative goals, resulting in the acquisition of conventional behavior. Children are acutely sensitive to relations among individuals (Chudek, Heller, Birch, & Henrich, 2012; Kalish, 2013; Nielsen & Blank, 2011), particularly to whether two or more individuals act or make judgments in the same way (Corriveau, Fusaro, & Harris, 2009; Pasquini, Corriveau, Koenig, & Harris, 2007). Children are sensitive to social pressure to conform with a peer group, even when no instrumental knowledge is gained, and publicly disguise correct judgments to conform to the erroneous consensus (Haun, Rekers, & Tomasello, 2014; Haun & Tomasello, 2011).

Children are precocious social learners, well-equipped to engage in high fidelity imitation, a potential indicator of group affiliation through conformity (Herrmann, Legare, Harris, & Whitehouse, 2013; Over & Carpenter, 2009, 2012). Overimitation may be an adaptive human social learning strategy facilitating the rapid social learning of instrumental skills and may be employed at the expense of efficiency (Flynn & Whiten, 2008; Whiten, McGuigan, Marshall-Pescini, & Hopper, 2009). High fidelity imitation in children has also been linked to social concerns (Nielsen, 2006; Over & Carpenter, 2012), such as encoding normative behavior (Kenward, Karlsson, & Persson, 2011; Nielsen, Kapitány, & Elkins, 2015) and fear of ostracism (Over & Carpenter, 2009; Watson-Jones, Legare, Whitehouse, & Clegg, 2014; Watson-Jones, Whitehouse, & Legare, 2015). This suggests that children's motivation to engage in high fidelity imitation may be inherently motivated by affiliating with social groups (Legare & Watson-Jones, 2015; Over & Carpenter, 2012). Based on these early developing capacities, Chudek and Henrich (2011) and Chudek, Zhao, and Henrich (2013) take a culture-gene coevolved "norm psychology" approach to support early developing reasoning about conventional behavior, which we argue is a prerequisite for ritual learning.

New research on the cognitive developmental foundations of ritual has examined imitative behavior as a means of affiliation with social groups (Clegg & Legare, 2015; Herrmann et al., 2013; Legare & Herrmann, 2013; Legare & Nielsen, 2015; Legare, Wen, Herrmann, & Whitehouse, 2015; Watson-Jones et al., 2014; Watson-Jones et al., 2015). When excluded by an in-group, adults are motivated to affiliate with the in-group by utilizing selective and nonconscious mimicry (Lakin, Chartrand, & Arkin, 2008). This may be because individuals cope with ostracism by engaging in behaviors aimed at reinclusion (see Williams & Nida, 2011 for a review). Adults also engage in higher levels of emotional facial mimicry of in-over out-group members (Bourgeois & Hess, 2008).

We hypothesize that the performance of socially shared rituals amplifies the early developing and empirically documented preference for in-group members over out-group members (Legare & Wen, 2014). This hypothesis is consistent with new research investigating the extent to which rituals function as a mechanism for increasing social group cohesion (Whitehouse & Lanman, 2014). Rituals facilitate high fidelity cultural transmission, by (a) serving as social identity markers (e.g., dressing in a particular way) (Cosmides & Tooby, 2013), (b) demonstrating commitment to the group (e.g., more costly rituals signal commitment to group values) (Henrich, 2009; McElreath, Boyd, & Richerson, 2003), (c) facilitating cooperation with their coalition (e.g. rituals signal group commitment and increase group cooperation) (Ruffle & Sosis, 2007; Sosis & Bressler, 2003; Sosis & Ruffle, 2003), and (d) increasing group cohesion (e.g., rituals serve as mechanisms for social cohesion and foster longevity of social groups) (Atkinson & Whitehouse, 2011; Soler, 2012). Because rituals are resistant to individual innovation and change, they facilitate coordinated and cooperative group action, essential to solving important human adaptive problems associated with group living (Legare & Watson-Jones, 2015; Watson-Jones & Legare, 2015).

How best to examine the effects of complex social behavior such as ritual on group affiliation? There are several frequently co-occurring features of rituals that we hypothesize make them ideal candidates for amplifying social group affiliation and cohesion. Rituals are socially scripted, are frequently accompanied by normative or conventional language, and involve synchrony (i.e., coordinated movement matched in time (Bernieri & Rosenthal, 1991)) within groups (Hove & Risen, 2009; Kirschner & Tomasello, 2010; Marsh, Richardson, & Schmidt, 2009; Wiltermuth & Heath, 2009). New developmental research has documented that characteristic features of ritual have effects on imitative fidelity, a measure of affiliation. Children engage in higher imitative fidelity after (a) witnessing start- and end-state equivalence in an action sequence (Legare et al., 2015; Watson-Jones et al., 2014), (b) hearing conventional language (e.g., "everyone does it this way") rather than instrumental language (e.g., "she makes a necklace") (Clegg & Legare, 2015; Herrmann et al., 2013; Legare et al., 2015), (c) observing multiple actors engage in the same behavior versus observing one actor engage in the same behavior multiple times (Herrmann et al., 2013), and (d) observing behavior done in synchrony versus in succession (Herrmann et al., 2013). In the current study, rather than attempt to examine the effects of each of these features independently, our objective was to examine their cumulative effects compared to a matched social group experience. Does participating in a ritual increase in-group affiliation to a greater extent than group membership alone?

Despite the large literature on children's reasoning about social groups, this is the first study to our knowledge to examine the role of ritual participation on children's affiliation with in-group members. A novel social group paradigm (Tajfel, 1970) was used to examine the hypothesis that the experience of participating in a ritual may increase preference for in-group members, an effect we predicted to be greater than experiencing social group activity alone. Across conditions, children were first assigned to a novel social group in an afterschool program setting (i.e., yellow or green group). In the ritual condition, children in each group participated in a scripted, synchronous necklace-making task that was demonstrated by a group leader. In the control condition, children in each group participated in a non-scripted necklace-making task that was supervised by a group leader. The language children heard to describe each group and the amount of social experience in a group setting were identical across conditions. We predicted that children in the ritual condition would demonstrate stronger in-group affiliation than children in the control condition.

2. Methods

2.1. Participants

Seventy-one 4–11-year-olds (42% female, 58% male; $M_{age} = 7$ years, 4 months; range = 4 years, 2 months to 11 years, 6 months) were recruited at two afterschool program locations in the American southwest. Participants were primarily from working-class families (66% of children attending school at the locations tested are economically disadvantaged) based on school district records (i.e., eligible for free or reduced-price lunch or other public assistance). Participants were also ethnically diverse (51% Hispanic, 39% White, 7% African–American, and 3% other ethnicities). Sample size was determined prior to data collection via power analysis using a predicted effect size of $d = 0.80$ based on previous research using similar experimental paradigms. The power analysis suggested a sample size of 26 subjects per group, power $(1 - \beta$ err prob$) = .80$. We concluded data collection when we ran the study in two schools (one per condition). Our sample size ($N = 71$) exceeded the suggested sample size ($N = 52$) because we collected data from all consented individuals, so as not to exclude children that wished to participate.