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# Negation and Doubt in Religious Representations: Context-Dependence, Emotion and Action

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## Abstract

Religious representations are often held to be counter-intuitive, in that they represent properties that contradict deeply-held assumptions about the natural world and its behaviour. In this paper, I consider some implications of understanding such counter-intuitiveness not in terms of simple negation of those assumptions (as is also widely assumed), but rather in terms of casting them into doubt. Doubting such properties implies that possessors of the representations are not certain about whether religious entities follow ontological assumptions about the natural world or negate them. However, religious doctrines and culture also carry the promise that such doubt can and will be resolved, so that believers have the anticipation of arriving at a clear knowledge of the ontological nature of gods, spirits, and so on. Such conceptual doubt and the promise of its resolution imply that the content of religious representations is more sensitive to context than widely countenanced. Now, since this doubt concerns ontological properties whose truth or falsity cannot be assessed by ordinary empirical means, the important kinds of context are ones that do not primarily offer new empirical information. Instead, they prompt resolution by providing input whose force can be to change belief in the doubted properties into belief in their truth or falsity. I argue that these inputs come from three key sources, which may interact – religious actions or rituals, emotions, and social deference. These sources follow well-understood patterns for both religious and non-religious representations. However, given that they do not provide new information per se, the resulting resolutions of doubt may not easily generalise beyond the specific contexts of action, emotion and social relations that produces those resolutions. As a result, holders of religious representations are seen as recurrently revisiting their doubts, with rituals, emotions and social deference providing means of – usually, temporary – resolution.

## 1 Introduction

Amongst the key pre-theoretic intuitions concerning religious representations, three appear to be predominant. The first is that these representations incorporate some form of counter-intuitiveness or conceptual contradiction as an integral part of their descriptive content. The second is that such descriptive aspects of content are intimately connected to non-descriptive aspects related to their “psychological modality”, and in particular to a range of emotional connotations. The third is that both the descriptive and non-descriptive aspects of the content of religious representations are closely related to religious behaviour or rituals. Taken together, the three intuitions provide a general position that conceptual representation, emotion and action are intimately related to each other in the religious domain, but leave open the precise nature of their relations.

In this paper, I discuss some of the issues that arise when their relations are considered. In particular, I will explore the implications of a specific construal of the counter-intuitiveness of descriptive content, for the relations to emotion and action, and will suggest that this construal may lead to a more natural account of those relations than do other construals. This approach to counter-intuitiveness is one that sees a major role for doubt concerning the ontological properties of religious entities, as opposed to direct negation (see Franks (2003) for a detailed presentation), and consequently sees the content of religious representations as fundamentally more dynamic or context-dependent than the somewhat static approach often assumed elsewhere.

The paper is structured as follows. In the next section, I will outline the possible role for doubt in religious representations, contrasting this with accounts that assume that counter-intuitiveness involves simple negation of intuitive ontological properties. Following this, I will consider an implication of such doubt – namely, that religious representations are dynamic in their content, and I suggest that such context-dependence is evidenced in their relations to emotions, action and deference. I contrast the view presented with other accounts that seek to articulate the connections between content, emotion and action in religious representations.

## 2 Doubt and Counter-Intuitiveness in Religious Representations

Views of religious representations that are inspired by the cognitive sciences tend to agree that those representations are natural or intuitive in that they are represented, processed and understood by the same mechanisms as non-religious representations – so accounts of the former should be continuous with accounts of the latter. Hence, the account of our representations of gods and spirits should not be essentially different from the account of our representations of animals and people. However, the content of those religious representations is also seen as somehow counter-intuitive. The most straightforward interpretation of this notion is that religious concepts negate the intuitive ontological expectations about the natural world – about physics, psychology, and so on – which govern non-religious concepts.

To see this, it is useful to understand religious representations as involving a form of implicit concept combination, in which complex representations are derived from more basic ones. Those basic representations – concepts – are usually held to encode important properties of a domain such that, when entities in that domain are categorised as members or non-members

of a category, these concepts are deployed. The kinds of contents represented in such concepts are widely agreed to be intimately connected with peoples' commonsense theories about the relevant domain (e.g., Murphy & Medin, 1985; Medin & Ortony, 1989; Murphy, 2000). Those commonsense theories are often taken to represent distinct types of properties of two broad kinds. One kind represents information about category members' surface properties – that is, characteristic shape, size, colour, movement, and other inspectable properties that function as more or less reliable indicators of category membership. Such surface or diagnostic properties of the category may act as evidence for a non-demonstrative inference about the possession of inner properties of the category: that is, if something has the appearance and/or behavioural properties of a blackbird, then (by non-demonstrative inference) it more than likely is a blackbird. These inferences are widely characterised as concerning the entity's possessing the hidden essence of the category; such essences constitute the second main kind of property held to be represented in concepts. The proper characterisation of an essence is not completely clear, but it is usually taken to comprise properties that are necessary for category membership, which could be inspectable under ordinary conditions (e.g., to be a blackbird, a bird has to have been born from another blackbird), or properties which give rise to other, category-defining properties, but which are not themselves inspectable under ordinary conditions (e.g., some hypothesised internal properties which give rise to a blackbird looking like a blackbird). Another – and less widely discussed – option is that the essence may be a property that might be possessed under ideal conditions, or which an ideal member of the category might possess (e.g., to be an ideal blackbird, a male would need to have perfectly black plumage). In this way, essential properties connect the representation of entities to fundamental ontological assumptions about a domain. For example, entities in the domain of folkbiology will be represented as possessing essential ontological properties of that domain, and the characteristic inference

patterns for folkbiology will be supported by those properties. Such ontological assumptions may comprise sets of intuitive expectations that the natural world is implicitly expected to respect. For discussions of these and related points, see Atran (2002); Murphy & Medin (1985); Medin & Ortony (1989); Braisby, Franks & Hampton (1996); Gelman & Hirschfeld (1999); Murphy (2000).

Many theories of religious representations take it that concepts of religious entities are arrived at by contradicting some such ontological expectations. Perhaps the most detailed such account is offered by Boyer (1994a, 1994b, 2000), and echoed by Atran (2002) and Barrett (2000). Boyer has argued that a religious representation activates at least one ontological category – for example, the representation of spirit activates the ontological category of “person”. The representation then directly negates (“breaches”) some of the intuitive expectations of that ontological category – for example, the representation of spirit is of a “person” whose properties definitely do not respect the intuitive ontological expectations concerning physics that normal people obey (e.g., spirits are usually invisible and able to move through physical obstacles). Additionally, such representations also activate (“transfer”) the remaining intuitive expectations of that ontological category – for example, a spirit behaves like a “person” with a functioning mind, acting according to belief/desire psychology, and so on. The key factor, then, is the counter-intuitiveness of the representation – the fact that it runs counter to intuitive ontological expectations of the ordinary world. So the representation of a religious entity is in large measure constructed by applying direct negation to a subset of the essential properties of one or more non-religious categories.

Three principle sources of difference can be seen in extant accounts that view religious representations as counter-intuitive variants on ordinary concepts. The first concerns the

nature of such counter-intuitiveness – the qualitative form of the contradictions of intuitive expectations in our religious concepts. That is, are intuitive expectations fully negated or merely cast into doubt? The second concerns the extent of such counter-intuitiveness – the quantitative preponderance of contradicted versus non-contradicted intuitive expectations in our religious concepts. That is, does counter-intuitiveness relate to the bulk of the content of religious representations, or to a restricted range of contents? The third concerns the representational location or type of content that is concerned. That is, does contradiction relate to ontological assumptions alone, or to other contents (including those inferentially related to ontological assumptions)?

Regarding the nature of counter-intuitiveness, it is clear that Atran and Sperber are in accord with Boyer's notion that the key quality of counter-intuitiveness lies in the direct negation of intuitive expectations – that is, in taking a category's ontological property P, and incorporating its negation, ¬P into a religious representation. I have argued elsewhere (Franks, 1995, 2003) that such negation expresses only one – and indeed the most extreme – result of aligning two apparently contradictory domains. A less stringent form of contradiction can be referred to as doubt, where the result is a representation that incorporates neither P nor ¬P (this is equivalent to assuming a 3-valued logic of negation, where  $\neg \neg P \neq P$ ). There may be, as it were, a truth-value “gap” that reflects the semantic doubt over the possession of the properties. Some non-religious examples of linguistically explicit concept combinations, which reflect doubt over essences, include apparent friend, blue lemon, alleged criminal. Here, the modifier concept casts doubt on the essential properties of the head concept: for example, an apparent friend is a person whose friendly behaviour who may or may not be caused by true friendship; an alleged criminal is a person who has been claimed to be a criminal, but may or may not really have committed a crime. To take a religious

example, concerning the Catholic Mass, it is possible that the wine and bread are represented by communicants as not determinately possessing either the essence of the blood and body of Christ, nor the essence of wine and bread, nor their negation: i.e.,  $\neg$  (essence of wine &  $\neg$  essence of wine) &  $\neg$  (essence of blood of Christ &  $\neg$  essence of blood of Christ). Such conceptual doubt may take (at least) two different forms – a weaker and a stronger form (Braisby, Franks & Harris, 1997). The form noted above is the weaker, “exclusion” doubt, which reflects the possibility that an entity does not clearly possess property P nor  $\neg$ P. Such a form has been employed in characterising conceptual “fuzziness” (e.g., McCloskey & Glucksberg, 1978; van Mechelen, de Boek, Theuns & de Greef, 1992). A stronger form of doubt – “inclusion” doubt – reflects the possibility that an entity possesses both the property P and  $\neg$ P. Inclusion-doubt appears to reflect the possibility of a tolerance of contradiction in certain forms of thought, as argued for by Nisbett and his colleagues (Nisbett, Peng, Choi & Norenzayan, 2001). Whether such “gaps” in belief are actually eradicable, or believed to be eradicable, may well depend on the domain of the belief. In Franks (2003) I argued that it is important to the psychological sense of “mystery” that pertains to the doubt in religious beliefs, that the believer does believe in the possibility of that doubt being resolved. Below, I will argue that the presence of such “gaps” also renders religious representations on this account more context-dependent than on an account that assumes that counter-intuitiveness involves only property negation. And such context-dependence renders them the more susceptible to being influenced by emotions and rituals or actions. In a sense, then, we can think of such gaps or doubts as being usually unresolved in peoples’ representations, but susceptible to temporary, situation-dependent resolutions, according to the context (and its attendant actions, emotions and possibilities for social deference). This possibility bears contrast with Atran, despite his assertion that religious beliefs cannot be truth-evaluated. Atran’s point – of course, quite right – is that religious beliefs, because of their content,

cannot be evaluated for truth via ordinary means of data gathering and observation, unlike other representations. His characterisation then appears to be based on the view that such evaluation is not promised or offered by religious beliefs. However, this is a view from, as it were, the “outside”. My point is that a constituent quality of religious representations from the “inside” – for those who believe them – is that they are subject to certain limited forms of doubt, that they are not truth evaluable (or resolvable in the terms used above) in the ordinary manner, but that they are nonetheless believed to be resolvable. That is, the promise of resolution of the doubt is critical, as is the occasional and temporary sense – arising through emotion, ritual or explicit semantic deference to authority – that the doubt has been resolved. Indeed, it is in part the promise or belief in the possibility of resolution that renders religious beliefs “relevant mysteries” (Sperber, 1996): a full understanding of them may be outside of the believer’s grasp on any one occasion, but they are only just outside of that grasp (on the inside of the outside, as it were), and the believer may have the temporary sense on occasion that they have been understood, or that they could be understood in time.

Regarding the quantity or preponderance of counter-intuitiveness, Boyer appears to suggest that maximal counter-intuitiveness is related to religious representations – or at least to culturally resilient and successful representations, of which religious representations form a type (see, e.g., Boyer & Ramble, 2001). By contrast, Atran (2002) and Sperber & Atran (1991) argue in favour of minimally counter-intuitive representations – that is, religious representations involve negation of one or two key ontological assumptions for a domain, but preserve intact the bulk of the domain’s ontological properties. This, according to Atran, contributes to the preservation and utility of religious representations in a world that is governed by non-religious principles, since it allows a clear interface between religious entities and non-religious ones. Atran bases this argument in large measure on empirical

evidence of recall of ideas, which suggests that participants are no more likely to retain memories of highly counter-intuitive ideas than of minimally counter-intuitive ideas. Whilst this evidence is relevant to the issue in general, it is at best suggestive – the fact that people remember ad hoc minimally counter-intuitive ideas does not carry the inference that those religious ideas that are remembered under normal circumstances are minimally counter-intuitive. However, the present view would tend to concur with that of Atran and Sperber. Given that the key form of counter-intuitiveness envisaged relates to doubt, and that the working assumption of a possessor of a religious belief must be that such doubt is in principle resolvable, then this would suggest (though not, of course, entail) that a key aspect of religious doctrine and ritual involves ontological doubt management. Put simply, doubts are more practicably managed when they are fewer and clearly represented (there is, as it were, little room for meta-doubt – doubt about what is open to doubt).

Regarding the location of counter-intuitiveness, it is useful to differentiate between the content of the representations themselves (and in particular, their ontological assumptions), and any inferences that are carried out using those representations as input (in particular, inferences about how to behave in respect of those entities). Boyer assumes that religious representations are determinate: that is, the ontological status of religious entities is clear, since the cognitive mechanisms through which the representations are produced involve simple negation and transfer of ontological properties. The implication is that we have clear knowledge of the essential properties of the things which religious representations represent. However, Boyer also suggests that such counter-intuitive ontology produces “inferential gaps” – that is, uncertainty concerning whether and how to adhere to behavioural implications of religious beliefs. So Boyer’s approach appears to combine representational determinacy over ontology with inferential indeterminacy over resultant inferences about

belief and behaviour. Sperber's approach, in contrast, presents a higher degree of indeterminacy. Sperber suggests intuitive contradictions may not result in a clear negation of one of the beliefs (unlike in Boyer's "breaches"). Rather, the cognitive mechanism for generating complex concepts may not produce an interpretation at all; instead, what results is a "semi-propositional" belief. Here, the two contradictory elements are preserved in the representation – although only partly understood (since the contradiction is not resolved), the belief is still a true belief. The contradiction may not be resolved at all, but if it is resolved, the outcome may depend on deference to an appropriate authority. Given the ontological contradiction, there may be indefinitely many possible interpretations of the ontological nature of the entity represented by the religious representation – and the preferred interpretation may or may not involve arriving at a determinate ontological interpretation. However, it is worth noting that the assumption of minimal counter-intuitiveness may at least limit the ontological indeterminacy to a finite subset of properties. The constituent ontological representational indeterminacy of such representations is combined with an inferential indeterminacy that is similar to that proposed by Boyer. Atran's approach presents a similar picture of indeterminacy to that of Sperber.

So, for Boyer, religious representations have representational ontological determinacy coupled with inferential indeterminacy, whilst for Sperber and Atran religious representations have representational (ontological) indeterminacy coupled with inferential indeterminacy. The current approach, in drawing on well-understood theories of mechanisms for constructing complex concepts, allows a middle line to be pursued, in which religious representations are more representationally indeterminate than Boyer suggests, but not as open-ended as Sperber and Atran appear to claim. The key difference being that the available mechanisms for arriving at an interpretation for contradictory concept combinations provide a

delimited space of possible ontological interpretations, and a general account of how doubt might be resolved (for detailed discussion of such mechanisms, see Franks, 2003).

In sum, regarding the nature, extent and location of counter-intuitiveness and contradiction in religious representations, the different extant approaches make different claims. The key to the rest of the discussion will be the issue on which there is the clearest difference between the current approach and those of Atran, Boyer and Sperber – that is, the characterisation of counter-intuitiveness as a form of conceptual doubt.

### 3 Doubt and Context-dependence and Religious Representations

We have arrived at the view that some religious representations are (1) types of (usually, linguistically implicit) concept combination in which (2) a subset of the main features that represent ontology are cast into doubt. Both of these qualities also suggest a further aspect of religious representations which has not been systematically addressed in the literature – the possibility of context-dependence in their content. Context-dependence has been central to understanding the structure and content of conceptual representations in cognitive psychology. In a sense, providing an account of conceptual content then involves providing an account of (a) the basic content represented (b) the content arrived at in different contexts (c) the mechanisms or principles by which (b) is derived from (a). So providing an account of content involves providing an account of the content as it emerges in different contexts. By contrast, the accounts of religious representations offered by Atran, Boyer, Sperber and others have described content without explicit reference to contextual variation – that is, they have offered general accounts of “the” content of religious representations. In ignoring contextual variation, they have treated religious representations as somehow different from non-religious concepts, and have also bypassed issues concerning the processing of religious

beliefs; in doing so they have also been unable to address in detail the dynamics of the relations between conceptual content, emotion and ritual.

We can see the lack of focus on context-dependence as in part emerging from those theories' commitment to counter-intuitiveness as clear property negation – for, if it is clear what the basic ontological properties in question are, there is no particular motivation for believers to seek further information (at least, about those properties). One general picture of how contextual variables might influence conceptual content is via the knowledge or information it yields – either by incorporating such knowledge from outside the concept into the concept itself, or by using that knowledge to change the weighting or assessment of knowledge already in the concept. As summarised by Murphy, knowledge from outside the concepts will be actively used (for example, in categorisation), “when the decision is difficult, is slow, is based on little perceptual information, and in similarly straitened circumstances” (Murphy, 2000: 172); for automatic day-to-day categorisation or judgements which do not share these qualities, little or no concept-external information will be used. And categorising or thinking on the basis of doubtful ontological properties – that is, resolving doubt – in religious representations appears to be a case of just such “straitened circumstances”.

The general view I suggest is that, for properties that are in doubt in particular, context can have a marked effect – in one context, the interpretation may incorporate that property, whilst in another context the interpretation might incorporate its negation; in still another context, the influences may remain insufficient to resolve the doubt, so that the interpretation retains the doubt over that property. The picture is one in which such a resolution may only hold for that specific context or situation – that is, in which at least some of the content associated with the interpretation is thus represented for that occasion, and not necessarily for others

(see, e.g., Clark, 1983; Franks, 1995; Sperber & Wilson, 1986, 1998). We can consider such context-dependent use of concept-external knowledge as being subject to general requirements of processing and task relevance. In particular, the effort to access additional information should be justified by the constructive impact of that information on the cognitive processing and action performance in hand.

There is a major difference between resolving doubt for religious representations, and doing so for the bulk of non-religious representations. Consider again the examples of an apparent friend or alleged criminal; in such cases, there is a determinate fact of the matter which can be discovered by ordinary empirical means. So, contextual influences would have a role in resolving this kind of doubt by providing additional knowledge or information about the people in question. By contrast, doubt over ontological properties in religious representations does not appear to be resolved by such means – gods and their ilk rarely make unambiguous declarations, appearances nor provide other empirical evidence of their properties. Adequate empirical knowledge is not available in this case, and that which is available will not avail; rather, context's role here is largely to provide knowledge or influences that lead to a different assessment or evaluation of properties that are already represented in the concept. The contextual influences are therefore not concerned with discovering more about the properties of the entity per se. Rather, they are concerned with the contexts and experiences in which the entities are held to be relevant, and their impacts on the believer's epistemic attitudes towards the entities' properties that are pertinent to those contexts and experiences. Hence, "context" here, is being used broadly to include not only the physical and social situations of concept use, but also aspects of psychology and behaviour that arise differently in response to such different situations. I will suggest that the key elements of context that are important for resolving this kind of doubt in religious representations have three sources: the

use of those representations in religious actions and rituals, the connections that emerge with emotions, and input from culturally relevant authorities. Each of these factors may have independent influences, but their impact also often arises through their interaction.

Concerning a role for action and ritual, it is likely that, if doubted properties are relevant to performing a given religious action or ritual, and that action is performed, this performance will contribute to resolution of that doubt. Let us take a very simple-minded example.

Consider the property to be represented in the concept of a god, relating to a particular quality of theory of mind – being a kindly, benevolent god (or being the converse, a harsh, judgmental god). If this property is doubted or uncertain, then part of the concept will represent something like,  $\neg$  (benevolent &  $\neg$  benevolent). Now consider a ritual or activity that presupposes that the property is in fact, true: that the god is benevolent – say, some kind of public absolution for misdemeanours. That is, it is a necessary condition on belief that a ritual has been enacted successfully to believe that the god does possess this property. If this ritual is performed adequately and accurately, and therefore is seen to succeed by the social-religious group of which the concept possessor is a member, then that property is taken to be true. So the evidence of the truth of the property is the success of the ritual actions, since that success presupposes the truth of the property.

Such a possibility could be construed in either of two different ways, in terms of the nature of the representations employed. The first depends on the possibility that a single entity may itself be represented and categorised in two ways – in taxonomic or in script terms (see Ross & Murphy, 1999; Schank & Abelson, 1977). Taxonomic representations are the kind that are normally assumed in discussions of concepts and categories, where items are understood in terms of basic properties that allow them to be ranked according to specificity/abstractness.

Foods, for example, may be categorised in taxonomic terms into fruit, vegetables, and so on. By contrast, script-based categorisations are based on understanding items in terms of the characteristic patterns of behaviour and actions with which they are associated. In the case of foods, then, we might differentiate them in terms of the meals to which they are appropriate (settings, times and locations being relevant parameters) – for example, breakfast foods versus dinner foods, or weight-loss diet foods versus sports-playing fitness foods.

Taxonomic and script-based categorisations of items are thereby likely to cross-classify each other. This is because, as Ross & Murphy found, although the items possess the same properties in the different categorisation frameworks, those properties will be differentially relevant to those frameworks. What is important to differentiating a fruit from a vegetable (e.g., some assumption about underlying essences) is not directly important to differentiating breakfast foods from dinner foods (e.g., cultural appropriateness, assumptions about digestibility). So a single property may be given different weight, or be assessed differently, or perhaps be understood as being possessed or not possessed on different grounds, depending on the type of representation involved. Assessing the ontological properties of a god relative to a taxonomy of the natural and non-natural world is one thing (and may result in all manner of conceptual doubts about ontology), but assessing them relative to performing an action or script in which that property is implicated is another entirely (and may remove conceptual doubts as a result of action).

The second possibility for considering the connection between action and doubt resolution does not involve postulating two separate ways of representing the same item by one person, but rather involves assessing the role of concept use in influencing the conceptual representation. For example, Medin, Lynch, Coley & Atran (1997) have shown that people who actively work with category members as part of their everyday lives, develop

representations that reflect their usual interactions with those items. For example, tree landscapers have somewhat different concepts of trees from biologists – the former more focused on functional attributes, relations to weeds and shrubs, and so on, and the latter more focused on botanical and chemical differentiations. This is not, however, simply to say that use and interaction with items is important in acquiring or learning the concepts. Ross (2000) has shown that, where the category of the items is noted by people during an interaction, that interaction will then feed back into the representation of the category. So the ways in which we interact with items in a category, or behave when using a conceptual representation, can then alter the way we represent that concept. Once again, then, if the use primes awareness of or salience of certain properties, we can expect that their role in the representation will be altered. This could involve either adding greater weight to properties that are already in the representation, or resolving doubt about properties whose appropriateness was uncertain prior to the interaction.

Turning to the possible role of emotion as a determinant of conceptual doubt resolution, the picture is similar. Here, however, there has been little theoretical or empirical work relevant to connecting concepts and emotions (as opposed to concepts of emotions), so my comments on process are necessarily more speculative. In what follows, I will use “emotion” to cover the general affective spectrum that includes emotions and moods. Since the current goal is to articulate connections between conceptual properties and the affective domain in general, the specific differences between emotions (as fleeting and directed states, for example) and moods (as enduring and undirected, by contrast), are not important. The general position is that the resolution of doubt over a property may be connected to the experience of an appropriate emotion (which itself may connect with an action or ritual) – for example, a doubted property may be associated with a positive emotional response in a ritual, thus

leading to a resolution that prompts incorporation of its positive resolution into the representation. Consider again the possible property of a god as  $\neg$  (benevolent &  $\neg$  benevolent). Adding to the claim about ritual above, the picture is: if the ritual assumes, for its successful completion, that the property is true, and if the ritual is performed successfully, and if that performance produces positive emotions, then the doubt may be resolved positively for that property. Here, it is the emotion that is assumed to play a key role, not the action itself. The more general case would be one where the ritual remains agnostic about the property being true – e.g., prayer does not necessarily presuppose a benevolent god; then if the act of prayer is itself connected to experience of a positive emotion, the doubted property may be resolved in favour of benevolence.

What kinds of process might support such a connection? The most direct relates to well-established characterisations of the process of arriving at an emotional experience. The general characterisation of such experiences is that both the quality or type of emotion experienced, and its intensity, may depend on cognitive interpretation or appraisal of the situation, which then provides an explanation for any physiological arousal experienced (e.g., Lazarus, 1992; Smith & Lazarus, 1993). Such appraisal involves not only assessing the nature of the external situation or event that might cause the emotional response, but also the responses of other people exposed to that same situation or event (Schachter & Singer, 1962). The picture, then, is one in which a doubted representation itself may induce uncertainty and hence some physiological arousal on entering a religious ritual. The additional arousing qualities of the ritual, arising from the panoply of sensory and imagery, as well as social relations and activities, then serve to heighten that arousal. In interpreting the situation that has given rise to the arousal, the participant is then in a position of deferring to his or her peers and authority superiors in the ritual. In such emotional deference, if salient others

construe the situation as a positive emotional one, then so should the participant. The further link being suggested here, is that this will then induce an appropriate resolution of conceptual doubt. This would then be a component of the cyclical feedback process between appraisal, arousal and emotional experience: if the doubt is resolved following feedback from the emotional experience, this new representation (with doubt removed) then adds to the ongoing appraisal to the emotion-inducing ritual, thus potentially both clarifying the valence or nature of the emotional experience and heightening its intensity.

An additional reason for thinking that emotions might have such an impact on concepts is to consider conceptual content as being related to the belief component of social attitudes. Attitudes, as evaluative stances on social objects, events or situations, are traditionally considered as having 3 components (e.g., Olson & Zanna, 1993) – an affective component (roughly, positive or negative), a cognitive component (the set of conceptual representations that characterise the properties of the attitude object), and a behaviour component (a behavioural disposition towards the attitude object). The key point for current purposes is the general finding that people tend to operate on the basis of a consistency principle – that is, that the three components will tend to be consistent with each other (e.g., Eagly & Chaiken, 1993). A positive affect will be connected with a positively characterised set of properties in the cognitive component, and both will be connected with a particular kind of behaviour. If any of the components is not consistent with the others, there will be a tendency to change that component in order to bring it into line and thereby re-establish consistency. This overall result has been obtained both for explicit, consciously processes attitudes, and for implicit attitudes. Hence, where a religious ritual involves a positive emotion, related to or deriving from positively experienced shared ritual actions, then there should be a tendency to resolve any conceptual doubt in an appropriately positive manner. I am not suggesting that the

questions here be recast as ones concerning attitudes; rather, I am suggesting that the assumption of consistency may be one that is invoked under certain circumstances – especially in religious rituals. Religious rituals very often involve precisely this expectation of consistency – that is, having the correct, sincere beliefs and intentions to accord with the actions and emotions that are experienced when in the presence of a god or gods who may have access to our thoughts.

A third aspect of the concept-emotion connection concerns the recall of conceptual properties themselves, within and outside the ritual setting. A key role here may be played by mood-dependent/state-dependent recall from memory. The general finding for this phenomenon is that recall from memory may be enhanced under certain emotion- or mood-related conditions: recall is improved when the mood at recall matches that at the time of learning (e.g., Gilligan & Bower, 1984), an effect that is enhanced when the mood is positive as opposed to negative, and when the material learned has high personal relevance (Ucross, 1989). For many religious rituals, the emphasis is on positive emotional culminations of activities that may have some stressful or negative components, and since they are geared towards bringing the supernatural and the personal in close contact the resulting memories have high personal relevance. I have already mentioned the relevance theoretic idea that processing depends on the possibility that resulting cognitive content should be of sufficient benefit to warrant the processing cost. In the domain of emotionally-charged processing, this can be related to the finding that, when in a given mood state, people are better able (hence, find it easier/less effortful) to recall events or items that are congruent with that emotion or mood. So if the prevailing emotion is one of elation, then similar events from the past will be recalled. In such a setting, if an action governed by a concept functions as the cue to recall, then there may be a multiplier effect of the emotional experience – the impact on the

resolution of doubt will be based not only on the current emotional experience, but also on the additional memories recalled using the content as a way of recalling appropriate mood-dependent content. Such a role for emotions adds to the cognitive basis of the relevance framework; the clear connection with effort in processing suggests a fruitful line to pursue.

The third influence from outside the conceptual representation concerns social deference – the possibility that doubt over an interpretation can be resolved by reference to an external knowledge-source, in particular a culturally-sanctioned religious authority. I have discussed this elsewhere (Franks, 2003), and will elaborate here. Suffice to say that deference will interact with the impact of emotion and action/ritual, in that cultural relations are critical in determining when a ritual has been successfully enacted, and the interpretation of an emotion-arousing ritual may defer to the behaviour or interpretation of salient others.

Thus far, I have assumed that concepts of religious entities are laden with doubt concerning at least some of their ontological properties, and that, although this doubt may be resolved by action, emotion and deference, such resolutions may be temporary and situation-specific, as opposed to lasting and generalisable to other situations. Doubt was pursued in detail in Franks (2003), whilst the possibility of its temporary resolution remains to be argued. Why assume that resolutions of doubt are not always retained in the representations over the longer term? This is clearly a matter for empirical investigation, but there are some reasons to think that they may – at least, often – be temporary. As above, let us contrast ordinary truth-evaluation and doubt-resolution based on perceptual and other evidence, with the kind of doubt-resolution envisaged here. First of all, in the former case – for non-religious representations – any properties whose salience is increased by action, emotion or deference, are still present to be inspected/truth-evaluated by ordinary means afterwards. Those

properties were merely marked out or made more salient by the action, emotion or deference. By contrast, those properties that are resolved for religious representations are not available to ordinary inspection afterwards – in fact, they are only unambiguously present under the precise conditions of the specific use/interaction/emotion that allowed their resolution. Outside of these situations, they are not observable, because those situations create the necessary conditions for their being grasped or accepted. Second, connecting, as above, the general relevance theoretic approach to mood-dependent recall, it is likely that emotional and action-based resolution will be more likely to be recalled only under similar conditions of emotion and action – under those conditions, the effort of recall and accepting the resolved property is matched by the outcome. For example, recall of emotion-laden reasons for belief under different or neutral emotional conditions may in fact increase the required effort whilst not increasing the resulting cognitive effects. The more extreme the emotions (within limits), or more arcane the ritual setting, it would appear the more arduous the cognitive effort of transferring a resolution to everyday situations (since the harder it would be to find a match between the everyday situation and the cues to recalling the ritual setting and its resolution) – though this might be tempered by the intrinsically memorable nature of extremely emotional events. So the resolutions of doubt just may not fulfil appropriate relevance-theoretic criteria for being recalled outside of the ritual settings in which they are produced. Ordinary, empirical resolutions of doubt do not carry this extra emotional baggage, and so have more promise of generalisation. Of course, these are not knock-down arguments – they really amount to empirical issues, which may help in evaluating the different theories. For example, Atran's view appears to be that emotional intensity per se is a guarantor of high mnemonic value, whilst the current view is that this will interact with mood-dependent phenomena and with the general semantic-conceptual issues regarding relevance. It may, as noted above, vary with the strength or nature of the associated emotion, with the specificity of the action/ritual,

or perhaps also with the nature of the property itself. The over-all position, then, is one in which at least some of the key ontological properties in religious representations – and especially those that are concerned with how the human believer can interact with or connect to the entities represented – are subject to recurrent doubt; this doubt is revisited recurrently in appropriate rituals, and may be temporarily resolved or alleviated to different degrees by those rituals.

Now, drawing a close connection between semantic/conceptual representation and emotions as mediated by actions and rituals, is by no means inevitable in the domain of religious representations. For example, in Boyer's account emotions do not play a central role; a similar sense emerges from Sperber's account. Another view draws a sharp distinction between two modes of representation, dissemination and development of religious rituals – the “imagistic”, which is emotion-laden, and the “doctrinal”, which is semantic and emotion-free (Whitehouse, 2000). The doctrinal mode of ritual activity is said to be based on frequently repeated routines, whose repetition creates representations of ritual and attendant entities that are doctrinally accurate – the result is an abstracted, relatively impersonal representation of the “logical” structure of the ritual events, where the logic amounts to an automatic sequence of actions, akin to a script in its force (Schank & Abelson, 1977). There is no scope for uncertainty over ontology or agency in such a representation, nor for deep emotional commitment.

By contrast, the imagistic mode of ritual organisation involves emotionally loaded experiences that are represented in terms of specifics of location, timing and personal or autobiographical involvement. Such a mode often relates to one-off or infrequent (if predictable) events such as rites of initiation, and indeed Whitehouse suggests that the most

sacred rites may occur only once in a lifetime. Rather than being semantic or verbalised, the resulting representations are unverbalsed, and may take the form of highly emotionally-charged and detailed multi-sensory “flashbulb” memories of the specific events and people.

Whitehouse provides detailed empirical analyses to suggest that these two modes of ritual do interact in rather complex ways over historical time, so that any one religion may be highly imagistic in early historical-developmental phases, progressing to a more doctrinal phase as the religion coalesces with relevant social normative and organisational structures, and then perhaps undergoing imagistic “reinvigoration” in times when the aridness of doctrine begins to deplete the commitment of adherents. However, despite such historical interactions, the approach adopted clearly separates the two styles of understanding and representing ritual in any one cognitive agent over normal, moment-to-moment or day-to-day processing time.

By contrast, as Atran (2002) argues, experience of frequently repeated liturgy and ritual is not “logical”, and emotional arousal during ritual – though varying in intensity – is not rare.

Atran’s own approach paints with similarly broad brush strokes to Whitehouse, but is nonetheless the most thoroughgoing attempt to integrate emotional and cognitive aspects of religious representations. He suggests that emotionally intrusive and eruptive existential anxieties motivate religious beliefs – concerns about mortality, about the future, and so on. Religious beliefs, through allowing the construction of elaborate counterfactual worlds of non-natural causality (based on the kinds of minimally counter-intuitive representations discussed above), hold out the promise of addressing those existential anxieties. However, because such representations cannot be truth-evaluated by ordinary means, they cannot be logically or empirically verified or falsified. Hence, they appear to hold out hopes for anxiety reduction that cannot be satisfied by rational means; as a result, acceptance of those beliefs

also cannot be validated by such rational means. Atran's claim is that such ontological uncertainty is addressed by the emotional arousal of religious rituals. Key rituals involve the recreation of exactly the same existential anxieties that prompt the origin of the religious beliefs – they are costly, stressful, anxiety-producing and exhausting “life rehearsals”. But the most important aspect of such rituals is that they permit the removal or amelioration of such anxieties via the invocation of religious entities and via the sharing of the ritual experience in a community. By using strong sensory pageantry, creating intense emotions and enabling strong social bonds, such rituals thereby produce vivid, shared memories that can be applied not only in future repetitions of the ritual, but, crucially, in the day-to-day situations in which the same existential anxieties are met. Finally, the stress and anxiety that rituals engender produces costly and memorable commitments to both the social group and its supernatural agents.

Atran's account involves a relatively open-ended set of religious representations being augmented by emotionally-intense rituals that can provide the validation for the representations that would not be available in ordinary circumstances. It represents a marked advance on accounts that allow for little or no systematic role for emotions. However, it is best viewed as complementary to the view presented here, since it has a different focus.

The first difference is that Atran's account retains a relatively context-independent view of the content of religious representations, and does not see that content interacting with or being sensitive to religious rituals or their associated emotions. Although he is not entirely clear about this, there appears to be no change to the content of the representations as a result of these rituals and emotions: those representations remain minimally counter-intuitive, and they remain non truth-evaluable. The sense in which rituals provide validation is a social-

emotional one, and not one that pertains to belief content. Over-all, it seems that the only context-dependence is not in belief content, but in the degree, strength or emotional and motivational quality of the belief. Commitment and motivation are heightened by the emotions of ritual, but the content remains the same. By contrast, the current view sees content and emotion as interacting in a more fine-grained manner, at a more basic level, with emotions resulting in (possibly temporary) changes to content via resolving doubts about ontological properties – so different things may be believed as a result of ritual, as opposed to the same things being believed in different ways.

The second concerns the nature of the emotions and motivations with which Atran's account is concerned. These are major, existential emotions, concerned with significant rites of passage, and providing the ultimate emotional reasons for religious beliefs. Indeed, Atran suggests a similarity between the outcomes of some of the emotional experiences of major religious rituals and post-traumatic stress disorder. And it seems intuitive to say that such resounding emotional responses might well function as a form of validation of quite general associated themes or patterns in a set of religious beliefs, possibly without the need for any alteration in or processing of detailed belief content. By contrast, the current approach is perhaps more concerned with the routine, daily emotions (and moods) of believers regarding rituals which are regularly repeated; of course, more extreme emotions may also interact with the conceptual representations so as to remove doubt over ontological and other properties.

So for Atran, powerful and vivid emotions associated with key rites provide the validation for complexes of counter-intuitive beliefs – for explanations of the state of things in this world now, for promises of changes, for other worlds and non-natural agents and their interventions in this world. Such validation is socio-emotional in nature and does not alter the fundamental

quality of the major themes of religious representations as being non truth-evaluable. By contrast, the current approach hypothesises a connection between cognition and emotion at the more basic level of specific conceptual representations of the ontological properties of religious entities, based on recurrent interactions between conceptual contents and the possibly less extreme emotions of frequent rituals. Such interactions do prompt changes to conceptual content, and thus provide the contexts in which believers believe that at least some of their beliefs are truth-evaluable. It is possible to view the current view as providing a micro-level analysis to Atran's macro-level analysis; alternatively, the basic conceptual cognition-emotion interactions could provide a form of input to the larger-scale emotional validation of beliefs suggested by Atran.

#### 4 Summary and Conclusions

I have presented a picture in which three key aspects of religious beliefs are connected – the counter-intuitiveness of their content, their associated actions and rituals, and parallel emotional responses. The closeness and fine-grain of the hypothesised connections result from the characterisation of counter-intuitiveness as a form of conceptual doubt rather than direct property negation. Such doubt suggests that religious representations are highly context-dependent. And the precise aspects of context considered were those of action/ritual, emotion and deference – all of which can be seen to operate on exactly the same principles for both religious and non-religious content. These aspects of context function to provide temporary resolutions of conceptual doubt over the ontology of religious entities. The approach offered is complementary to existing accounts, in providing an alternative explanation of counter-intuitiveness which directly links to context-dependence. In sum, the account offered promises a direction for fine-grained empirical and theoretical development concerning the interaction of emotions, belief, ritual and culture in religious representations.

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