Introduction

Why does ritual continue to be an issue in religious studies and in anthropology? Why do we keep writing books and having conferences devoted to this apparently elusive subject? In this paper I will propose a cognitive approach to rituals, focussing on those aspects of rituals that are distinct from other types of actions, together with what cognitive responses these differences provoke. It will be argued that rituals violate basic causal assumptions and by doing so, trigger off cognitive processes in order to ascribe purpose and meaning to the action. In conclusion, this will be related to findings in ethology and evolutionary theory, arguing that ritual as a behavioural category plays an important role in the formation of symbolic thinking.

However, I would first like to discuss why rituals persistently provoke such heated scholarly debate. Why are rituals interesting? A pragmatic answer to this could be that it is our most important raw material. Besides texts, behaviour, and notably ritual behaviour, constitutes the primary source material for the study of religion. As a mode of activity, ritual provokes a search for explanation, for a rationale underlying the apparently irrational and non-instrumental behaviour performed and observed. Thus one of the primary features of ritual action is exactly the opacity of the behaviour in question. It is not obvious what reasons underlie the behaviour, and how its purpose is related to the actions performed. Thus when the functionality of an action recedes into the background, it is recategorised as an instance of ritualised behaviour motivated by other factors both formally and substantially.

This peculiar character of ritual action is recognised by both participants seeking out ritual and by religious experts searching for an answer to the meaning and purpose of particular rituals, as well as by scholars looking for the meaning and function of particular rituals and of ritual in general. In the study of religion, religious ritual as a behavioural category is of course more circumscribed than the broad folk-theory just referred to:
it concerns interactions with hidden and superempirical agents, it is prescribed by tradition, and it is a collective mode of action, even when performed in private. I will claim nevertheless that our intuitions about what constitutes ritual behaviour are informed by the folk-theory according to which ritual is a type of behaviour not easily ascribed to rational or instrumental causes. The reasons for ritual behaviour must be found elsewhere.

Why is ritual such an important category in the study of religion? I think the reason is that ritual is the primary and most accessible indication that people entertain religious beliefs — beliefs subsequently used as the explanation of the actions observed. Like other types of human action, rituals are explained by reference to the belief-states of the agents. They are seen as indicating that people entertain certain beliefs, as they are believed to act upon these. However this seems to be a circular argument. On the one hand, ritual actions are used to claim the existence of religious belief motivating the actions (actions pointing to the existence of beliefs), and on the other hand these purported beliefs are used to explain the ritual actions observed (beliefs explaining actions). This is of course a standard mode of inference in explaining ordinary, non-ritual behaviour, but as we shall see in the following, the special character of ritual actions questions the utility of this approach. Problems arise when people do not refer to beliefs when asked why they perform a particular ritual and what it means — at least these beliefs will not explain the form, content or structure of actions performed. The circle is broken and the ritual can no longer be seen as an index of specific and commonly held underlying beliefs, nor can the rationale underlying ritual performance be explained by reference to such beliefs. As we shall see later, this does not imply that there is no relation between ritual and belief-states, but merely that we need to move beyond the circular argument in order to describe how they are connected.

Thus traditional explanations of rituals point to the underlying beliefs and explain ritual actions as social expressions of more or less conscious but culturally shared beliefs. A way out of this circularity connecting individual belief-states and ritual action is to claim that rituals do not find their raison d'être in individual beliefs, but somewhere else. Even though more sociologically inclined explanations have not fundamentally challenged the premise of individual beliefs underlying ritual actions, they have added another explanatory level. It is argued that rituals form a necessary part of social life, ensuring the continuation and persistence of the group by expressing more or less consciously held fundamental values and structures of the group. People perform rituals motivated by beliefs, but the real function of rituals can be found elsewhere, namely in the effect the rituals have on social cohesion through their employment of common symbolic structures. Through in-depth analysis, the observer is believed to be able to "crack the code" and relate the symbolic elements found in
the ritual to a general symbolic system that in some aspects corresponds to external social structure.

Theories focussing on the symbolic character of ritual actions have been challenged on several points. In *Rethinking Symbolism*, anthropologist Dan Sperber (1975) argues against the notion that ritual actions should be seen as expressions of symbolic systems in need of interpretation. He argues that the relation between ritual actions and underlying explanatory systems, whether internal beliefs or external semiological structures, are much more complex than hitherto acknowledged. The symbolic interpretation given by the observer is, according to Sperber, a mere extension of the activity found in the ritual itself, and symbolic interpretations will therefore never explain why a ritual is performed nor what it does, but merely add to the ever-growing numbers of local exegeses.

More recently, Caroline Humphrey and James Laidlaw (1994) have argued that the relation between intentions entertained by the agents and the actions performed are radically transformed in ritual actions, in comparison with ordinary action. When engaged in ritual performance, people only entertain intentions in relations to the whole ritual sequence, whereas the constituent actions are stipulated by tradition and therefore intentionally underdetermined. In ritual, there is no direct feedback between the result of actions performed and how the ritual is performed.

**Ritual as a special behavioural category**

Above, we found two points in which ritual actions are to a significant degree distinct from ordinary actions: 1) The performance of rituals cannot be explained by reference to underlying symbolic and explanatory systems or belief-states; 2) the relation between participants' intentions and the actions performed is radically altered. In this paper I wish to point to a third important feature of ritual actions. On a cognitive level, rituals imply that intuitively held assumptions and domain-specific expectations regarding the causal properties of the entities involved are disconnected (Sørensen 2000). In recent years cognitive psychology has established evidence that human cognition is constrained to a certain extent by domain-specific categorisation. Humans entertain different intuitive and unconscious expectations regarding different domains of reality, such as physical objects, animals, theory of mind, and social categories. The exact number of these domains is disputed, as is their basis, whether innate or acquired, but this need not concern us in the present context (for discussion see Hirschfeld and Gelman 1994; Sperber, Premack and Premack 1995; Whitehouse 2001).

Contrary to ordinary actions, in which a large number of such intuitively held assumptions guide our expectations, rituals explicitly downplay
or violate some of these assumptions and thereby provoke a search for meaning through either perceptual characteristics or more or less reified symbolic interpretations. When stones can think and act, birds are spirits and human souls can leave the body, ordinary and automatic domain-specific inferences are violated. This not only enhances memorability and transmission, as argued by Pascal Boyer (1994, 2001), but it also provokes the invocation of alternative hermeneutic strategies available in order for participants to extract the meaning or purpose of the ritual sequence. It is these alternative strategies I will discuss in the following.

The difference between ordinary action and ritual action can be illustrated by means of two simple models depicting the two types of action as event-frames (Fillmore 1982; Sørensen 2000). An event-frame is an idealised, mental construct of a given action-sequence containing the relevant elements and their internal relation. In the models described below, an event-frame is depicted by an analytic distinction between three phases of the actions involved. A phase before the commencement of the action (conditional space), the proper action itself (action space), and the effect of the action (effect space). A premise of the following argument is that agents performing an action will have a broadly equivalent representation of an action, its conditions, and its consequences.

Figure 1 depicts the non-ritual action of breaking a window by throwing a stone through it. In the conditional space, all sorts of intuitive background knowledge about windows, human agents, and interactions between these are present. Windows are physical objects that do not move by themselves but are subject to physical causation; humans can act on their own volition and can interact with most physical objects through their body. In short, it contains knowledge derived through a combination of experience and intuitive ontological assumptions. This might seem trivial and so it is in the sense that it is not present in our consciousness in normal circumstances. But it has crucial effects on the way we represent actions involving the window: that it can be broken by a physical object, that it is subject to physical force, that humans can perform certain movements and thereby influence the window etc. Thus the action of breaking a window is informed by knowledge about windows and human agents and knowledge about what type of actions can interfere with windows, i.e. the causal expectations and assumptions relating action and the conditional space through what can be called a diagnostic process.
Similarly, a prognostic process relates the action to representations of the effect of the action, in this case the window being broken. Again, all sorts of causal expectations are present, for instance that it is the physical force of the stone that breaks the window, that the shattered glass will fall down etc. Even though these assumptions are not present in our consciousness, they guide our behaviour. This is evident in cases when an action fails to produce the desired effect. The failure of the stone to break the window will not be represented as caused by the window moving in response to my throwing a stone, or the stone "deciding" not to hit the window. Rather I will infer that I need to pick a larger stone, use more force, and/or move closer in order to break the window, all inferences based on windows being classified as a specific type of physical object.

The purpose of this sketchy analysis of an ordinary action is to highlight some aspects of what happens when actions become ritualised, i.e. what distinguish ritual from non-ritual actions. I have already mentioned how the relation between the agent's intention and the actions performed is radically transformed in ritual actions (Humphrey and Laidlaw 1994). Here I will focus on how ritual actions can be characterised as based on a similar radical transformation or even violation of intuitively held causal expectations.

If we compare ritual actions to the non-ritual actions described above, we find a significant transformation that can be illustrated by figure 2:
In the model, the non-ritual action of breaking a window with a stone is changed into the ritual action of effecting a transition from a state of impurity to a state of purity by means of a performance of a specific ritual. The most important change is that the intuitively held and domain-specific inferences relating the condition space to the action space, and the action space to the effect space are severed. Participants have little or no domain-specific intuition about how the states of affairs preceding the ritual are related to the actions performed in the ritual, or about how these ritual actions produce the desired effects. Instead, two strategies for relating the action to the condition and the effect are utilised. The first consists in the numerous iconic and indexical relations that it is possible to establish between aspects of the condition, action and effects spaces (depicted by the dotted line connecting the spaces). The obvious examples are usually described as “magical rituals”, as when the Azande attempts to cure a man suffering from leprosy by means of a ritual involving a creeper shedding its “skin” as a part of its natural process of growth (Evans-Pritchard 1937). As the plant survives and prospers through this loss of outer extremities, so the man suffering from similar loss of outer extremities should survive and prosper. In this case, the iconic relation between the perceptual characteristics of the man and the creeper is highlighted, and in fact motivates the ritual procedure. However, rituals not usually described as magical also contain this feature, as when blessing involves physical contact or the ingestion of specific objects. In these cases, the action can be interpreted as
a metonymic relation between the status of the person performing the blessing, the actions performed, possible objects utilised and its purported effect (see Sørensen 2000 for an analysis of magical rituals).

Thus we find both the so-called laws of sympathetic magic described by James Frazer – not restricted to magic but found in some form in most rituals. The violations of domain-specific expectations and inferences prompt a cognitive search for other available clues to the meaning of the action, and relations of similarity and contact are easily accessible. In the words of the German ethologist Hans Kummer, the strong causal inferences given by domain-specific intuitions are replaced by weak causal relations based on perceptual similarity and spatio-temporal contiguity (Kummer 1995). We shall return to ethology and its importance for the study of ritual below.

Another hermeneutic strategy used to relate the condition, action and effect spaces is that of symbolic interpretations. In figure 2 this is depicted as the curved arrows substituting the severed domain-specific causal connections. In symbolic interpretations of ritual actions, the prognostic and diagnostic processes are upheld by symbolically expressed links between the spaces. The most obvious example is of course established dogmas connecting certain states to certain rituals purported to effect specific changes. At the other end of the spectrum, it also covers idiosyncratic interpretations made “on the fly” to explain the meaning of some ritual. In between these extremes we have the more or less creative use of established cultural models used by participants to make sense of the actions they engage in. The vast terminology employed by New Age groups is an excellent example of such free-floating cultural models used to interpret ritual actions.

To summarise: when people engage in ritual actions, such as the consumption of bread and wine insufficient to satisfy hunger, and attempts to inflict pain on an opponent by means of manipulation of a doll, we intuitively know that something special is going on, i.e. that the action performed is a special type of action. Usually we just name such actions “symbolic” in order to point to their special features. I will argue that this definition is premature. The primary mistake lies in the confusion of the sign itself, in this case the ritual action, with the way the actions is interpreted. The ritual elements are not in themselves symbols. They can be interpreted symbolically, but this is not the only way ritual actions are interpreted or understood. Iconic and indexical connections play a significant role in most ritual actions, facilitating a more direct and less contextually informed interpretation based on the recognition of relations of similarity and contact. Besides these two hermeneutic strategies, there is a third strategy, in which the ritual action is not interpreted at all, but only performed because “our ancestors did so”. However, even in such cases, the ritual is performed on
certain specified occasions, and the failure to perform the ritual often effects representations of the dire results of not performing the action.

These hypotheses concerning the special properties of ritual action (as an ideal type) favour a procedural approach to the ongoing construction of ritual meaning and purpose by participants. Whereas the purpose, intention and thereby meaning of ordinary actions are processed by a combination of domain-specific and cultural knowledge, ritual actions radically downplay intuitive, domain-specific processing. This leads to the application of three alternative hermeneutic strategies:

(a) Use of perceptual characteristics of the actions, notably relations of similarity (icons) and contagion (indexes).
(b) Symbolic interpretations, from idiosyncratic to culturally reified models.
(c) Contextual interpretations based on the broader context in which the ritual action takes part.

A result of this analysis is that instead of arguing whether rituals are in themselves symbolic and expressive or rational and instrumental, we can focus on the aspects of ritual action that differ from ordinary actions and outline possible cognitive processes carried out by ritual participants. Even though some rituals might actively exploit one or other of the hermeneutic strategies available to participants, all rituals can be interpreted by all three strategies, and I believe that investigations into the history of ritual practices will expose a constant flux between the different hermeneutic strategies.

In the following, I will restrict myself to a discussion of the first two strategies and their internal relation.

From iconic and indexical to symbolic interpretations

Above I described two strategies, that of interpretation by means of iconic and indexical relations and that of symbolic interpretation, as two equally applicable strategies utilised by participants to make sense of ritual actions. However, this is not an accurate description as the two modes of interpretation are unequal in a number of ways. In short, one can say that iconic and indexical relations are more easily and more automatically processed; they utilise very fundamental cognitive processes used in basic level categorisation; and they do not require a significant amount of background knowledge. In contrast, symbolic interpretations are slower and less automatic; they use higher level and more complex cognitive processing; and they require a significant amount of background knowledge, as the sym-
bolic interpretation relates elements of the ritual to symbolic structures found outside the ritual, for instance in myths or dogmatic systems. In order to make this difference more explicit, let me use an example from a classic study in ethology, Konrad Lorenz's *Das sogenannte Böse* (1963). Lorenz argues that ritualisation in animals can be defined as the redirection of instinctual actions from their former function to that of communication. Among greylag geese, a mating pair strengthen their mutual bonds by performing in unison the same sequence of actions normally used to fight an enemy, but without the presence of any enemies. According to Lorenz, the aggressive action is redirected so as to communicate reciprocal bonding between the two geese and it is thereby transformed from a direct instrumental function of fighting off an adversary to a communicative function of confirming the bond between the mates. Now, the concept of communication can be misleading as it implies a conscious attempt to transfer information. In this case, it is the direct and most likely unconscious exchange of signals in contrast to the intentional exchange of symbolic signs prototypical of human communication. The example illustrates how ordinary actions, when deprived of their ordinary function (in this case aggression), will provoke a search for other perceptible features that can give functional purpose to the action. It is the iconic structure of the actions performed in unison by the two geese that becomes highlighted when the enemy is absent. By performing the actions in unison, the bonding is directly acted out rather than symbolically expressed. The strong causality involved in the aggressive behaviour addressed against an enemy is transformed into the weak causality involved in the perceptual similarity of the actions and spatial contiguity of the bonding pair.

This is not intended as a mere analogy from the animal kingdom. I believe there is a strong affinity and possibly direct evolutionary connection between the ways in which animals and human beings process and construct iconic and indexical relations, and how these become highlighted in ritualised behaviour. I also believe that there is a direct relation between the ways animals and humans ritualise otherwise functional behaviour, and that thorough studies of human rituals will expose a ground of "deep meaning" based on iconic and indexical features (cf. Eibl-Eibesfeldt 1989; Burkert 1979, 1996). This evolutionary origin might explain why iconic and indexical interpretations are more easily and more rapidly processed than symbolic interpretation. They have been with us for a long while and are therefore deeply embedded in our cognitive architecture. I shall return to this question below.

But there is one aspect that distinguishes the way humans use and interpret rituals from that of other animals: the tendency to apply more or less consistent symbolic interpretations to the actions. Even though such symbolic interpretation can be understood as a "side-effect" not intrinsic
to ritual itself (Staal 1979), this side-effect has had crucial importance for the survival and grounding of ritual actions in the larger social and symbolic fabric of society. When actions are ritualised, they not only facilitate the relative highlighting of iconic and indexical interpretations but also the application of new or already existing symbolic interpretations. Such symbolic interpretations are loosely constrained but not determined by the iconic and indexical features just described. This implies that it is possible to extract a basic meaning structure from the actions performed that will constrain, but not determine, subsequent symbolic interpretations. When the bread of the Eucharist is consumed, it is difficult to ignore that something is taken into the body and that it is a transformation by “eating”, even though this need not be highlighted in the symbolic interpretation chosen, or can be given very divergent symbolic interpretations. The rapid change of interpretations of the same ritual found in the history of most religions testifies to this non-determinacy. This does not imply that there are no constraints imposed on new interpretations by the actions performed, but as the constraints are relatively loose, extrinsic factors will enter into the development of symbolic interpretation, e.g. dogmas and narratives.

This flux, and even struggle, characterising interpretations of ritual actions begs the question of why rituals have such a dominant place in most religious traditions. Why perform rituals if they notoriously provoke conflicting interpretations? This is of course a complex question, to which several answers have been provided during the last 150 years. To make a crude summary, two basic positions crystallise within the functionalist approach to ritual and religion. The first conceives rituals as a conserving force in society and in the history of religion. Rituals are relatively stable through history and their primary function is to address and solve social crisis, while most other aspects of religions can change. The second position conceives ritual as an innovative force, as a means of transcending social structure, as when the creative or subjunctive mood replaces the indicative, to paraphrase Victor Turner (1990). Both positions have important insights. Rituals constitute a conserving force by their relative stability through both time and place. Rituals should be unchanging, as they are stipulated acts whose efficacy is ensured by their origin. Thus the cohesive social force of rituals should not be underestimated, not because all participants share the same interpretation – they don’t – but because they perform the same public actions and thus iconically confirm social adhesion. Pushed to the extreme, the question can be posed whether we are really dealing with ritual rather than religious traditions. On the other hand, rituals function as an innovative force exactly because their possible meanings are underdetermined by the actions performed. Rituals provoke the construction of new interpretations. In fact, such new interpretations are the inevitable
result of the relative stability of rituals compared to the relative flux of social structure and history. Thus rituals are both conserving and innovating and a substantial number of schisms found in the history of religion boil down to questions of the right performance of rituals and their correct interpretation. As rituals provoke a search for meaning or purpose, religious traditions and cultures can either actively discourage explicit interpretations of ritual actions, as we see among the Baktaman of Papua New Guinea (Barth 1975), or seek to control interpretations by restricting them to specific authorities, as seen in most literate traditions. In both cases the potential disruptive force of mutually opposing interpretations can be held at bay, even if the innovative, creative and possibly disruptive forces of new interpretations cannot be ruled out.

From action to meaning: How ritual action furthers symbolic interpretations

The relation between ritual action and more or less authoritative interpretations is further complicated by the fact that rituals tend to downplay and de-emphasise the symbolic elements they contain. Language is the most central ritual element connected directly to a conventional symbolic system with a relatively fixed interpretation. However, many rituals tend to downplay the symbolic reference of the words used in favour of the iconic elements of prosody, and the indexical elements of enunciation. How words are pronounced and who pronounces them have relatively more importance in rituals than in everyday language, at the same time as archaic and even non-sense words flourish. In ritual, language itself is ritualised as its direct reference is loosened. Ritual language is separated from the web of symbolic reference that constitutes everyday language and, in a manner similar to poetry, this enables novel interpretation.

The question naturally arises of why ritual has this function of separating elements from their ordinary symbolic reference? Why is ritualisation an excellent method to achieve new meaning? I believe the answer can be found in the role of ritualisation in human evolution. Rituals not only lead to a constant reinterpretation of the basic semiotic and symbolic inventory of religious traditions, but can, on a more fundamental level, be understood as the most important bridgehead leading from iconic and indexical to symbolic representations. In The Symbolic Species, physical anthropologist Terrence Deacon argues that the origin of language is grounded in a unique human ability to produce symbolic representations, and that this ability developed in a co-evolutionary process involving the convergent development of internal brain structure and external language structure (Deacon 1997). In his argument, ritual plays a significant role as it contains
a feature necessary for the first construction of symbolic reference: the repetition of certain actions not directly related to a functional aim, in this case, sounds. By containing constant repetition, ritualisation enables symbolic reference to emerge as concepts acquire meaning through stable relations to other concepts. (Deacon 1997: 402–10.) Thus language is a kind of transformed ritual, in which interpretations are relatively locked by the cross-referential structure of the system.

However, language did not eradicate ritual. Ritual persists despite the existence of much more efficient means of communication. Ritual is in itself not an expressive and symbolic medium, but rather a type of action that constitutes one of the necessary conditions for the development of symbolic reference. Of importance in this context is that its role as an evolutionary bridgehead between iconic and indexical reference on the one hand and symbolic reference on the other, can be reversed. By means of ritualisation, conventional symbolic reference is dissolved into the constitutive parts of indexical and iconic relations, thereby facilitating the re-interpretation of otherwise fixed structures of meaning. Ritual is not only one of the origins of symbolic structure, but also contains the possibility of constantly reinventing, restructuring and reinterpreting the constituent actions and structures of society by dissolving conventional symbolic reference into its iconic and indexical parts.

This is of course a very sketchy evolutionary outline, which needs to be worked out in detail. I nevertheless believe it sheds light on some aspects of ritual that can be of assistance in our current treatment of rituals found in diverse religious and cultural traditions. I will end this article with a short list of propositions summarising the preceding argument:

1) Ritual should not be seen as a kind of language, even if the two things share certain characteristics. Language is dependent on a system of conventional symbolic reference meant to communicate, whereas ritual is a type of action meant to do something.
2) Ritual and ritualisation as a mode of behaviour is found among animals and humans alike and therefore forms a very basic, possibly innate, behavioural modality in humans. This explains why it is spontaneously produced and found in all human groups.
3) By violation of domain-specific expectations, rituals provoke the search for other possible clues for the purpose or meaning of the ritual action.
4) Two strategies are involved: (a) basic perceptual features are utilised to construct iconic and indexical relations; (b) symbolic interpretations are formed, constrained but not determined by these basic structures. In the case of religious rituals, symbolic interpretations tend to be drawn from a culture's stock of religious representations and facilitate new religious interpretations to emerge.
5) Finally, rituals not only enable the construction of symbolic interpretation, but also facilitate the dissolution and deconstruction of already established interpretations. Rituals can in this respect be understood as generators of symbolic meaning, not because rituals have symbolic meaning by themselves, but because they are actions that violate intuitive expectations and deconstruct established symbolic reference and thereby give rise to alternative hermeneutic strategies used to construct representations of meaning and function.

References

Barth, Frederik

Boyer, Pascal

Burkert, Walter

Deacon, Terrence

Eibl-Eibesfeldt, Irenäus

Evans-Pritchard, Edward E.

Fulmore, Charles


Humphrey, Caroline, and James Laidlaw

Kummer, Hans
Lorenz, Konrad

Sørensen, Jesper

Sperber, Dan

Sperber Dan, David Premack, and Ann James Premack

Staal, Frits

Turner, Victor

Whitehouse, Harvey