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André L. Souza & Cristine H. Legare

Department of Psychology, The University of Texas at Austin, Texas, USA

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The role of testimony in the evaluation of religious expertise

André L. Souza* and Cristine H. Legare

Department of Psychology, The University of Texas at Austin, Texas, USA

People learn about the efficacy and validity of cultural practices through the testimony and expertise of others. Although some religious practices are highly accessible and require no specialized expertise to engage in them, and others are part of highly controlled religious organizations that designate and legitimate religious experts, many are associated with loosely organized religious traditions that involve a variety of supernatural healing practices and remedies. How is expertise evaluated in these contexts? One possibility is that consensus information may be important; higher levels of agreement about the efficacy of an expert may be more convincing than lower levels of agreement. Another possibility is that the expertise of the informant may influence efficacy judgments. In cases in which the skeptic or supporter is another religious expert, does the expertise of the informant override consensus information? In the current study, we investigated the effect of consensus information and the expertise of informants on perceived efficacy evaluation of religious healers in Brazil, a cultural context in which religious healers are consulted to solve a great variety of everyday problems. Results indicate that although both consensus information and expertise independently influence the perceived efficacy of a religious healer, the opinion of another expert overrides consensus information when the two are in conflict.

Keywords: testimony; expertise; supernatural reasoning; religious cognition; traditional healing; consensus

Introduction

Much of what we know about the world cannot be learned from direct observation. Consequently, humans are deeply reliant on acquiring information from others (Reid, 1785/2002) and learn about the efficacy and validity of cultural practices through testimony. We define testimony as a linguistic statement taken by another as reliable evidence of the truth. Like other forms of cultural knowledge, the development and transmission of religious and supernatural beliefs are heavily influenced by the testimony and expertise of other people (Harris & Koenig, 2006). Many religious practices require an expert (e.g., ministers, shamans, and gurus) to perform and transmit specific actions and rites. Understanding the factors that influence judgments we make about the efficacy of their expertise is particularly important given the pervasiveness of religious experts (Ashforth, 2005; Cohen & Barrett, 2008) and the important function they serve as the agents of cultural transmission.

*Corresponding author. Email: andre.souza@utexas.edu
Research on the cognitive science of religion has provided mounting evidence that religious ideas and practices must be situated within the larger scope of cognitive representations and that basic features of human cognition can explain the origin and transmission of religious beliefs and behaviors (Barrett & Lawson, 2001; Barrett, 2002; Boyer, 1994; Boyer & Liénard, 2007; Dennett, 2006; McCauley & Lawson, 1993, 2002; McCauley & Whitehouse, 2005; Whitehouse, 2001, 2004). In fact, the process by which religious or supernatural information is evaluated may be more similar to the way in which scientific information is evaluated than is typically thought (Legare, Evans, Rosengren, & Harris, submitted; Legare & Gelman, 2008). For example, unobservable scientific and supernatural entities may be conceptualized in similar ways (Harris & Koenig, 2006) — that is, people learn about the ontological status of both empirically verifiable and non-verifiable concepts from cultural input, often conveyed through language and based on the testimony and expertise of others. Although there is currently considerable interest in the role of testimony in the development of supernatural belief systems (Harris & Koenig, 2006; Harris, Pasquini, Duke, Asscher, & Pons, 2006; Woolley, Boerger, & Markman, 2004), relatively little is known about the factors that influence the evaluation of supernatural information and expertise, a topic we propose is heavily reliant upon the testimony of others.

Although some supernatural healing practices are highly accessible and require no specialized expertise to engage in them (Legare & Souza, submitted), many others are part of highly controlled religious organizations that designate and legitimate experts (Whitehouse, 2004). How then is supernatural expertise evaluated? What kind of information is used to evaluate the efficacy of religious healers, experts, ministers, and prophets? There are several criteria that may matter. One possibility is that the amount of positive testimony matters (i.e., consensus information). Thus, complete agreement that a particular religious expert is effective may be more convincing than discordant opinions from several sources. Another possibility is that the source of the positive testimony may also be important. Is a religious expert considered a more reliable source of information for the evaluation of another expert than an experienced non-expert? And finally, how are conflicts between consensus and expertise resolved? In cases in which the testimony provided by the majority conflicts with the information provided by an expert, is an expert considered a more reliable source for the evaluation of religious expertise? Our objective was to investigate these questions by examining the contribution of consensus information and expertise to perceived efficacy of religious experts (i.e., religious healers).

Consensus and expert testimony

Individuals rely on the testimony of others to acquire information to which they do not have direct access (Harris & Koenig, 2006), and in doing so they rely on multiple kinds of information to evaluate the reliability of this information. One strategy that people often use is to check the accuracy of the information provided by an informant. Although informants with a history of being accurate are more often relied upon than informants with a history of inaccuracy, it is not always possible to check for the accuracy of information provided by others. When no explicit index of the accuracy of the information provided by others is available, it is useful to monitor other informants’ opinion about the same information for evidence of consensus among the group (Corriveau & Harris, 2010). In a classic study, Asch (1956) showed
that individuals are sensitive to group consensus when making a judgment (also see Sherif, 1936) – a phenomenon related to the principle known as social proof. People determine what an appropriate response is by examining the pattern of responses made by other people in the same community (Cialdini, 1993; Cialdini & Trost, 1998).

There is also evidence that expert testimony is important to evaluating the expertise of others; both adults and children rely on experts to acquire information about domains they do not have direct access to (Lutz & Keil, 2002; Sniezek & Van Swol, 2001; Woolley et al., 2004). For example, people often ask advice from others when making decisions, especially from advisors who have more expertise about the decision domain than the decision-maker (Sniezek & Van Swol, 2001). It has also been documented across several academic disciplines that the source of information is important to building trust; trust in information sources is a critical factor for behavior change (Gilson, 2003) and people who trust experts responsible for a specific technology perceive fewer risks related to the use of that technology (Frewer, Howard, Hedderley, & Shepherd, 1996).

Like other forms of cultural expertise, we propose that reasoning about religious expertise is influenced by the testimony of others. In the present study, we investigated how consensus information and expert testimony influence the evaluation of supernatural expertise by studying the perceived efficacy of religious healers in Brazil, a cultural context in which healers are frequently consulted to solve a great variety of everyday problems.

**Religious healers in Brazil**

Supernatural healing procedures are widely practiced and endorsed in Brazil. These practices, known as Umbanda, have their origin in about the mid-sixteenth century when the first African slaves were brought to Brazil (primarily from the West African coast). Umbanda is characterized by the communication with spirits or orishas that were considered very important in healing ceremonies (Cohen & Barrett, 2008). Umbanda experts, known as pai-de-santo or mae-de-santo (father-of-all-saints or mother-of-all-saints), intervene in the world around them through communication with powerful spirits that can be talked to, pleaded with, and cajoled through special offerings. The spirits are believed to be knowledgeable about herbs and about the special teas and potions needed by the sick and infirm. Given the prevalence of religious experts cross-culturally (Stein & Stein, 2007), as well as the lack of objective means to evaluate their efficacy, we propose that expert testimony and consensus information are essential to this process.

We examined the influence of consensus information and expert testimony on the evaluation of healer efficacy by exposing participants to different amounts of positive testimony (i.e., manipulating consensus) and also by controlling the valence of the expert’s opinion. We were also interested in the relationship between consensus information and expert testimony and how conflict between the two is resolved. Investigating culturally specific, supernatural beliefs in Brazil was an essential part of establishing the ecological validity of our experimental design; our primary objective was to examine how people engage in the evaluation of religious expertise in a cultural context in which the population routinely evaluates religious experts as part of their regular religious practices.
Method

Participants
Thirty-six Brazilian Portuguese-speaking adults (28 female, 8 male) participated in the study. Participants were from the metropolitan area of the city of Belo Horizonte located in the southeastern region of Brazil. Participants ranged in age from 24 to 47 years old ($M = 34.6$, $SD = 6.9$). They were recruited from public health centers located in a low-income neighborhood of Belo Horizonte. The public health centers (known as Posto de Saúde) are centers maintained by the city administration, and are aimed at serving the population from the community in which the center is located (they differ from hospitals in that they do not deal with complex medical procedures, such as surgery and life-threatening emergencies). Participants were recruited while waiting to be seen by a medical practitioner.

According to the Brazilian Institute of Geography and Statistics – IBGE (2008), Belo Horizonte has a population of over 6,082,776 people. The ethnic composition of the population is 41% Pardo (mixed race), 12% White, and 47% Black. In terms of religious composition, over 68% of the population self-identify as Catholic, 19% identify as Protestant, and 8% of the population report not having a religious affiliation. The participants in the present study were representative of the ethnic communities living in this region and were all native speakers of Brazilian Portuguese.

Materials
To investigate the role of consensus information and expert testimony in the evaluation of religious healer efficacy, six videos were designed. Each video, which corresponded to each experimental condition, depicted three informants providing testimony about the efficacy of a pai-de-santo. Among the three informants there was a religious healer (the expert). The videos varied in terms of (1) the amount of positive testimony about a fictitious pai-de-santo (zero, one, two, or three) and (2) positive versus negative testimony from the expert. Table 1 presents a schematic view of the content of all six videos. All three informants depicted in the videos were native speakers of Brazilian Portuguese and used names that are very common in Brazil. None of the participants reported having met any of the informants before.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Amount of Positive Testimony</th>
<th>Valence of the Expert Testimony</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>zero</td>
<td>negative</td>
</tr>
<tr>
<td>2</td>
<td>one</td>
<td>negative</td>
</tr>
<tr>
<td>3</td>
<td>one</td>
<td>positive</td>
</tr>
<tr>
<td>4</td>
<td>two</td>
<td>negative</td>
</tr>
<tr>
<td>5</td>
<td>two</td>
<td>positive</td>
</tr>
<tr>
<td>6</td>
<td>three</td>
<td>positive</td>
</tr>
</tbody>
</table>
Procedure

The study used a between-subjects design. Participants were randomly assigned to one of six experimental conditions (see Table 1). A native speaker of Brazilian Portuguese, who was also from the same cultural background as the participants, individually explained the experiment and conducted the experiment with participants. After being explained the procedures, the participant signed the consent form and the session began. The session began with the experimenter telling the participant that she would watch a video depicting three people talking about a \textit{pai-de-santo} and that, after watching the video, she would be asked a series of questions about the same \textit{pai-de-santo}. Each participant was told the following background story: \textit{“Pai José de Oxalá is a well-known pai-de-santo in the small town of Gandu in Bahia. You are going to listen to what three people have to say about him.”}

Then, the experimenter showed participants the video with the three informants talking about Pai José de Oxalá. After listening to the testimony from all informants, participants were asked to rate, using a Likert scale ranging from one (strongly agree) to 10 (strongly disagree), a statement regarding the efficacy of the pai-de-santo (i.e., \textit{“This pai-de-santo is effective”}). The efficacy judgment (the dependent measure in the present study) was the extent to which participants agreed with the statement about the efficacy of the healer.

At the end of the session, participants were also asked a question about their own and their family’s consultations with pais-de-santo and experience with Umbanda practices. Nearly 70\% of the participants reported that they or their family had consulted with a pai-de-santo at least once.

Results

The main objectives of the current study were to investigate the role of consensus information, expert testimony, and the interaction of the two on how participants evaluate the efficacy of religious experts (i.e., religious healers). To examine this experimentally we manipulated the amount of positive testimony from the informants (i.e., zero, one, two, or three) and also the valence (positive vs. negative) of the testimony from the expert and examined how this influenced how participants rated the efficacy of religious healers (i.e., pais-de-santo). Table 2 shows the mean efficacy ratings for each one of the six conditions. Overall, as expected, the mean efficacy rating for the pai-de-santo receiving positive testimony from three informants ($M = 3.5$, $SD = 1.64$) was higher than the mean efficacy rating of the pai-de-santo receiving positive testimony from none of the informants ($M = 8.0$, $SD = 1.78$). A 4 (Amount of Positive Testimony) $\times$ 2 (Expert Testimony) analysis of variance was conducted with the mean efficacy ratings from Table 2. Results revealed

<table>
<thead>
<tr>
<th>Positive testimony from the expert</th>
<th>Negative testimony from the expert</th>
<th>Positive testimony from the expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive testimony: zero informants</td>
<td>8.00 (1.78)</td>
<td>N/A</td>
</tr>
<tr>
<td>Positive testimony: one informant</td>
<td>6.5 (0.54)</td>
<td>4.5 (1.37)</td>
</tr>
<tr>
<td>Positive testimony: two informants</td>
<td>6.67 (1.36)</td>
<td>4.83 (3.25)</td>
</tr>
<tr>
<td>Positive testimony: three informants</td>
<td>N/A</td>
<td>3.5 (1.64)</td>
</tr>
</tbody>
</table>
a significant main effect of Amount of Positive Testimony, $F(3, 30) = 5.96, p < 0.005, \eta^2 = 0.59$, indicating that the more positive the testimony, the more efficacious the pai-de-santo was perceived to be. There was also a significant main effect of Expert Testimony, $F(1, 30) = 6.44, p < 0.05, \eta^2 = 0.21$; the testimony of another expert appears to matter when people judge the efficacy of a religious healer.

We were also interested in whether testimony from an expert takes precedence over consensus information when the two are in conflict. If the two are discordant, do individuals rely more on testimony of a minority expert than the lay majority? To address this question, we directly compared the condition in which all informants provided positive testimony except the expert to the condition in which only the expert provided positive information. We compared these two conditions because they represent the case in which the majority opinion directly conflicts with the expert’s opinion. The Independent Sample $t$-test indicated that expert testimony takes precedence over lay consensus when the two are in conflict; the healer was rated as more efficacious in the condition in which the lay informants provided negative testimony and the expert provided positive testimony than in the condition in which the lay informants provided positive testimony and the expert provided negative testimony, $t(10) = 2.73, p < 0.02$ (see Figure 1).

![Figure 1. Mean efficacy ratings for consensual testimony versus expert testimony.](image)

**Discussion**

We learn about many aspects of the world, including the efficacy and validity of cultural expertise, through the testimony of others. As in the case of evaluating expertise in natural or scientific domains, we propose that individuals rely on consensus information and expert testimony to evaluate supernatural expertise. The present study investigated how testimony influences the perceived efficacy of a religious healer using ecologically valid content in a cultural context in which religious healers are frequently consulted to solve a great variety of everyday
problems. It is worth pointing out that the primary objective of the study was not to investigate culturally specific religious practices per se, but to examine how people evaluate religious expertise in a cultural context in which the population actually engages in this sort of task (evaluating the efficacy of religious experts) as part of their regular religious practices.

Our data provide evidence that consensus information and expert testimony uniquely contribute to the evaluation of the perceived efficacy of religious healers. Both kinds of information increased participants’ willingness to rate a religious expert (pai-de-santo) as efficacious. Furthermore, when the testimony of the lay majority conflicted with the testimony of an expert, expert testimony took precedence over consensus information. This suggests that when consensus and expertise are in conflict, the opinion of an expert overrides consensus information. One reason for this may be that, in general, people tend to view experts as possessing high levels of organized domain-specific knowledge, whereas non-experts have loosely organized knowledge about a subject matter (Chi, Feltovich, & Glaser, 1981).

As an under-explored field of research, there are many potentially interesting questions about the evaluation of religious expertise that remain to be addressed. Given that women may be more likely than men to seek out traditional forms of healing practices (and our sample consisted of more females than males), examining sex differences in how supernatural expertise is evaluated would be a compelling topic for future research. It would also be interesting to examine the evaluation of religious expertise in diverse cultural contexts and to compare our results with a population that is naive to these healing practices. These comparisons would increase the generalizability of our results and provide valuable information about the extent to which they can be productively applied cross-culturally.

In sum, like other forms of cultural expertise, reasoning about religious expertise is heavily influenced by the testimony of others. The present study provides support for the claims that religious ideas and practices are situated within the larger scope of cognitive representations and that basic features of human cognition provide explanatory information for the evaluation and transmission of supernatural beliefs and practices (Boyer, 1994; Dennett, 2006; McCauley, 2000; Whitehouse, 2004).

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