Conceptualizing Spirit Possession: Ethnographic and Experimental Evidence

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Abstract   We report the findings of a programmatic series of studies designed to investigate the cognitive underpinnings of cross-culturally recurrent forms of possession belief. Possession phenomena are frequently portrayed in the anthropological literature as incompatible with common cultural assumptions and biases guiding Western notions of ''self'' and ''personhood'' and as resisting generalization and explication in comparative theoretical analysis. Our findings concerning the cognitive capacities and constraints that facilitate the emergence and transmission of possession concepts support the position that certain fundamental aspects of these concepts' forms are explainable in terms of ordinary, panhuman cognitive function. Ethnographic and experimental data indicate that successful possession concepts (e.g., those that entail the effective displacement of the host's agency by the possessing spirit's agency) emerge and spread, in part, because they effectively exploit universal cognitive mechanisms that deal with our everyday social and physical worlds and that this contributes to their enhanced incidence, communicability, memorability, and inferential potential relative to less ''cognitively optimal,'' less widespread possession concepts. [spirit possession, cognitive science of culture, cultural transmission, Afro-Brazilian religion, mind-body dualism]

In this article we present the findings of a series of controlled studies designed to explore specifically why possession beliefs take the forms they do, and why certain possession beliefs enjoy more widespread transmissive success than others. Our research agenda stems from a number of observations raised by the ethnographic literature on spirit possession and mediumship. This vast literature reveals many different varieties of possession belief. The reported configurations of minds, spirits, agencies, and bodies in space and time, and the variable contexts in which possession phenomena arise, appear so dissimilar as to call into question the existence of any important cross-cultural recurrences. Nevertheless, deeper analysis reveals that the range of possession beliefs that may be encountered cross-culturally rest on certain key assumptions.

As Bourguignon noted, "The concept of spirit possession is clearly dependent . . . on the possibility of separating the self into one or more elements" (1968:4). More precisely, possession-trance concepts frequently entail a (literal or effective) separation of mind (or agency, spirit, person, self) from the body. For example, the agency of the host is frequently represented as withdrawing from the body or assuming a passive role in relation to the

control of the body, which is subsequently occupied or animated by the possessing spirit. Indeed, despite the presence of a wide variety of concepts of possession-trance (and additional logically possible concepts), one in particular appears with considerable frequency across the ethnographic record. This concept entails the complete displacement of the host's agency by another agent's agency, such that a bodiless agent effectively acquires the body—but not the mind or self—of a living being.

Below we present evidence supporting our hypothesis that the frequent recurrence of displacement conceptions of possession, relative to other possible models, is due in some part to basic human social-cognitive architecture. People from culturally rich spirit-possession traditions or from contexts of relatively impoverished exposure to such events and ideas will ordinarily tend to understand possession in terms of a displacement of agency because of how human cognitive structures process information about minds.

The "displacement" model of possession-trance minimally entails the following conditions:

- During the possession episode, the agency of the host is completely replaced by an agency other than the host's.
- No trace of the host's agency remains or fuses with the possessing agency.
- The entity that possesses (i.e., the possessing agent) completely controls the behaviors of the host's body.
- The possessing agent is wholly responsible for all behaviors for the duration of the episode.[1]

James Frazer, for example, describes possession as the moment when a spirit enters into a person. The person's "own personality lies in abeyance during the episode," and all utterances "are accepted as the voice of the god or spirit" (1958:108). Melville Herskovits similarly writes of the Haitians, "The supreme expression of their religious experience is a psychological state wherein a displacement of personality occurs when the god "comes into the head" of the worshipper. The individual thereupon is held to be the deity himself" (1948:66–67). More recently, Paul Stoller describes spirit mediumship among the Songhay of Niger as resulting "from the temporary displacement of a person's double by the force of a particular spirit.[2] When the force of the spirit enters the medium's body, the person shakes uncontrollably. When the deity's double is firmly established in the dancer's body, the shaking becomes less violent. The deity screams and dances. The medium's body has become a deity" (1989:31).

In his ethnography of Trinidadian "*orisha* work," Kenneth Lum writes, "After an orisha had manifested on a person, it was that orisha who was now animating that person's body. . . . The displaced [*host's*] spirit only returned when the orisha had left" (2000:156). In Mayotte, according to Lambek, spirits are said to "enter the bodies of human beings and rise to their heads, taking temporary control of all bodily and mental functions." He continues, "Despite the fact that the body remains the same, it is now occupied by a different person. . . . During

the trance, the human host is absent, no one can say where, and is temporarily replaced by the spirit. Spirit and host are two entirely different persons" (1981:40).[3] Erika Bourguignon explicitly considers the connection between displacement of control and responsibility and culpability: "When the spirits take over, women can do unconsciously what they do not permit themselves to do consciously. The demands that are made, the orders that are given, are those of the spirits' doings and sayings. They are neither responsible for nor aware of what is going on and do not remember it after the fact. They have ultimate deniability" (2004:572; for further examples see Al-Adawi *et al*. 2001:49–50; Behrend and Luig 1999; Field 1969; Firth 1967:312; Hitchcock and Jones 1976; Kiev 1968:143; Lewis 1971:105; Rosengren 2006:812; Rouget 1985:325; Schömbacher 1999; Sharp 1996).

Our studies seek to explain why this displacement conception is so prevalent in the ethnographic literature; but the inspiration for this inquiry came from a related puzzle presented by a particular ethnographic observation. In Belém, Brazil, where one of us (Cohen) conducted 18 months of ethnographic fieldwork, Afro-Brazilian religionists offer similar displacement descriptions of possession. Strikingly, these displacement-like descriptions and definitions of possession, offered by the majority of members of Cohen's research community, differed markedly from what the leadership taught the laity about possession. Rather than a displacement conception, the cult house leader expressed and taught a rather different account of what happens when someone "incorporates" a spirit entity. Yet this "theologically correct" account, what we call a "fusion" model of spirit possession (described below), apparently failed to take hold across the wider group. What, then, are the factors influencing this pattern of cultural transmission? Why does the displacement concept persist even in the face of theological correction and instruction? Related to this, why is spirit possession commonly conceptualized as displacement across cultures? The ensuing program of empirical research, reported below (see also Cohen and Barrett in press), suggests that displacement descriptions of possession are better supported by intuitive cognition dealing with the social and physical worlds of persons and bodies than alternative models of possession, such as that taught by the Afro-Brazilian cult house leader.

Transmitting Possession

Cohen's ethnographic research was conducted during eighteen months (2002–2004) with a group of Afro-Brazilian religionists in the northern Brazilian city of Belém. Members referred to the ritual practices that identified them and other Afro-Brazilian communities across Brazil by the term *culto afro*, a generic term that applies to African-derived traditions of mainly Yoruban, Dahomean, and Angolan origin. Afro-Brazilian religion in Belém has been the focus of considerably less ethnographic research than in the major conurbations of the South and East, such as São Paulo and Salvador.[4] This lack of representation in the literature, however, belies the vibrancy of Afro-Brazilian religious forms in this region. In 2003, The Federation of Spiritist, Umbanda, and Afro-religions for the State of

Pará registered 1,600 *terreiros*, or Afro-Brazilian religious "houses," in the Greater Belém area. It was known, however, that there were many unregistered terreiros and other rooms used by mediums for spiritual healing and counseling across the city.

The terreiro within which Cohen conducted her research was the dwelling place of the group's leader, Pai (the *pai-de-santo*), and a rolling total of around five initiated practitioners *(filhos-de-santo)*, and was the venue for daily possession, healing, and ritual ceremonies. Membership at this terreiro was slightly above average for the city: a core of 20 members frequented public and private ceremonies, social gatherings, and business meetings, with numbers swelling to over 60 attendants at larger events. Neighbors, clients, relatives, and friends added to the core membership on these occasions, with spirit possession occupying a central place in proceedings. "Direct contact with the gods," the pai-de-santo once stated in an interview, "and the preparation of the body so that these gods could return to manifest themselves and offer advice is the supreme point *(ponto máximo)* of the culto afro." Informants typically referred to these gods as *entidades* (entities), a term encompassing deities believed to be of West African origin, such as *orixás* and *voduns*, as well as the spirits of European explorers, statesmen, princesses, and warriors, and *caboclo* spirits indigenous to the Amazonian region.

As the pai-de-santo explained on numerous occasions using different analogies, spirit possession involves a fusion of an entidade with the spirit or mind of a human host. In an interview, for example, the pai-de-santo likened the fusion to the combination of two substances, saying, "It's as if I got some water from the Amazon River and put it in various glasses and in each glass I added sugar, lemon, etc. Is it water from the Amazon? Yes! But each one has its own taste according to whatever was added." The Amazon refers to the possessing spirit and the sugar or lemon refers to the host. One new entity with a unique blend of attributes is created and this entity is what animates and controls the host's body in possession. This fusion model constituted the official teaching of the culto. Although this model was never the subject of frequent or protracted discussion, whether in the casual conversations that participants engaged in each evening, or in the regular, more formal study and seminar sessions that Pai organized, it was an inevitable component of culto teaching for initiated members of the group. Nevertheless, these participants did not offer such a fusion account when describing possession. Rather, the common understanding followed the displacement model that pervasively characterizes possession descriptions cross-culturally. This was despite the complete absence of any explicit transmission of such a model in Pai's teaching.

A senior member of the culto clearly described possession as the joining of the body of the medium with the spirit of the entity. These two parts, he claimed, make up the new (possessed) person. Another senior ranking member described possession as the moment in which one's own spirit withdraws "and another spirit comes and throws him/herself into your body." Drawing a clear demarcation between medium and spirit, another member described her possession episodes as follows: "I don't know where my spirit goes. I don't

know. I only know that I switch off. I don't remain in me." Another person stated, "Possession for me is a state of unconsciousness . . . in which we are not answerable for our actions, our bodily movements . . . we don't have control of our bodies anymore. It's the total loss of control of the body and the mind. Something else controls—it is the spiritual being." When possessed, the entidade is said to "take control," "dominate the mind," or "command the body and the mind," while one's own spirit is said to "lie down," "journey to the other world," "dream," "sleep," or "remain watching."

Although alternative descriptions of possession trance lightly pepper the ethnographic record (e.g., forms of fusion in which host and spirit merge, or "exchange experiential domains," during the possession episode [see Boddy 1989:151], and *oscillation* in which, for example, spirit and medium vie for control during a possession episode), *displacement* appears to be a more pervasive description of possession-trance by both observers and hosts.[5] As we have observed, a fusion account is explicitly upheld and taught by the leader of the Afro-Brazilian cult house that the above-quoted individuals frequented, but displacement accounts still prevailed. Furthermore, as we have noted elsewhere (Cohen 2007; Cohen and Barrett in press), fusion, in fact, seems better to account for culto participants' experiences of possession-trance. For example, fusion of host and spirit during possession explains why different mediums possessed with the "same" spirit entity exhibit very different manifestations. Fusion provides a satisfactory account for these differences because the preferences, characteristics, and personality of the host-spirit merger are unique to each medium. Participants, however, did not offer such an account when apparent behavioral inconsistencies were recognized (against a backdrop of displacement-model assumptions), often referring the anthropologist to the pai-de-santo for a possible solution.

That a displacement conception of spirit possession is dominant even when it appears incompatible with observers' experiences of possession and even when an alternative account is offered that fits with these experiences, and that the displacement concept is recognizably recurrent across a wide range of cultural and religious contexts, raises a set of problems concerning the causal roles of environmental and cognitive factors in the transmission of this cultural concept. These patterns of incidence suggest that historico-cultural factors cannot fully account for the transmissive success of this spirit possession concept. We hypothesize that panhuman features of normal human cognition explain, in part, the incidence of displacement in the Afro-Brazilian context in particular, and the cross-cultural recurrence of displacement more generally.

Theorizing Possession

Possession-trance phenomena have been the focus of hundreds of anthropological, medical, psychological, historical, sociological, and neuroscientific studies. The "otherness" of possession, it has often been suggested, is captivating, mysterious, and enigmatic. Many anthropologists have commented on "its uncanny inexplicability, its screaming

incompatibility with Western notions of personhood, its seeming disdain for self-control, its radical otherness" (Van de Port 2005:151; see also Boddy 1994; Keller 2002; Maurizio 1995; Rosenthal 1998; Stoller 1995; Taussig 1987, 1993; Wafer 1991), highlighting potential reasons for its appeal as a subject of research and aesthetic appreciation as well as its alleged resistance to cross-cultural translation and explication.

Janice Boddy, for example, characterizes *possession* as "a broad term referring to an integration of spirit and matter, force or power and corporeal reality, in a cosmos where the boundaries between an individual and her environment are acknowledged to be permeable, flexibly drawn, or at least negotiable" (1994:407); and she concludes her review of the anthropological literature on possession by acknowledging the potential for emerging notions of mimesis (see Taussig 1993) to shift the key question from "How is it that other people believe the self to be permeable by forces from without?" to "How is it that Western models have repeatedly denied such permeability?" (Boddy 1994:427). As a glance through the contents of recent anthropological journals will reveal, possession phenomena still have a magnetizing effect, but in "a shift toward more context replete accounts" (Boddy 1994:412) anthropologists have focused on the elaboration of interpretive approaches to possession phenomena and have largely turned away from explanatory models of cross-cultural patterns of recurrence and variation.

Nevertheless, there are few—if any—domains in which interpretation and explanation fail to inform one another in potentially instructive ways. Answers to questions of understanding are ultimately constrained by hypotheses—whether explicit or implicit—about where best to look. And theories of cultural phenomena are informed by selective and interpretive processes that are necessarily applied to the data even in their most raw form. A truly integrative approach demands transparency in the processes by which theory and interpretation proceed, and in the methodologies employed. We argue for such an integrative theoretical approach to possession that focuses both on meaning, structure, and experience of possession phenomena and on the identification of possible causal factors influencing patterns of recurrence and variation evident from the ethnographic literature. The value of such an approach is demonstrated through a return to the generation and investigation of ethnographically sensitive problems and hypotheses of generalizable, explanatory import, and the systematic and cumulative collection of various forms of relevant empirical data.

The questions guiding the research reported here are set within a selectionist framework. Across cultural settings, beliefs and ideas that tend to be readily generated, remembered, communicated, and used, because of how human minds normally function, will tend to out survive other competing beliefs and ideas. If human minds more readily entertain a displacement conception of spirit possession than other possible conceptions, that fact would contribute to why displacement is both cross-culturally recurrent and persistent even in the face of contrary religious instruction. Offering a potentially complementary approach to interpretivism and historical materialism, Dan Sperber (1996) developed this explanatory framework for the study of long-standing anthropological concerns to do with cultural transmission, diversity, and universality. Sperber's approach, and theories of other

anthropologists such as Pascal Boyer (2001) and Harvey Whitehouse (2004) on religion, Scott Atran (1990, 1998) on folkbiological systems, and Lawrence Hirschfeld (1996) on the development of racial thinking, have offered empirically tractable claims and hypotheses about the cognitive underpinnings of cultural transmission.[6] These claims, grounded in the properties and processes of human neural and cognitive architecture, turn on questions of perception, representation, memory, communication and motivation. How are cultural representations (ideas, ritual practices, etc.) remembered? Why are some representations more widespread than others? How does cognitive function shape and constrain cultural variation? These ethnographically informed questions and problems about belief and practice are amenable to empirical investigation through established psychological methodologies.

Applying this approach to the comparative, explanatory study of possession raises—and promises to respond (at least in part) to—crucial questions about the transmissive dynamics of possession. Rather than reducing the complexities and subtleties of widely variable possession beliefs and practices to the physiological mechanisms of trance, or measuring the superficial resemblances among possession and pathology, a cognitive approach to cultural phenomena takes seriously and focuses centrally on generative concepts within and across diverse cultural contexts. It recognizes the causal role of mental constraints and capacities on the forms that successfully spreading cultural concepts take, as well as the potential for particular ecological conditions to shape the operations of these mental mechanisms. A cognitive approach to cultural transmission may therefore potentially complement other theoretical frameworks in anthropology, including interpretive ones, to give a richer understanding of both cross-cultural recurrences and specific cultural phenomena such as that discovered by Cohen in Belém. Most importantly, the approach suggests tools by which theories may be tested, often through a combination of qualitative and quantitative techniques, thereby enabling cumulative theory building in the study of culture.

Below we report the findings of a series of controlled studies designed to investigate whether human cognitive systems are biased indeed toward a displacement interpretation of spirit possession. To do so we have taken the unconventional step of examining people with a relatively impoverished interaction with spirit possession in the context of religious practice. From the culto in Brazil we turned to Northern Irish university students in an attempt to reduce or eliminate the possible influence of social-functional factors that might contribute to the resilience of a displacement model. One possible complementary explanation for why displacement is cross-culturally recurrent, for example, lies in the instrumentality-intentional or otherwise—of possession-trance (Nelson 1971; Saunders 1977). Low-status women of a community, for example, may assume the persona and power of a deity or ancestor, thereby adding the authority of these beings to their statements, which often take the form of demands on husbands. Although such instrumentality is not a feature of all possession activity everywhere, a frequently recurring theme in possession cults is the temporary transformation of humble mortal into supernatural being for some locally relevant purpose, for example, the offering of advice, healing, the delivery of a message. The efficacy of the possession event presumes the total transformation of the medium, such that observers may be confident that they are indeed dealing with the spirit or deity, and not the medium-host.

Hence, insofar as possession serves a local function that entails that an ordinary human being is credibly transformed into an authoritative supernatural being, who has access to forms of secret and concealed knowledge (e.g., about the future), who may effectively heal sicknesses, and so on, this function and context may impose constraints on the range of workable candidate possession concepts. Recurrent significances and contexts of possession, then, could be key factors explaining why displacement models recur cross-culturally perhaps more frequently than other models such as fusion. If so, possession concepts outside of these contexts, where representation is not constrained by expectations to do with the social instrumentality of possession, may freely deviate from a displacement model, unless other factors, such as the proposed cognitive bias, are in play as well.

The empirical question to be investigated, then, is: how is possession represented among people where possession is not practiced and no elaborated cultural models of possession exist? Recent research on early-developing cognitive systems in infants suggests that humans may have distinct systems for handling ideas about the properties and behavior of solid physical objects (such as bodies) and a different set of systems for reasoning about activities of intentional agents. These systems have different evolutionary histories and developmental schedules, yielding an "intuitive dualism" (Bloom 2004). One feature of these systems may be the tacit presumption that bodily behaviors may be attributed to a single agent in any given episode, a feature we have called the "one-mind one-body principle" (Cohen and Barrett in press). If so, acquiring and embracing a displacement model of possession (in which a mind or agency fully displaces the other) may be more natural than acquiring a fusion model in which two agencies fuse in a single body. The cross-cultural recurrence of displacement conceptions of spirit possession is consistent with this account, as are Cohen's observations of the persistence of displacement in the face of authoritative endorsement of fusion. Nevertheless, because intuitive thinking is often richly amplified and elaborated across varied cultural landscapes, relevant conceptions from outside the possession tradition are critical. If we do find displacement descriptions in such contexts, this would more strongly suggest that the concept is guided by tacit cognitive assumptions about persons, bodies, and the relationships between them.

We have begun to conduct just such a research program investigating whether adults from outside of a spirit possession context spontaneously assume a complete displacement of mental (but not physical) characteristics when presented with hypothetical scenarios involving one mind going into another body. Results clearly indicated the predominant conception of the mind-transfer scenario was consistent with a displacement model and inconsistent with fusion (Cohen and Barrett in press). Nevertheless, such evidence far from conclusively settles whether displacement is a more cognitively natural conception of spirit possession than fusion or other models.

In the remainder of this article, we report additional findings generated thus far from our program of ethnographic and experimental research on the transmission of possession-trance concepts. We used a combination of forced-choice and open-question methods. These methodological techniques, developed mainly within the psychological sciences, enabled the targeted investigation of tacit assumptions guiding participants'

thinking. As such, they offer a valuable complementary tool to direct questioning and participant-observation techniques used in much ethnographic enquiry and are indispensable in the identification of recurrent patterns of intuitive thinking across widely different cultural landscapes. A fundamental premise of our approach is that concepts of possession and spirits do not have special cognitive supporting structures of their own, but they are supported—and constrained—by the same cognitive structures that guide ordinary, everyday, tacit thinking about persons, bodies, and minds and the relationships between them. The experimental techniques employed thus promise to help identify and characterize those cognitive tools, used for solving common problems in our social and physical environments more generally, that are exploited by stable and widespread possession concepts in particular.

Study 1: Describing "Possession"

In our first study, we asked a population of Northern Irish undergraduate students about possession, using a structured questionnaire combining open and forced-choice questions. Participants were recruited through advertisements posted around the university campus and through e-mail announcements sent to Levels 1 and 2 students in the Schools of Psychology and History and Anthropology. All participants received monetary compensation for time and travel costs incurred (standard amount, £10).

In this cultural context, as in much of the United Kingdom, possession is a familiar idea that our participants may have occasionally encountered in various forms in the popular media. Available cultural models for spirits entering people range from the Christian notion of being filled with the Holy Spirit (bearing similarities to a fusion model) to demonic possession in popular film such as *The Exorcist* (a vying-for-control or oscillation model, see Friedkin 1993). Possession by spirits, therefore, was a familiar notion for participants, whether such phenomena formed part of any explicit religious beliefs or commitments or were simply encountered in popular culture. We were interested in the degree to which possession descriptions converged (or diverged) across this population, however, given this potential range of possible possession concepts and backgrounds. In particular, we sought to investigate whether displacement would be most frequently offered as a description of possession, even outside of any salient cultural and contextual constraints concerning, for example, the subjective experience or instrumentality of possession-trance.

Method

Participants ($N = 51$; 16 male, 35 female; mean age, 20.5) were asked to imagine that they are from a community that believes that spirits occasionally enter the bodies of living people, and that episodes may last for anything from 10 minutes to 2–3 hours.[7] Participants were then asked a series of open questions in which they were encouraged to comment on various aspects of such a possession event. Questions included (in the following order);

1. What do you think it means for a spirit to enter someone's body?
2. How do you think this would affect how the individual behaves?
3. How do you think this would affect how the individual thinks?
4. How do you think this would affect how the individual feels?
5. Afterward, do you think the individual will remember that the spirit had entered him or her? Why or why not?

Finally, participants were asked to choose from a list of four statements which statement they think best fitted and which statement least fitted these communities' understanding of "what happens when a spirit enters someone's body." To avoid unduly priming a stereotype of "possession" casually encountered elsewhere, we did not use the term *possession* in any of the questions. Further, when directed at a hypothetical group of people, questions such as these serve as proxy for informants' own ideas that they might otherwise feel reluctant to share. As participants have received no explicit instruction or information about these people's concepts of possession, they must draw on their own intuitions about what possession is. Statements, which focused on the element of control over the body, included the following:

1. The spirit comes in and together with the host person controls the body's speech and actions. It is like two people merging into one new person during the episode;
2. The spirit comes in and controls the body's speech and actions intermittently with the host person. It is like two people take turns acting during the episode;
3. The spirit comes in and controls the body's speech and actions completely, with the host person doing nothing. It is like one person acts through another person's body during the episode;
4. The spirit comes in but the host person controls all the body's speech and actions. It is like the person acts normally with another person watching.

Statement 1 here corresponds to a fusion description of possession, 2 to an oscillation description, 3 to a displacement description and 4 to a host control description. The order in which the statements appeared was counterbalanced across participants.

Results

Responses on the best fit-least fit task demonstrate a strong preference for displacement descriptions as best describing how people understand what happens when a spirit enters someone's body. Of the participants, 33 chose the displacement option, 8 chose the fusion option, 7 the intermittent option, and 3 the host control option (X^2 [3, $N = 51$] = 43.98, $p < .0001$). Displacement descriptions were significantly favored over fusion, oscillation, and host-control descriptions ($p < .001$, sign test). Host descriptions were favored over all the other options as least fitting how people understand what happens when a spirit enters someone's body. Of the participants, 33 chose the host-control option, the oscillation and fusion options were both selected by 7 participants, and 4 participants chose displacement

(X^2 [3, $N = 51$] $= 43.35$, $p < .0001$). A sign test revealed that host-control was significantly preferred as a least-fit description of possession ($p < .001$).

Responses to the open questions allowed participants to offer more elaborate notions about what it means for a spirit to enter someone's body. Example statements of those participants who chose the displacement option in the best fit-least fit task include, "For a spirit to enter someone's body, an invisible presence (the spirit) enters the person and takes over their whole body and mind"; "They enter the body and control the mind, what they say, what they talk, act"; "The spirit can 'try on' the body like a set of clothes—can inhabit it but not permanently"; Another personality—person takes over and replaces the original person, taking control of their body, thoughts"; "It means that your body is taken over or influenced by another's mind. Your mind is no longer in control of your body." Of the eight who chose the fusion option, example statements include, "The spirit's influence may alter thought processes"; "Depending on how powerfully the spirit is felt, the individual's behavior could change dramatically"; "An outward force gets into the mind and body of a person, making them react in various ways."

Study 2: Identifying "Possession"

An additional group of participants ($N = 41$), selected according to the same procedures as Study 1, completed a task designed to probe notions about possession more subtly than the explicitly definitional task above. Although participants in Study 1 demonstrated a high degree of consensus on explicit definitions of possession in general, it is possible that such explicitly entertained displacement concepts are not applied when it comes to identifying whether a specific event is or is not possession. That is, a broader range of phenomena might be equally recognized as spirit possession even if a displacement definition sounds most fitting. Displacement concepts may be difficult to use and apply in the real-time perception and interpretation of possession events, while fusion may serve as a rich hub of inferences that allow people readily to make sense of possession behaviors. Our second study begins to investigate these possibilities.

Method

Participants were asked to choose from a list of four options which option appeared most likely and which appeared least likely to describe a possession episode. Participants were asked to imagine that they have been presented with an envelope in which there are four statements, each a short extract from different anthropologists' fieldwork interviews. They were told that they have been given the task of analyzing the statements and identifying what kinds of activities they describe, despite having no immediate contextual or general background information, and no indication about whether the names that appear refer to people or to supernatural beings. Participants were also told that someone else had already looked at the statements and this person had reported that he was almost certain that one of the

statements referred to a spirit possession episode. Participants were asked to indicate which extract they thought was most likely and which extract was least likely a description of a spirit possession episode. Four descriptions were offered:

- "and Hared shoves Pati to the front of the crowd" [*distractor 1*]
- "so Naita and Drec simultaneously share control of Drec's body" [*fusion*]
- "then Hasa takes over Gret's body and controls it" [*displacement*]
- "so Tapi influences Frewse to participate in the fight" [*distractor 2*].

This task enabled us to investigate indirectly people's expectations about specifically the degree of control that the spirit would have over physical behavior of the host, whether complete, or partial (e.g., equally shared with host). A complete control response would indicate that a displacement model is being used and a fusion response would indicate that a fusion model is being used. Distractor items also potentially describe possession episodes, but both statements (the first and fourth above) are more ambiguous concerning the possible possession model. In addition to obscuring the specific contrast of theoretical importance, the distractor items provide participants with the option of not committing to the strong version of either model. Again, the order in which the statements appeared was counterbalanced across participants.

Results

Of a total of 41 participants, 29 chose the displacement description as most likely describing the spirit possession episode, 9 chose the fusion description and 3 chose Distractor 2, (X^2 (2, $N = 41$) = 27.12, $p < .0001$). A significant preference for displacement-of-control over fusion in spirit possession episodes was thus revealed ($p = .001$, sign test). Thirty-three participants offered the description in Distractor 1 ("and Hared shoves Pati") as the least likely description of possession, 7 offered the Distractor 2 description ("so Tapi influences Frewse"), and 1 chose the fusion description (X^2 [2, $N = 41$] = 42.34, $p < .001$). No participants offered the displacement option as a least-likely description of spirit possession.

Discussion of Studies 1 and 2

The data generated by these investigations of Northern Irish undergraduate students' notions about spirit possession demonstrate that this population has significantly convergent notions about what it means for a spirit to enter someone's body. This is the case despite the absence of cult-specific teaching on possession and despite limited familiarity with and experience of possession practices. Indeed, it is probable that the portrayals of possession to which participants have been exposed occasionally through film and the media more closely resemble an oscillation or vying-for-control description of possession, as in films such as *The Exorcist*. Nevertheless, the overwhelming majority of participants represented spirit possession as entailing a temporary and complete substitution of the host's agency by the

spirit's agency, such that the spirit holds complete control over the behaviors of the host's body for the duration of the possession episode.

Although there is scope for a much larger program of research across many different cultural and religious contexts, these results together with the wider ethnographic data are sufficiently striking to suggest that possession concepts and ideas about spirits entering bodies are not only familiar cross-culturally, but that they are significantly similar cross-culturally also, whether or not possession is a salient aspect of local religious practice, experience and teaching. These results further prompt the question that if the convergent intuitions about possession as displacement are not drawn from any well-elaborated cultural model, how is this convergence to be explained? Given the range of possible possession models available, why does displacement predominate across religious and cultural contexts?

One potential explanation is that the specific notion of displacement possession is better supported by ordinary cognition about persons, minds, and bodies and the relationships between them than alternative descriptions, such as fusion. Ideas about spirit possession exploit ordinary cognitive capacities used in the everyday perception and representation of our social world, as do ideas about gods, spirits, eternal souls, ancestors, and so on. But some variants of these ideas better exploit these cognitive capacities than others. For example, the cognitive mechanisms that underpin the panhuman capacity to represent persons as having a core identity (i.e., the aspect of the person that remains constant throughout life) are mobilized in identifying other persons in our environment as fundamentally the same person from one day to the next, and from one year to the next. Such mechanisms find expression in variable ways across different sociocultural contexts and may be more or less sensitive to different sets or ranges of inputs.

For example, the notion of core identity may be utilized in the interpretation of a significantly broader range of social contexts in some societies than in others. In certain sociocultural contexts, people may be more inclined to interpret behavioral events against immediate contextual factors, or in terms of "multiple selves," than in terms of perceived enduring traits or dispositions. The variability with which panhuman cognitive mechanisms are activated and expressed, however, does not call into question their existence and their capacity to guide basic processes of social perception and reasoning about identity continuity. Such cognitive mechanisms govern the range of possible potential conceptual outputs without prespecifying completely the content of concepts that may become widespread in a population. Concepts of core identity may therefore be differently elaborated among different individuals and populations, but they are informed by a range of cognitive mechanisms that are routinely activated in dealing with the social world and in the categorization of persons according to unique, intrinsic, and fundamentally continuous properties.[8]

The same panhuman cognitive mechanisms are also likely mobilized in the identification of spirits in the bodies of possessed hosts in a similar way. Ancestor X, for example, is Ancestor

X whether he possesses Medium A today or tomorrow, and whether he is possessing Medium A or Medium B. We suggest that the displacement possession notion is supported by the mechanisms that underpin this capacity to represent persons as fundamentally continuous, unitary, and discrete, whereas the fusion notion fails to resonate with the output of these mechanisms, and as a result runs counter to readily generated intuitions about social agents. Resistance to the possibility of identity fusion, therefore, may result from the operation of a combination of perception and conceptual mechanisms that predictably govern basic and higher level social cognition.

Further Studies

To investigate whether ordinary cognition is a relevant factor in constraining the range of intuitively plausible spirit possession interpretations, and in encouraging specifically a displacement interpretation, we conducted a series of controlled experimental studies. The results of two of these experiments are reported elsewhere (Cohen and Barrett in press). These studies, demonstrating that displacement may be the dominant model guiding mind-transfer events, begin to hint at the possible presence of a guiding one mind-one body principle underpinning forms of mind-body thinking, whether in hypothetical mind transfers or in possession. This may be a crucial factor explaining the pervasiveness of displacement concepts even across different cultural contexts. As noted above, recent research is beginning to show that the perception of one's self, or person, as distinct from one's physical matter may be less a product of a particular philosophical tradition, and more the outcome of an intuitive dualist stance on the social world that begins to develop early in infancy (e.g., Bloom 2004). Displacement concepts of possession, ideas about souls, afterlife, supernatural entities, and even morality and disgust may all have at their core a natural conceptualization of the world as composed of two discrete kinds of phenomena: physical bodies that operate according to laws of physical forces (gravity, contact, cohesion, etc.) and psychological agents that operate according to beliefs, desires, dispositions, and so on. Belief in possession—a phenomenon so often denied systematic theoretical investigation, and represented in the literature as an inexplicable and enigmatic aspect of Otherness—may effectively exploit entirely ordinary, garden-variety social-cognitive mechanisms for making sense of our everyday social worlds.

Nevertheless, the potential transmittability of a concept is measured along various additional dimensions. Certain concepts may be readily generated, grasped, and entertained (e.g., a concept of a possessing spirit), but their salience and potential to generate meaningful inferences in real-time social interaction may be relatively poor compared to other similar concepts. Compare the inferential potential of an infant spirit possessing an invisible shoe and a spirit doctor possessing a medium healer, or the ease/difficulty with which we may represent the activities of an entire collective of ancestors simultaneously possessing a desk fan compared to the ease/difficulty of representing the activities of a single deceased relative possessing a human host. Perhaps displacement generates inferences with

greater ease and is more readily applied to understanding and predicting the behaviors of mind-transfer characters and possessed mediums than fusion. If so, we would have greater reason to believe that displacement is the cognitive default as a description of possession, and to suggest that this default presents fusion and other concepts with greater resistance in cultural transmission.[9]

Related factors in cultural transmission are memorability and ease of communication. Perhaps the most straightforward evidence that the transmission of displacement is strongly supported by ordinary cognition would be how well displacement versus other models of mind/spirit/body relations is recalled. Ideas that are better remembered and passed on are more likely to spread and to spread in relatively stable form. For a particular idea, belief, or schema to become widespread within or across groups, a helpful feature is that the idea is effectively and efficiently communicable (Bartlett 1932; Sperber 1996). An idea that cannot be readily understood, remembered, and communicated will usually lose out to ideas that can be. Perhaps, then, the fusion model of spirit possession is not as readily communicated (because it is either hard to understand, remember, or communicate, or some combination of these) as the displacement model.

The final study reported below investigated aspects of the memorability of displacement, fusion and other concepts. This study used hypothetical person-transfer scenarios to measure the relative ability to recall these and oscillation concepts. We presented participants with a narrative concerning beings with the ability to "possess" other beings under either a displacement, fusion, or oscillation model. (The term *possess* was not used in the script: see the method section below.) We measured how successfully participants recalled these beings and their special abilities. Importantly, no possession model was specified in this task. We did not wish to activate and explore concepts of possession but, rather, to identify the assumptions that pertain to the elemental conceptual building blocks of possession concepts (about bodies, agency, etc.).

Study 3: Memory for Possession Models

Forty-one undergraduate students, all young adults, (11 male, 30 female), primarily drawn from the Schools of History and Anthropology and of Psychology at Queen's University Belfast, Northern Ireland, participated in the study. Participants were recruited as in Study 1 and Study 2.

Method

Participants listened to an audio recording of a futuristic newscast set in the year 2365. The newscast, read by a professional actor, reported on a conference at which beings from various planets have gathered. A professor of intergalactic anthropology was interviewed about the conference and he described its rather unusual lineup of participants and speakers. Of

primary interest were three beings representing three different models of the relationship between minds and bodies: a displacement being, a fusion being, and an oscillation being. The professor in the news report describes the displacement being as a "being [who] is able to enter the body of another. The being whose body has been entered may remain conscious, but is unable to control his body." The description is further reinforced, "This means that if, for example, I were one such being, I could enter the body of another being from my planet and have complete control of that being's body. The host being is unable to control the body's behaviors." In the similarly structured description of a fusion being, the professor says that this "being is able to enter the body of another. The being completely fuses his mind with the being whose body has been entered and simultaneously they control his body. This means that if, for example, I were one such being, I could enter the body of another being and fuse with that being. We would merge together and control the body's behaviors." Finally, the oscillation being is described as a "being [who] is able to enter the body of another. The being whose body has been entered and the other being intermittently control the body. This means that if, for example, I was one such being, I could enter the body of another being from my planet, and I would sometimes have control and sometimes the host would have control over the body's behaviors." The order in which these three descriptions were heard was counterbalanced across participants.[10] Two distracter beings were described also, appearing as the first and final items presented (to reduce serial position effects).

The complete audio track was three minutes. The experimenter instructed participants not to take notes while listening to the recording. Before completing the narrative recall task, participants performed a brief distracter task: a word search with a two-minute time limit. They were then instructed to recall and write what the professor said about the beings attending the conference as completely and as accurately as they could remember.

Response scripts were independently coded by two hypothesis-blind coders. That is, coders attempted to discern which of the five beings (displacement, fusion, oscillation, and two distracters) described on the recording were remembered and identifiably described. The initial coder agreement rate was 91.7 percent and all discrepancies were resolved through subsequent discussion.[11]

Results

A total of 31 participants recalled displacement accurately enough for coders to recognize; 12 recalled fusion and 11 recalled the oscillation concept. A Friedman test, comparing response frequencies for related samples, yielded a significant difference among the three types of item, X^2 (2, $N = 41$) = 26.28, $p < .001$. Further, Wilcoxon signed ranks tests comparing the three test concepts pairwise yielded significant differences between displacement and each of the other two concepts (see Table 1). Of the participants who successfully recalled either displacement or fusion (but not both), 20 recalled displacement and 1 re-

TABLE 1. Comparisons of the Frequency with which Fusion, Oscillation, and Displacement Concepts were Identifiably Recalled

	Displacement-Oscillation	Fusion-Oscillation	Displacement-Fusion
Probability	<.001	.782	<.001
Z value	4.082	2.77	4.146

called only fusion. Similarly, when comparing recall for displacement versus oscillation, 22 recalled only displacement and 2 recalled only oscillation.

Discussion of Study 3

This narrative recall study presented participants with novel concepts in a novel context, each with equal reinforcement. What we found, however, is that not all concepts were equally memorable or communicable. The idea of one being entering the body of another and taking complete control of that being was significantly more frequently and accurately recalled than descriptions of what might appear to be minor variations of this displacement concept. These minor variations, however, apparently demand significantly more of our cognitive capacities in comprehension and communication. Concepts involving intermittent and fusion beings appear to be more cognitively costly, and may require considerably more cognitive and other resources (e.g., repetitive reinforcement, mnemonic aids) to ensure accurate transmission. These findings may help to explain, in part, why such concepts display differential rates of incidence across possession contexts, and particularly why in the Brazilian culto displacement descriptions of possession seem to stick, while explicitly taught fusion concepts fail to take hold. Furthermore, by not specifying any particular spirit possession model, studies such as these promise to reveal not only certain assumptions that may guide possession concepts, but also the expectations that obtain in many other forms of thinking about minds and agency, bodies, and persons in a broad variety of social situations (see Bloom 2004). Identifying precisely why displacement, out of a range of additional novel concepts, is significantly more memorable will require considerable further investigation into the schemas and mechanisms that guide such forms of thinking across different religious and cultural contexts, and that guide the representation of possession in particular.

Conclusion

The empirical findings presented here represent the modest beginnings of a new explanatory approach to the transmission of concepts about possession. Ethnographic data present two related problems, one specific and one general. Specifically, why do members of the Afro-Brazilian culto in Belém adopt a displacement conception of spirit possession-trance even when explicitly and repeatedly taught a fusion model by the group leadership?[12] Generally, why is something like a displacement model more cross-culturally recurrent? One possible answer to both questions is that the way human minds intuitively represent the

relationships among minds, persons, and bodies rendered displacement accounts easier to represent and use than other accounts such as fusion. Ideas about possession, including possession descriptions and representations of possession behaviors, employ entirely ordinary cognitive capacities that are used to make sense of the everyday social world of persons and bodies. The foundations of such fully mature adult capacities are being laid down from a very early age in development, and there is now compelling evidence that many of our expectations about how the world works are not solely or primarily the outcome of social learning but also are maturationally natural, emerging in infancy or early childhood without the need for special cultural conditions, models, or instruction (e.g., Atran 1990; Barrett 2004; Bloom 2004; Boyer 2001; Hirschfeld 1996; McCauley n.d.).

The findings of the studies and literature described here (and in Cohen and Barrett in press) suggest that there are clear and consistent cognitive parameters delimiting the space of readily transmittable concepts about persons and bodies and the relationships between them. They suggest that some person-body configurations should arise significantly more frequently than others in cultural representations across different contexts, should be more easily recalled than others, and should be more likely to be spontaneously generated in situations where a range of alternatives are theoretically plausible, and that this is not only or primarily an artifact of social learning and instruction. Taking these findings together, it appears that displacement is in some sense more natural than fusion when conceptualizing spirit possession. When members of the culto observe a possession event, they most readily understand it as a displacement. When hearing accounts of possession as displacement and accounts of possession as fusion, they may find the displacement accounts more understandable and memorable; hence, the contrast between what members of the culto are taught and what they reported to the ethnographer.

Cross-cultural data and developmental evidence is required to further substantiate these findings, and to identify additional factors (historical, cultural, cognitive) contributing to the relative success of particular concepts in transmission. Further studies investigating related aspects of various possession concepts, such as their potential to generate inferences and their relative utility in guiding the representation of behaviors in the observation of real-time possession scenarios, are required to augment the modest data provided so far. A programmatic approach to rigorous data generation and incremental theory building holds the promise of generating robust and increasingly comprehensive answers to why questions long abandoned by anthropological scholars in this area. Such research can add explanation to the rich descriptions and interpretations of diverse forms of possession now in the literature.

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Notes

1. We use agency here to refer to the mental states that cause actions. The agent is the entity that possesses mental states that cause actions. Some agents (such as human agents) may also possess memories, preferences, aptitudes, and bodies.

2. The "double" is described as "the essence of a person's humanity" and is distinguished from the human body (which "consists of flesh") and the "life force" (the "energy of life"; see Stoller 1989:31).

3. Note that the minimal definition of displacement makes no claims or assumptions about the location of the host agency during possession. Where the displaced host's agency goes, if anywhere, is superfluous to the criteria identified as minimally entailed by a displacement model. The possible presence of cognitive factors influencing this aspect of the displacement model is a separate empirical question.

It is worth noting that among populations that do employ a displacement model, there is frequently a lack of consensus about where the host spirit goes during a possession episode. Stoller, for example, writes, "There is widespread disagreement as to where the medium's double waits when it has been displaced" (1989:31). This was also the case among the Afro-Brazilian group studied by Cohen. This is not to say that people do not hold clear ideas about "where they go" when possessed but, rather, that there is considerable divergence on this issue within the population. This suggests that the displacement model held does not specify what happens to the host agency during possession trance, other than that he/she is no longer controlling his/her body's behaviors.

Furthermore, where the possessing spirit resides—whether inside or outside the body—is not specified by the model. Although displacement concepts tend to entail that the spirit agency resides within the body, such concepts may be commensurate with the notion that the spirit agency is operative from a position on or around the body. For example, Jennifer Nourse reports how "For Laujé mediums, the spirit takes over, or "sits in front" of, the human body it temporarily uses as a vessel" (1996:437).

4. See Cohen 2007 for an account of possible factors leading anthropological and historical researchers to ignore forms of Afro-Brazilian religion in the North—West region of Brazil.

5. This observation is based on the authors' preliminary analysis of the anthropological literature on possession-trance. Among those forms of possession in which the agency of the spirit and agency of host interact (in contrast to those forms in which spirit possession is conceptually represented as causing physical maladies or misfortune), there was a notable absence of descriptions that did not follow the displacement model. Systematic survey and quantitative analysis are required, however, to confirm this preliminary observation.

6. See also E. Thomas Lawson and Robert McCauley's *Bringing Ritual to Mind: Psychological Foundations of Cultural Forms* (2002).

7. It is important to convey the temporal aspect of possession to capture concepts more closely associated with temporary or short-term possession-trance episodes, rather than longer-term or permanent possessions. Likewise, the idea of "spirits entering the bodies of living people" was used so as to avoid minimally agentive descriptions of possession, such as trait possession, for example, where possession is effectively restricted to specific aspects of character and behavior (e.g., jealousy, depression, immorality). Although of interest to a more general investigation of notions about possession, such descriptions would have been irrelevant to our specific research questions (see Cohen 2008).

8. That such properties are perceived to exist is sufficient to constitute a concept of core identity, even though they or their source may not be explicitly characterized. Such a person-identity concept would parallel "placeholder" essentialist concepts reportedly activated in the intuitive categorization of biological species and social categories (see Gelman 2004).

9. Research on these questions is currently ongoing using a variety of studies designed to investigate both offline and online reasoning about displacement and fusion characters.

10. Three audio tracks were professionally engineered from the original master recording and copied onto three different CDs. Participants were randomly assigned to the three conditions.

11. The initial coding disagreements do not impact the main findings.

12. For an accessible psychological account of the broader phenomenon of "theological incorrectness," see Jason Slone's *Theological Incorrectness: Why Religious People Believe What They Shouldn't* (2004).

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