

Article

Buddhist Ritual from Syntax to Cognition: Insight Meditation and Homa

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Abstract: The concept of “ritual syntax” is developed by relating it to cognitive studies of ritual, providing a fuller theoretical basis. Developing theoretical grounding requires differentiating between the members of five pairs of concepts: production is not the same as analysis, syntax is not the same as semantics, ritual is not the same as the mental, cognition is not the same as the mental, and syntax is not the same as language. These distinctions help avoid overly strong interpretations of the analogy between ritual and language. A discussion of “ritual” suggests that it is best conceptualized in terms of multiple scalar characteristics with degrees of ritualization. Two Buddhist practices, insight meditation and homa, are introduced as instances for the cognitive study of ritual. Syntax involves not simply ordering of elements, but also hierarchical organization of those elements. While syntax allows sentential elements to move within a sentence, ritual tends toward invariance. Invariance seems to contradict the claim that ritual is syntactically organized. However, rituals are often modeled on ordinary activities, producing a kind of “semantic” motivation for invariance.

Keywords: ritual; tantra; syntax; semantics; cognitive linguistics; embodied cognition; insight meditation; homa; Frits Staal; ritual invariance

1. Introduction

The goal of this essay is to provide greater theoretical grounding for the idea of ritual syntax. Though it has antecedents, in present-day scholarly discussion the idea that ritual has a syntax was introduced by Frits Staal in his 1979 essay “The Meaninglessness of Ritual” [1]. In this essay, Staal proposed a systematic analysis and description of the organization of ritual activities by borrowing the techniques employed in linguistics for the analysis of sentential syntax. Unfortunately, this proposal has been largely elbowed aside by controversies arising from his assertions regarding ritual as a meaningless activity. His claim of meaninglessness may easily be read either as the Reformation era theological debate over the efficacy of the sacraments, which has been called “prejudicial theology” ([2], p. 24), or as the more recent modernist version that rituals are meaningless because they are performed merely by rote. These are not, however, what Staal meant. Some of his arguments regarding the meaninglessness of ritual activity seem well grounded, such as when he points out that during a ritual performance practitioners need not be thinking about the symbolic referents of ritual elements such as actions, implements, and offerings. The meanings of actions taken, implements used, and offerings made is ascribed to them by a religious tradition, and conscious awareness of those meanings is not a necessary part of the ritual performance. Discussing such attributed meaning, Meshel calls attention to the fact that the “apparent artificiality of such correlations has led to their disregard in much of modern scholarship, as they attribute meanings to a system in which they do not inhere—much as astrology attributes meanings to the (inherently meaningless) relative positions of celestial bodies” ([3], p. 186). As noted by Laurie L. Patton [4], however, such reflection is not necessarily absent either. Conscious reflection on the meaning of a ritual or its elements

is, therefore, distinct from ritual performance. Staal's meaninglessness thesis is sometimes rejected without acknowledging the importance of this distinction. (For an extended treatment of Staal's meaninglessness thesis see [2].)

Staal's claims have been controversial to such a degree that they are at times met with incomprehension, and often with indignation. Thus, critiques of Staal's claims regarding the meaninglessness of ritual activities have themselves frequently compounded the confusion about what claims Staal is making. While Staal's claims regarding the meaninglessness of ritual are interrelated with his concept of ritual syntax, the latter is not dependent upon the former. The debates over his meaninglessness claim are, therefore, separate from the question of the utility of syntactic analysis as a tool for the study of ritual. Our intention here is, therefore, to address meaninglessness only to the extent required in order to provide the concept of ritual syntax a more adequate theoretical grounding as part of the cognitive study of ritual. As Carl Seaquist notes, "one advantage of Staal's theory of ritual is that it emphasizes the cognitive capacities that underlie human ritual action as a subject for inquiry" ([2], p. 40).

2. Methodological Separations

In order to clarify the utility of applying the tools of syntactic analysis to ritual activities, it is necessary to delineate between the members of five pairs of concepts.

2.1. *Production* \neq *Analysis*

The technique of syntactic analysis differs from the concerns and goals of linguistics more generally. Key to this delineation is the difference between production and analysis. In rejecting Staal's claims regarding the meaninglessness of ritual, his critics have conflated those claims with the proposal for a syntax of ritual, and on the basis of that conflation asserted that any purely formal syntactic analysis is irrelevant ([5], p. 2), theoretically misdirected ([6], p. 59), or simply mistaken ([7], p. 220; [8], p. 274). These arguments are made irrelevant because they confuse the goal of developing theories explaining language production with the technology of syntactic analysis.

Although Staal does make general statements about rituals, as well as attempting to articulate ways in which ritual structures can be seen as systematically related to one another (such as modification and recursion), he is not offering a general theory about ritual production equivalent to a linguistic theory of language production. If that had been the case, given the historical intellectual context within which he was working, we could expect that he would have theorized ritual competency as analogous with linguistic competency, as others have suggested [2,3,8]. The limited analysis as found in the generative rules he identifies do not indicate the intent of articulating a full-blown theory of ritual production.

It is, therefore, important to highlight the distinction between production and analysis. In linguistics the debates over whether syntax is autonomous, or syntax and semantics are inseparable are conducted in relation to questions regarding language production. Claims regarding the unity of syntax and semantics are at the basis of the rejections of a syntactic analysis of ritual, and are justified by reference to linguistics [5]. These claims, however, follow from confusing theories of language production with the analysis of the language produced.

Theories of language production encompass both synchronic production, that is, production of language in the present, and diachronic production, that is, the evolutionary development of language. Whatever theoretical position linguists take on the question of autonomy versus unity, they employ the techniques of syntactic analysis—that is, theory is distinct from method. Ritual theorists may find the techniques of a syntactic analysis of ritual structure useful in developing an understanding of ritual activity, just as linguists do in developing their understandings of language. In neither case—theories of language and theories of ritual—is there an identity between the theoretical goals and the techniques employed.

2.2. Syntax \neq Semantics

The theories of language production offered by generative linguists differ from those offered by cognitivist (or constructionist) linguists, taking these as general names for two major parties to the debate. Generative linguists can be characterized as taking an axiomatic deductive approach, attempting to identify the rules that can explain the production of different sentences. In contrast to this “top-down” approach, cognitivist linguists conceptualize language production in terms of how different sentence structures are built up on the basis of usage [9,10]. “In the generative model the structure of linguistic expressions is deemed to be determined by a formal rule system that is largely independent of meaning. By contrast cognitivists argue that linguistic structure is a direct reflex of cognition in the sense that a linguistic expression is associated with a particular way of cognizing a given situation” ([11], p. 1). At the risk of oversimplifying, we can suggest that the positions involved can be categorized as in support of either the thesis of the autonomy of syntax (generative) or the thesis of the unity of syntax and semantics (cognitivist).

Following Chomsky, generative grammarians have largely argued in favor of the autonomy of syntax. This view asserts that not only is language itself an innate mental capacity (the “language instinct” as per Steven Pinker [12]), but that in turn it has several autonomous components. Ray Jackendoff proposes four such components: phonology, syntax, semantic/conceptual, and spatial. Being linked (or “bridged”) one to the other, each operates on the elements produced by the other in sequence to finally produce a grammatical sentence [13]. Although linked together in a systematic fashion, each operates according to its own rules, and operates autonomously from the others. An example might be that while in Japan I myself have produced sentences by inputting Japanese words into English syntax. Such sentences may be almost incoherent to most native speakers of Japanese, but it does suggest the autonomy of the lexical items from syntactic structures. More familiarly perhaps, we all know and use loan words that were introduced into our own language from another without regard to the syntax of the source language.

Alternative to the autonomy of syntax is the thesis of the unity of syntax and semantics as found in the works of cognitive and constructionist linguistics. One prominent proponent is Michael Tomasello, who has argued that syntax and semantics emerge from “holophrases,” the two components being discriminated from one another by learning [9,14]. His approach is that children first produce holophrases in which semantic and syntactic aspects are not distinguished. Then at a second stage of development (both ontogenetic and phylogenetic) the social conventions for using semantic symbols syntactically are learned. This conception then does not rely on hypothesizing an autonomous syntactic module as does the generative approach.

In light of the distinction made in the preceding section, we can point out that both theses—autonomy and unity—are concerned with language production. Since the cases made for rejecting a syntax of ritual are based on one version or another of the thesis of the unity of syntax and semantics, that is, a theory regarding language production, they are irrelevant to the use of syntax as a tool for the analysis of ritual.

This does not mean that the semantics of a ritual are not important, but that both semantics and syntax may be important for different inquiries—it is the question motivating the inquiry that determines whether or not a formal syntactic analysis is “adequate,” and not any putatively objective characteristic of rituals, such as “being meaningful.” And, indeed, as a pragmatic matter of study, the two can and are considered independently of one another. Despite her protestations that syntax cannot be considered separately from semantics, this is just what Annette Wilke does in describing the ritual cycle found in the *Paraśurāma-Kalpasūtra*, a Śrīvidyā manual that constitutes the focus of her study. After describing in abstract form the order of rites, she then supplements that syntactic analysis with a semantic one ([7], pp. 231–33). Figure 1 reconfigures her tabular presentation of the syntax of these rituals into the form of tree diagrams, which in this instance make the hierarchical groups of acts (see below) evident, and gives a more explicitly formal presentation of the syntactic structure of the ritual. (In these diagrams, I am following Wilke’s own schematization without attempting to introduce

any additional structuring.) An examination of these diagrams shows just the kind of expansion by means of embedding that Staal identified ([1], p. 18), which he referred to as comparable to a “phrase structure rule” ([1], p. 19).

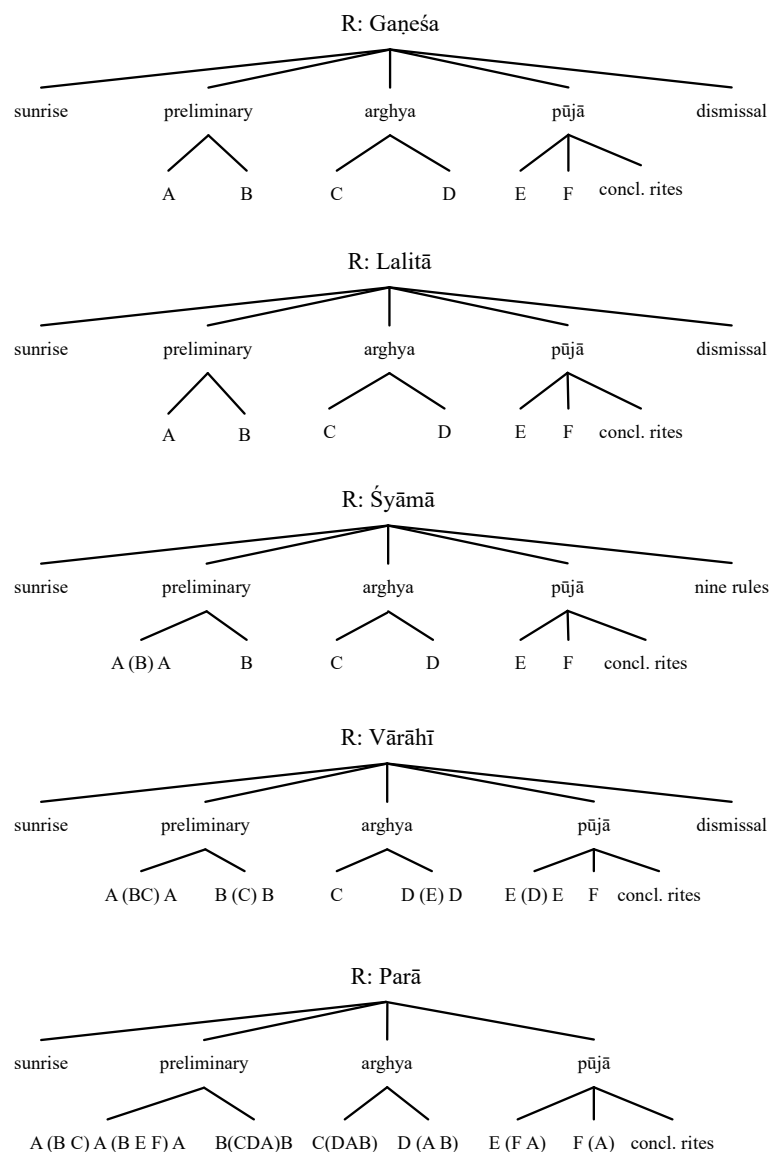


Figure 1. Syntax of Rituals Studied by Wilke.

The point of this exercise is to demonstrate that syntax and semantics can be separated in practice, despite protestations to the contrary. One basis for those protestations is that syntax alone does not give as full a picture of a ritual as does the combination of syntax and semantics—the synthetic step that Wilke takes following her (not quite fully formal) syntactic analysis. As for the desire to have a full or complete study of a ritual, much more even than a synthetic presentation of syntax and semantics would be required—as Wilke indicates when at the start of her essay she sets as her goal “a ‘unitary ritual view’ regarding morphology, syntax, pragmatics and semantics” ([7], p. 216; see, however, [8], p. 79). The epistemological judgement as to adequacy necessarily refers back to the questions that the study is intended to answer. A truly comprehensive understanding of ritual is only a hypothetical desideratum—as Tim Murphy has noted, “all analysis is finally heuristic in that it is predicated upon selection (totality being a post passed, a dream lost)” ([15], p. 9).

2.3. *Ritual ≠ Mental*

The most prominent—if not hegemonic—understanding of a cognitive approach is a mentalistic one. That is, one that gives mind the central explanatory role in understanding ritual—not only are mental phenomena the object of inquiry, but explanations that begin or end with the mind, whether conscious or unconscious, are held to be sufficient. The term “mentalistic” is used here to cover the range of emphases that define the issue to be examined in terms such as religious ideas [16], beliefs, concepts ([17], p. 15), meaning, mental representations [18], categorization, memory, experience [19], etc.

This emphasis on the mental may follow from the fact that most of the work on the cognitive study of ritual takes place within a discursive framework that (still) identifies religion with mental phenomena such as belief and experience. The focus on mental phenomena in the cognitive study of religion is a legacy of the Protestant Reformation that was integrated into religious studies at its beginning in the nineteenth century and continues into the present. In much of Protestant theology orthodoxy is soteriologically central, that is, the idea that salvation is gained through proper belief. The central role of orthodox belief is augmented by Enlightenment era emphasis on the rational self as agent, that is, not simply dividing thought from action, but giving thought—self-aware conscious reflection—the role of determining action [20]. Despite the Romantic revolt against reason, the alternative offered was feeling. Whether religious or aesthetic, an emphasis on feeling, experience and emotion remains largely focused on the mental, just as much as do examinations focused on belief, mental representations, and so on.

Despite decades of critique within religious studies this conception that religion is about belief is still hegemonic in the field—though increasingly in the last half century alternative conceptions have been developed, including approaches that emphasize embodiment, discussed below. The focus on concepts (beliefs, doctrines, experiences) is integral to religious studies discourse in a fashion that makes its determinative role for the study of religion largely invisible to many within the field, and perhaps even more so for some of those who study religion from the perspectives of other fields and may therefore be unaware of the critiques of the conception of religion as belief-system. This discursive framework determines how traditions outside the Western monotheisms, such as tantra, are understood—that is, primarily as systems of belief, rather than as systems of practice. The claim here is not that doctrine has not been important for tantric and other traditions, but rather a questioning of the defining role of belief, doctrine, experience, and other mental correlates of these for the cognitive study of those traditions.

For example, a cognitive study of Christianity should be aware of the central role of doctrine in the Christian conceptions of Christianity, and how doctrine is held within the tradition to be determinative. But it is a mistake to elevate that characteristic of Christianity to a characteristic universally true of all traditions. From this perspective, it is also appropriate to question the defining role given to culturally-postulated supernatural agents (CPS-agents, also counter-intuitive agents, CI-agents, discussed below) in several of the mentalistic approaches to a cognitive study of religion. The centrality suggests a crypto-theological grounding to these putatively secular definitions of religion.

Given this hegemonic dominance of the mental in cognitive studies of religion, ritual is also treated as a mental phenomenon. Even the appearance of an acknowledgement of the importance of embodiment, such as a discussion of the role of the sensory in ritual, cloaks this presumption that the mental defines ritual. The sensory is treated as what impacts the participant’s mental state, and it is the latter that is seen as the noteworthy consequence of sound, scent, lights, and so on. While the mentalistic approach to the cognitive study of religion may offer additional complexity, it offers no alternatives to the long-standing tradition of religious studies being defined as the study of beliefs and doctrines.

Mentalist approaches are necessarily limiting—particularly in relation to ritual. People sometimes acknowledge the point that ritual is activity, but fail then to follow through on the meaning of activity as embodied action. It may be that a mentalistic focus is conceptually comfortable as it fits so well

within the implicit Cartesian dualism that continues to dominate religious studies and cognitive science. So comfortable in fact, that challenges to it such as Staal's are rejected as incomprehensible, or are dismissed out of hand. What then is the alternative? As already alluded to, a serious consideration of ritual as activity entails a serious consideration of embodiment—more than in the sense of the body as the passive recipient of sensory stimuli, but considering embodied activity itself as cognition.

2.4. Cognition \neq Mental

"Enactive embodiment" (also "enactionism," "embodied cognition," and "extended cognition"; [21], p. 118) refers to a conception of cognition as something that is not meaningfully reduced to neural functions in the brain, nor conceptual representations in the mind. It goes beyond a view that makes body the passive basis for sensory functions and emotions. For cognition to be enacted means that it is something that people do with their bodies as an activity in the world and in relation to other people. Jensine Andresen summarizes this view, saying that "Enactionism questions the relevance of representations per se while acknowledging the importance of dynamical mechanisms and emergence" ([22], p. 7). The version of cognitive science that understands cognition as enactive embodiment is found, for example, in the work of Francisco Varela, Eleanor Rosch and Evan Thompson [23], of George Lakoff and Mark Johnson [24], and others [25]. Lakoff and Johnson open one work with the assertion that there are three major findings of cognitive science, the first of which is that "The mind is inherently embodied" ([26], p. 3).

Varela, Thompson, and Rosch turned to the phenomenology of Merleau-Ponty in developing a conception of cognitive science grounded in embodiment ([23], p. xv). In doing so they move past not only the early cognitivist/computational conceptions of cognitive science, but also the later connectionist ones as well, toward an understanding in which the lived world "is inseparable from our bodies, our language, and our social history—in short, from our *embodiment*" ([23], p. 149—emphasis in original). In other words, neither the world nor human consciousness is taken as an independently existing object. More fully, Varela, Thompson, and Rosch then go on to claim that

The central insight of this nonobjectivist orientation is the view that knowledge is the result of an ongoing interpretation that emerges from our capacities of understanding. These capacities are rooted in the structures of our biological embodiment but are lived and experienced within a domain of consensual action and cultural history ([23], p. 149).

In many models of cognition that are structured by the sense-model-plan-act framework (discussed below) perception is considered foundational for cognition. Although perception is often described in terms that treat the body as a passive receptor (light waves striking the back of the eye, stimulating nerve cells, and so on), embodied active engagement with the world is key to perception as well. Summarizing his critical reflection on the embodied character of perception, Alva Noë insists that "Perception is not something that happens to us, or in us. It is something we do" ([27], p. 1). More fully, he says that "Experience isn't determined by neural states set up by patterns of stimulation alone; the qualitative character of experience depends on the perceiver's mastery and exercise of motor skills" ([27], p. 231). This integral conception of embodied existence and cognition is supported by work in robotics. Mentalistic versions of a cognitive science of religion employ a conception of cognition limited to mental objects: beliefs, feelings, representations, memories, experiences, and mental actions: comparison, recall, etc. The robotics equivalent is known rather colloquially as the sense-model-plan-act framework ([28], p. 139). Robots built on the basis of this framework either failed or were very inefficient at solving real world problems, such as moving in a crowded environment [29]. Rather than plotting a course in an internal representation of an environment, an alternate robotics solution involves what Andy Clark calls "action oriented representations," that is, "representations that describe the world by depicting it in terms of possible actions" ([30], p. 95). He proposes an evolutionary rationale for this kind of embodied cognition, "If the goal of perception and reason is to

guide action (and it surely is, evolutionary speaking), it will often be simpler to represent the world in ways rather closely geared to the kinds of actions we want to perform" ([30], p. 93).

In other words cognition is better conceived neither as a representational system within the mind nor as a computational system within the brain. Anthony Chemero suggests that instead of addressing the concept of representation at all, cognitive scientists "should use theories and explanatory strategies that treat animal–environment systems as unified entities and so do not license the invocation of representation and mental gymnastics" ([31], p. 207). Cognition takes place by a body nondually engaged with the world, including engaging through the cultural tools at hand [32], such as ritual. A mentalistic study of ritual is not simply incomplete, but being truncated distorts our understanding of cognition.

2.5. *Syntax ≠ Language*

Adding to the confusion surrounding the concept of a ritual syntax is the very natural idea that syntax means a characteristic of language, and that therefore any discussion of syntax means that one is only referring to something going on within language. Under this conception, syntactic structure primarily refers to how sentences are organized—entailing a strong interpretation of the analogy between language and ritual, one effectively making ritual syntax a subset of sentential syntax (for example, [2], p. 85; [5]). Such strong interpretations privilege language over activity, a privileging that Staal rejects when he makes the radical proposal that syntax originates with activity and then is developed into language ([33] p. 285; [2], p. 116). This move to a weaker analogy is consistent with Meshel's reservations, as when he says "the grammars of ritual systems are probably similar to those of natural languages only in a very general sense" ([3], p. 206).

Syntax has in some cases been conceived simply as the sequential ordering of words making up sentences. However, a more complex conception of syntax includes the hierarchical grouping of words [34], known as "constituent structure" ([2], p. 90). If we abstract syntax out of a limited conception of it as a subset of language, we find the same two levels of syntactic analysis apply to ritual as well: the sequencing of ritual acts and the hierarchical grouping of ritual acts.

Some ethologists have argued for animal acquisition of language employing the conception of syntax as sequencing alone. Jean Aitchison summarizes this argument for animal acquisition of language, saying that those making this claim use a broad definition of language. For them "a language is any communication system which refers consistently to the outside world by means of a set of arbitrary symbols which are combined together in accordance with conventional rules" ([34], p. 36). However, as Maggie Tallerman expresses it, "Sentences are not mere linear strings of words, or even linear groups of words, but consist of phrases within larger phrases. ([35], p. 446)." More specifically, she says that "Syntax is clearly more than mere regularities in the linear ordering of words. Languages are structure dependent: they exploit hierarchical structure to express different meanings" ([35], p. 447).

A simple explanation of hierarchical structuring is "the idea that a group of symbols could be substituted for a single one without altering the basic sentence pattern ([34], p. 36)." An example of this would be "Sam gave an apple to Harry," and "Sam gave a Braeburn apple to Harry," where the single noun "apple" is replaced by the phrase "Braeburn apple." Hierarchical structuring also enables moving phrases in converting one sentence to another. An example of this is "Sam gave Harry an apple and Jill a banana," and "Sam gave Jill a banana and Harry an apple." In this case the two phrases "Harry an apple" and "Jill a banana" (combining direct and indirect objects of Sam's acts of giving) can not only be reversed in order, but also added to with another phrase: "Sam gave Harry an apple, Jill a banana, and Fred an orange." The hierarchical structuring evidenced by these sentences is represented by inverted tree diagrams in Figure 2.

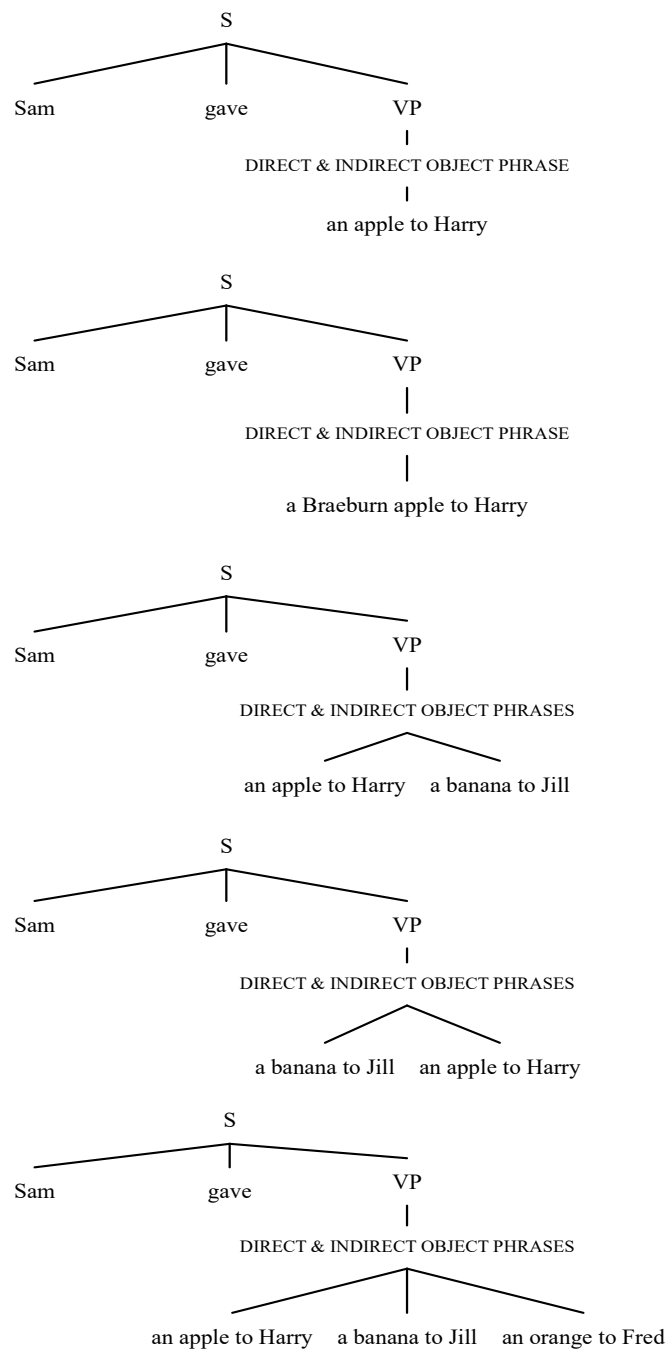


Figure 2. Hierarchical Structuring.

Again, the order can be changed without altering the basic sentence pattern. Hierarchical grouping in sentential syntax allows for freedom in moving such groups from one location to another. Does then the strong emphasis on invariance in ritual performances indicate that ritual syntax is only sequential and not hierarchical? As we saw in the diagrams for the rituals studied by Wilke, hierarchical groupings are found in rituals. As we will see below, hierarchical groupings are also found in insight meditation sessions and in homa. If hierarchically organized groups of ritual actions cannot be reordered as freely as hierarchical word groups, are rituals therefore some kind of intermediate phenomenon? Or is there another explanation of invariance? Rather than being an exclusively syntactic matter, ritual invariance seems to follow from semantic considerations and indicate one of the ways in which syntax

and semantics interact, but without being unitary. That interaction leads us toward a theory of ritual semantics below, Section 5.

3. Definition: From Ritual to Ritualization

The academic study of ritual has failed to come to agreement on a definition of ritual. This failure follows from the fact that the concept “ritual” is a social construct. As a social construct, when the term “ritual” is used there is no common objective referent that can be used to correct, modify or authenticate such usages. As long as ritual theorists had shared common prototypical examples of ritual, the absence of a common objective referent could go unnoticed. For instance, as long as discussion of ritual took place within communities of scholars sharing the Eucharist as their prototype conception of a ritual, the socially constructed character of the concept of ritual remained invisible, and any definitional difficulties could appear to be simply a matter of not yet having gotten the definition quite right.

A likely explanation for the present lack of scholarly consensus is that it results from the increasing diversity of scholars working in the field. Scholars from diverse backgrounds also hold conceptions of ritual based on diverse prototypical instances. This is a situation that cannot be resolved by claiming that “ritual” is adequately encompassed by common usage ([7], p. 217), by considering it a term of art, by attempting to identify a single defining characteristic ([1], p. 9), by recourse to “family resemblances” (polythetic definitions), or by stipulative definition. Rather than attempting to reify ritual as a clear and distinct category, the concept of “ritualization” allows us to consider that humans engage in practices that are similar or different to varying degrees as judged according to different characteristics. The practice of ritualizing can be further defined as taking place along several different scalar characteristics.

This approach was apparently first, and certainly best explicated by Catherine Bell. She suggested a set of characteristics of ritualization, as distinct from a set of defining characteristics of ritual. Her list of six characteristics includes formalism, traditionalism, invariance, rule-governance, sacral symbolism, and performance ([36], pp. 138–69). Since these characteristics can be found in greater or lesser form, they are scalar in character—though we note that while Bell employed the phrase “degrees of ritualization” ([36], p. 82), she did not specifically use the concept of scalar metrics. Bell’s is not a cumulative list of characteristics as one might find in some versions of a polythetic approach. In a polythetic approach, the more of the characteristics on the list that an activity has, the more ritual-like it is. With a scalar evaluation, an activity is scaled on each of the different characteristics identified as important, thus producing a twofold evaluation: score on individual characteristics and cumulative score on characteristics collectively. The higher an activity scores on more characteristics, the more highly ritualized that activity is. This conception of ritualization challenges some of the previous work on cognitive theories of ritual, which has tended to dichotomize ritual and ordinary activity.

4. Two Instances

Two instances of Buddhist practice provide examples of the way in which a syntactic analysis can be conducted. The first is insight meditation practice, and the second is tantric fire ritual (homa). As insight meditation practice is not tantric in character, it provides a useful contrast to the homa, which is considered tantric.

4.1. *Insight Meditation Practice Session*

Insight is a form of Buddhist meditation that has spread from its origins in Burma to the United States, Europe and elsewhere globally over the last several decades [37,38]. It is similar to the perhaps more widely known mindfulness meditation, insight having been one of the main sources for the development of mindfulness [39]. Commonly, insight meditation is practiced in groups on a regular weekly basis. This practice is complemented by individual practice at home, and practitioners may also participate in daylong sessions, or retreat programs of intensive meditation for periods of a

few days, to weeks and in some cases months. Most insight groups self-identify as Buddhist, while mindfulness groups tend to eschew any religious identity, claiming instead to be secular. These are not, however, strict segregating markers as the boundaries between the two are very permeable. For example, some of the largest and best-known mindfulness teacher training programs require students to attend Buddhist retreats as part of their training. Also, these institutions continue to undergo rapid change, and characterizations such as “Buddhist,” “secular,” “self-improvement,” “therapeutic,” and so on are presently in flux. The following description is a generalized one largely based on my own experience with such groups, specifically in the San Francisco Bay Area, over several decades of personal involvement with Buddhism.

In present-day insight meditation sessions, most participants—including teachers—are casually dressed in ordinary street clothes. This contrasts with some Buddhist meditation groups whose teachers and in some cases participants adopt special clothing such as traditional robes. Similarly “Westernized” is the accepted use of chairs for sitting during the meditation session per se, and during any attendant instruction (often referred to as a “dharma talk”). Noting that there are variations from teacher to teacher and from group to group, procedurally one could expect the following—

- participants enter the hall, sitting quietly, some on chairs, some on cushions on the floor,
- at the start of the session, the teacher rings a bell or gives some other conventional signal that the meditation part of the session has started,
- participants sit comfortably upright, some with eyes lowered, others with eyes closed, some with their hands folded on their laps, others with their hands on their legs; such variations seem to be quite accepted and it is my understanding that they result from different background experiences participants may have had with yoga, Zen, and so on,
- after a few minutes the teacher may speak quietly, reminding the participants to hold their attention on the breath, which is the most common object of meditation for insight meditation sessions; these instructions are usually brief, unless the session is specifically for beginning participants who may need more frequent or more detailed instruction,
- the balance of the meditation period, whether twenty, thirty or forty minutes, passes in silence, and at the end the teacher again gives a signal such as ringing a bell,
- this is followed by a short period for standing and stretching, after which participants again take their seats,
- there may then be announcements of various kinds—of visiting teachers, other meditation trainings, workshops, and social events,
- the instruction period, twenty minutes to an hour, then follows; different teachers have widely varying styles—some are quite anecdotal, some draw on a wide range of religious traditions for stories and allegories, some are focused on specific sequences of instruction based on scriptural sources (most commonly from the Pāli canonic and extracanonic materials), and some will mix elements from all three styles,
- at the end there may be a period for questions and answers, followed by closing, and then sometimes an opportunity for socializing, including in some cases a shared meal or other refreshments.

This is a very generic description, an outline which both orients those unfamiliar with such meditation sessions, and provides the basis of the syntactic analysis below. In considering this from the perspective of a cognitive study of ritual, there are four important dimensions of insight meditation practice—the absence of any specific content, the problematic character of any role for a “culturally posited supernatural agent” (see below), such sessions as ritualized activities, and the organization of the session.

The meditation itself is not “about” anything, that is, there is no specific referential meaning that is the focus of insight meditation. It is something that one does, an embodied activity. One is to keep one’s attention in the present by focusing on the experience of breathing. There is no specific symbolic

reference involved. The instruction will often provide guidance toward better meditation practice, such as by discussing difficulties that one may encounter during practice, and such guidance may draw on canonic or paracanonic texts. In some instances teachers will give specific forms of practice, such as “loving-kindness,” that may be practiced in order to develop certain qualities within oneself. While in a general way such guidance contributes to the development of a particular worldview, these teachings are generally not specifically doctrinal in character. Based on my experience, for example, it would be very unusual to encounter assertions as to the actuality of karma and rebirth as central to the instruction provided, which tends to either focus on meditative practice or more general spiritual topics. Some participants may ask about these kinds of topics during the question and answer period, however usually in response to something they have heard or read outside the context of insight meditation sessions *per se*.

There are, of course, founding myths, both about the meditation of Śākyamuni Buddha, and about the teacher’s experiences—myths that serve to legitimize the practice and the teacher. And some theorists might attempt to argue that these provide the meditation with meaning. Such meaning is not, however, referential in the way usually meant when scholars assert that ritual has meaning or is meaningful (for clarity we note that “meaningful” is not used to indicate “personally significant” or “emotionally evocative,” but rather to indicate that either the ritual as a whole or elements of it have meanings ascribed to them).

E. Thomas Lawson and Robert N. McCauley [40], Ilkka Pyysiäinen [41], and others have promoted the idea that what marks religion is belief in “culturally posited supernatural agents” (CPS-agents; more recently “agents possessing counter-intuitive properties,” or CI-agents (see [8], p. 89, n. 24). This idea has been extended to the claim that such agents play a founding role in religious ritual. A religious ritual in Lawson and McCauley’s view has a three-part structure: agent, action, object ([41], p. 14)—basically the structure of an English language sentence with a transitive verb, which they interpret as the cognitive meaning structure describing ritual action. On their view what distinguishes religious ritual from other actions that can be described in terms of the same three part structure is the role of a CPS-agent in establishing or founding the ritual. For example, the CPS-agent may be thought to have provided the first initiation, and the current priesthood derives its authority from that event. If we presume CPS-agent theory *a priori* and attempt to apply it to insight meditation practice, it may be tempting to interpret the position of the teacher as authorized through an initiatory sequence leading back to the actions of the founder, Śākyamuni.

In my experience, however, most insight meditation practitioners follow some version of the Buddhist modernist belief system, which emphasizes the merely human status of Śākyamuni. It is not uncommon to find teachers of insight meditation who, despite perhaps having spent time in monasteries in South East Asia as either lay practitioners or as monastics, will pointedly say that Śākyamuni is not a god. They will emphasize that he is not an object of worship nor is he prayed to, but that he is honored for having become awakened. Awakening is presented as an accomplishment that is both a model of our own potential and an assurance that it is something that can be achieved by ordinary human beings such as ourselves. Consequently, were we to apply the criteria for “religion” propounded by CPS-agent theorists, insight meditation practice would not be religious. To clarify, the issue is not a contrary claim on my part that insight meditation “really is religious.” Instead, the point is that while the concept of a CPS-agent may be descriptively valuable for some rituals, to employ that concept as a criterion for what is and what is not religious is an arbitrary and *a priori* use.

Similarly, Lawson and McCauley claim that one criteria for “religious ritual” is that “invariably, religious rituals, unlike mere religious acts, bring about changes in the religious world (temporary in some cases, permanent in others) by virtue of the fact that they involve *transactions* with CPS-agents.” ([42], p. 159). According to this criteria, insight meditation practice is not a religious ritual, and may not even be a “religious act.” While there are ideologues on both sides of the question of secular and religious Buddhisms, my point here is not to fuel those debates, but rather to point to the limitations imposed by an artificial, *a priori* definitional clarity that covertly introduces theological preconceptions.

If we consider the practice of insight meditation as described above from the perspective of Bell's approach of ritualization, it is moderately ritualized. Bell says that "formality appears to be, at least in part, the use of a more limited and rigidly organized set of expressions and gestures, a 'restricted code' of communication or behavior in contrast to a more open or 'elaborated code.'" ([36], p. 139). By this characterization an insight meditation session is moderately formal—it is distinct from other, more clearly social events by having regular times and places, and by having more constrained behavior and speech. Although the kind of meditation is a modern development [43], it is generally presented as having its origins in the teachings of Śākyamuni. In this representation insight meditation is given the aura of tradition. Bell identifies this as traditionalization, defining this concept by saying that "The attempt to make a set of activities appear to be identical to or thoroughly consistent with older cultural precedents can be called 'traditionalization.'" ([36], p. 145).

Bell explains the next characteristic, invariance, stating that "One of the most common characteristics of ritual-like behavior is the quality of invariance, usually seen in a disciplined set of actions marked by precise repetition and physical control" ([36], p. 150). There is very little variance in the sequence of events from one week to the next in insight meditation sessions, though this invariance is not itself held to be essential to the efficacy of the meditation practice. Bell explores the invariance of meditation practice in relation to the goals of personal transformation, which are central to insight meditation, and also calls attention to the rejection of the label "ritual" by Buddhist modernists who are under the influence of a highly rationalized representation of Buddhism promoted by apologists in the late nineteenth and twentieth centuries. She says that meditation is an "example of the way in which invariant practice is meant to evoke disciplined control for the purposes of self-cultivation, although some spokespersons for various traditions of meditation have attempted to distinguish meditation from ritual" ([36], pp. 151–52).

As defined by Bell, rule-governance can be deployed for any number of different ends. "Rule-governance, as either a feature of many diverse activities or a strategy of ritualization itself, also suggests that we tend to think of ritual in terms of formulated norms imposed on the chaos of human action and interaction. These normative rules may define the outer limits of what is acceptable, or they may orchestrate every step" ([36], p. 155). In addition to the orderliness imposed by the semi-formal nature of an insight meditation session, the practice of insight meditation per se is governed by a set of rules reflecting the ideas regarding proper meditation—though in this case "proper" meditation is itself conceived in terms of "effective" meditation. There may be some sacral symbolism employed in an insight meditation session, perhaps a small statue of Śākyamuni, with flowers and a candle, though these latter are not treated as formal offerings as they might be in a temple setting. Bell notes, however, that there is a fundamental circularity between sacral symbols and ritual activity. "While ritual-like action is thought to be that type of action that best responds to the sacred nature of things, in actuality, ritual-like action effectively creates the sacred by explicitly differentiating such a realm from a profane one" ([36], pp. 156–57). Thus there is a dialectic between the sacral symbols creating an environment for ritual-like behavior and that ritual-like behavior serving to identify the symbols as sacral. Performance is itself a complex, multifaceted characteristic in Bell's understanding. One of the facets that is particularly relevant to insight meditation is that "the power of performance lies in great part in the effect of the heightened multisensory experience it affords: one is not being told or shown something so much as one is led to experience something" ([36], p. 160). The "heightened multisensory experience" afforded by an insight meditation session is created not by increasing stimulation above the norm, but rather by reducing stimuli so that attention can be focused with greater intensity. Thus, in this sense there is the same effect reached by an approach opposite to what her description might lead one to expect. Considered along these axes, we can see that insight meditation sessions score in what might be designated the "upper middle range" of ritualization.

Figure 3 shows the basic structure of an insight meditation session as outlined above. Regarding Bell's criterion of invariance, we can note that there is no inherent reason that the order of meditation period and instruction could not be reversed. It would give a different experiential tone, and teachers

may prefer the tone this structure gives, or it may simply be traditional in the sense that this is the way they learned and prefer to not change it. Syntactically, what is important to notice is the groupings of actions. These will be discussed below in considering the nature of syntax as such, and the importance of hierarchical groups of actions in ritual performances.

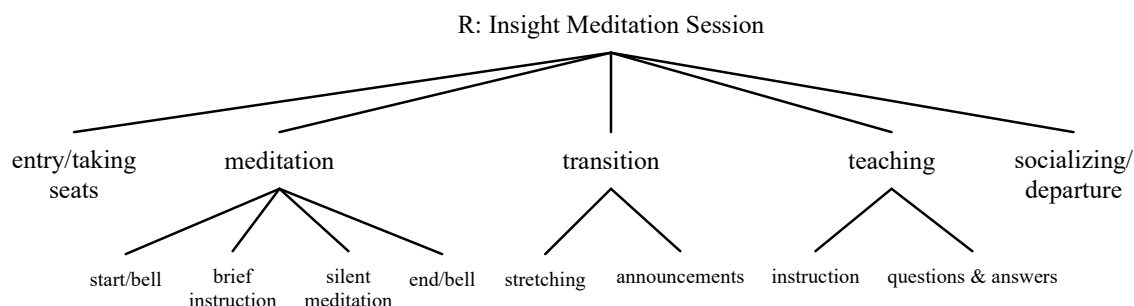


Figure 3. Syntax of Insight Meditation Session.

When considering ritual, CPS-agent theorists (such as Lawson and McCauley) and others who dichotomize ritual from other actions choose to focus almost exclusively on “religious ritual” (in some instances they write as if they consider “ritual” and “religious ritual” to be coterminous). The instance of insight meditation practice suggests that the scope of their approach could benefit by understanding ritual as a range along Bell’s several categories, and taking into consideration “secular ritual.” An instance of secular ritual relevant here is the sequence of training and testing involved in gaining a driver’s license. It is a highly ritualized sequence requiring the services of specialists who conduct the testing and provide the certification, and has as its grounding the agentive authority of the state. While the “state” is a culturally posited agency, it is not supernatural (nor counter-intuitive)—but does serve the same function of grounding the ritual system. A cognitive study of ritual should, therefore, dispense with the theologically loaded requirement of a supernatural agent, and consider a broader range of ritualized practices than allowed for by Lawson and McCauley, other CPS-agent theorists, as well as all theories based on dichotomizing ritual into a special category separate from other activities.

4.2. Homa—Tantric Fire Offering in the Shingon Tradition

The homa is a very dramatic ritual performance, one involving the construction of a fire on an altar and the making of offerings into that fire. With its roots in the Vedic tradition, Buddhist tantra incorporates the figure of Agni, the Vedic fire god who receives and purifies offerings, and who then transmits them to the gods. The homa is found not only in Buddhist tantric traditions, but throughout the tantric world [44].

The first homa that I observed was held early on New Year’s morning, beginning about 5 a.m., in the Sacramento Shingon temple. Dark inside the temple, the priest began the ritual, and while he was lighting the fire, a *taiko* drum began sounding loudly from alongside the altar. The congregation (*samgha*) of about 150 people began chanting the Heart Sutra in unison, while flames on the altar alternately flared up and then died down, and repeated the cycle. It was only later that I understood that there were five subrituals, all basically the same, and that in each subritual additional kindling was first added to the fire, oil was then poured into it causing the flames to light up the dark room, and other offerings made into the fire. After about 45 minutes the ritual was finished. The priest rose from his place in front of the fire, and left the altar (*naijin*, 内陣). By this time the sun had come up, and the temple was opened to allow the smoke to clear. The priest returned, having changed out of the formal robes of the ritual performance, and gave a short greeting. We were all given a handful of dry soy beans and three times on the count of three threw the beans and shouted “Oni wa soto, fuku wa uchi” (demons out, good luck in), a traditional Japanese way to greet the new year.

The five subrituals were to five different deities or sets of deities. The first is Agni (Katen, 火天), while the second is referred to as the “Lord of the Assembly.” Who this is varies depending on who the Chief Deity of the ritual performance is. The Chief Deity is the main figure of the ritual, and in the case of the New Year’s ceremony at Sacramento, the homa was a protective one and the Chief Deity was Acalanātha Vidyārāja (Fudō Myōō, 不動明王). Protective homas are probably the most commonly performed kind in present day Shingon, and Fudō one of the most popular Chief Deities. The fourth subritual is for the Celestial Deities, that is, asterisms, houses of the moon, and so on, while the fifth is for the Worldly Deities, a group that includes a number of Vedic gods.

While the Sacramento new year’s ritual was a protective one, in contemporary Shingon tradition there are four other functions—prosperity, subduing adversaries, emotional affinity, and summoning—for which the homa may be performed [45]. Different functions require hearths of different shapes, robes of different colors, different times of performance, different endings to the mantras, and so on.

Homa performances are more highly ritualized than the insight meditation session described above. They are more formal, for example requiring special dress and formal behavior for the officiant, and though members of the *saṃgha* are dressed in street clothes, their behavior and speech are also constrained. Like insight meditation, the homa is also represented as traditional—the performance of the ritual in its present form can be traced back several centuries, and is notably similar to performances in cognate tantric traditions as well. The performance tends to be highly invariant, with practitioners following the instructions of a ritual manual (cf. [8], pp. 112–17). Although individual lineages have their own manuals, such manuals are generally very similar to one another in terms of the ritual actions specified and the order of their performance. There is a clear setting of sacral symbolism, as the ritual is performed on a special altar, which like other Shingon altars is homologized with both a maṇḍala and a stupa, before a statue, scroll, or other representation of the deities, and inside of a Buddhist temple. The flames leaping up in a darkened temple, together with the sonic driving of *taiko* drum and group chanting afford the kind of “heightened multisensory experience” that Bell identifies with the performance dimension of ritualization.

In Figure 4 the greater complexity of the homa compared to an insight meditation session is evident. In this case the invariance is much greater, and the hierarchical groups of actions more greatly stratified. (The instance represented here is an Acalanātha śāntika homa from the Shingon tradition. For a full analysis, see [46], pp. 285–321.) The diagram has been abbreviated in order to simplify the basic structure. The ritual has five major sections: Purification of the practitioner, Construction of the ritual site, Encounter with the deities, Identification with the deities, and Dissociation from the deities and ritual. Each of these five constitute a hierarchical group of ritual actions—the significance of such hierarchical groups is discussed below. And the next level of detail indicates that each of these five have groups of actions, and each of those in turn comprise groups of actions—indicated by lower case letters. Some of the actions indicated by lower case letters are single actions, while others are themselves groups of actions, a level of detail not indicated in this diagram.

The group identified as “Entering Homa” is the group of five subrituals described above, one set of offerings for each of the five deities or groups of deities evoked in the ritual. This is an instance of what Staal called embedding, the group of five subrituals having been added to a ritual structure found in other Shingon rituals. In this case each of the five are effectively complete rituals of offering themselves with preparations, invitation, offerings, and dissociation.

In addition to embedding, the homa displays two other rules of ritual syntax, also found in many other rituals of the Shingon corpus (cf. [8], pp. 89–90). These are symmetry and terminal abbreviation. These are comparable to phrase structure rules, that is, ways in which the elements of rituals may themselves be organized. As in linguistics, a phrase structure rule for ritual does not mean that it is found in every instance of ritual. This kind of phrase structure rule, however, applies to two instances of the “same” phrase within a single ritual, a situation not usual in language, though not impossible.

(For example, “The skillful plumber was met by John, who was happy to know someone skilled at plumbing.”)

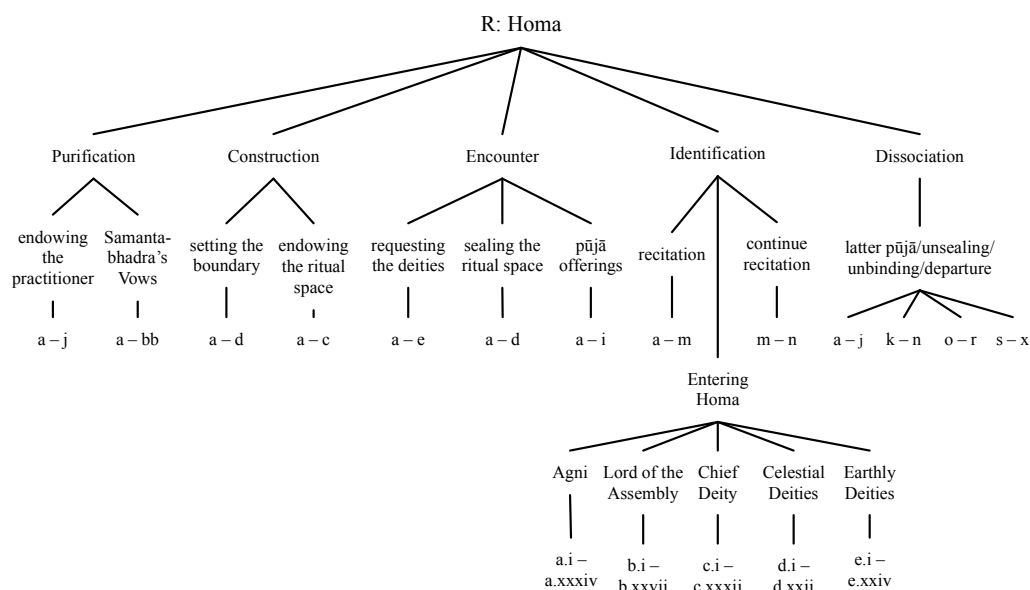


Figure 4. Syntax of Homa.

Symmetrical organization refers to the groups of actions performed at the beginning of the ritual being repeated at the end. While all of the homas in the Shingon corpus examined to date evidence symmetry, this is not “the key ritual structure” ([2], p. 156, emphasis in original). Rather, symmetry is a descriptive generalization of a particular set of rituals, not a pattern of “ritual” universally. Though the level of detail given in the diagram here does not reveal it, there are two kinds of symmetry, sequential and mirror-image. In sequential symmetry, the elements occur in the same order at both the beginning and end of a ritual, while in mirror-image symmetry, the order is reversed.

The homa and other rituals also demonstrate “terminal abbreviation.” In some cases the actions done at the end of the ritual are reduced in number of repetitions performed compared to when done at the beginning. Also, the set of actions within the hierarchically structured groups may be simplified. A hypothetical example would be that an act of purification at the beginning of the ritual might include three actions, the second of which is repeated five times. At the end of the ritual purification is to be performed by only three repetitions of the second action—that is, both the first and third actions are absent, and the second is repeated fewer times. This is why the last of the five major groupings shown in the diagram, Dissociation, has listed under it a single compound, “latter pūjā/unsealing/unbinding/departure.” This compound represents in reverse order (mirror-image symmetry) and abbreviated form all of the actions preceding Encounter.

Although more formal and more complex than an insight meditation session, the homa is also problematic for CPS-agent theorists. While like many tantric rituals it is thought to be made effective by the ritual identification of the practitioner with the chief deity, there is no mythology regarding the homa ritual being established by Śākyamuni. While having been introduced to Japan by Kūkai, neither his legendary status nor the character of the transmission of the ritual qualify as the actions of a CPS-agent as defined. Nor is it said to be some kind of primal act by Mahāvairocana, the central buddha for the Shingon tradition, nor by any other buddha. In one of the main scriptures for the Shingon tradition, the *Vairocanābhisaṃbodhitāntra* there are, for example, chapters describing the homas of competing traditions, and of the homas of tantric Buddhist tradition, but nothing about any supernatural agent having first enacted or established the ritual—no mythology of founding in the sense indicated by CPS-agency theories.

5. Invariance: At the Interface of Syntax and Semantics

At first glance, the invariance with which ritual actions are ordered would seem to indicate that there is only a sequential ordering of the actions, a linear sequence that becomes increasingly mandatory the more formal the ritual is. As such, one might mistakenly conclude that ritual does not have syntax in the sense of both sequencing and hierarchical structuring. However, one of the valuable differences between a linear description of the surface actions of a ritual and a syntactic analysis as made evident in inverted tree diagrams is that the latter reveals hierarchically structured groups of actions. Observation alone will not disclose more than a rough sense of the hierarchical groupings of actions in a ritual sequence, and even examination of a ritual manual may not provide more than that—depending on the detail and style of the manual examined, of course. Familiarity with the performance of the ritual as such is the best guide to understanding the hierarchical organization of ritual actions that constitute the sequence. (This methodological constraint is based not only on my own work on rituals with which I am personally familiar, but also from trying to perform syntactic analyses based on ritual manuals for traditions with which I am not familiar. Michaels indicates a similar difficulty, suggesting a similar methodological solution as one combining fieldwork and philology ([8], p. 114).)

Despite the existence of hierarchically structured groups of actions, sequencing is largely fixed in rituals. In this sense, then the syntax of rituals might be interpreted to be located between the syntax of sequencing only, and the full flexibility of the hierarchical groupings of the syntax of human natural language. However, if we consider cognition to be the embodied engagement with the world in the performance of activities, then the syntax revealed by the analysis of those activities does involve the hierarchical structuring of groups of actions, and is, therefore, as revealing of human cognition as is language.

If ritual syntax is hierarchical, and one of the marks of hierarchical syntax in language is the freedom to move groups around within the sentential form to create new sentences, then what explains the relative inflexibility of the order of ritual actions, their invariance? Most rituals, at least the ones that I am familiar with, seem to draw on some ordinary activity as their model, establishing a kind of metaphoric relation. Taking into account Bell's concept of ritualization as a scalar phenomenon avoids theorizing the pairing of ordinary activity and ritual as dichotomous.

The Eucharist points back to the Last Supper, and some tantric rituals employ the compound symbolism of insemination, gestation, childbirth, and maturation [47]. Similarly, Indian sacrificial rituals, *pūjā*, are modeled on feasting an honored guest, which also serves as the metaphoric basis for some of the tantric Buddhist rituals in the Shingon tradition, including the *homa*. To feast an honored guest requires a certain overarching order—the largest groupings of actions being preparations, offering the meal, and clean up. Each of these three stages involve a variety of different actions. Offering the meal might include drinks, light, music, incense, as well as food, each offered in the proper order. Even at this general level, we can discern that hierarchical organization of actions serves to structure both ordinary activities such as feasting an honored guest, and their metaphoric extensions in ritual, such as feasting the gods. This is illustrated in Figure 5. It is worth emphasizing in this regard that feasting an honored guest is not the “meaning” of *pūjā*, but its metaphoric model. As with other metaphoric relations, certain entailments are created that constrain the ritual. In this case, the fixed order of making preparations, presenting the meal, and cleaning up afterwards is entailed.

When considering ritual invariance, therefore, the metaphoric relation between the ordinary activity (source) and the ritual (target) imposes the same kind of order on the ritual as is found in the ordinary activity. In this sense the ordinary activity serves as the equivalent of the cognitive semantics of a sentence. While some source activities metaphorically entail a necessary causal order on the target ritual, other source activities do not. In contrast to the *homa* and *pūjā*, insight meditation sessions look rather similar to church services as found in the Puritan strains of American Protestantism, as well as dissident groups such as Quakers and Unitarians. These would seem to be the proximate models for

insight meditation sessions. As source activities they themselves have no strong causal ordering, and the metaphoric entailment on the target ritual allows for more freedom of organization.

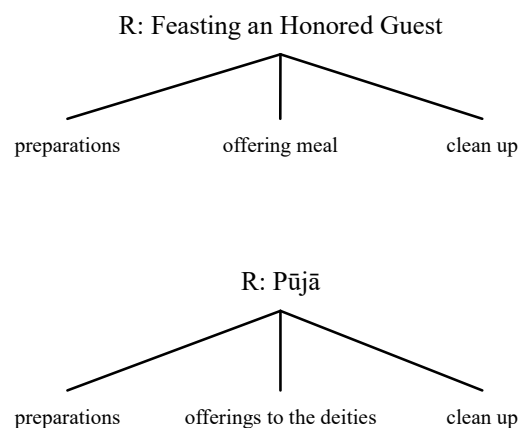


Figure 5. Metaphoric Extension to Ritual.

This way of understanding ritual semantics provides both a modeling relationship in the form of embodied activity, and an explanation for ritual invariance existing despite hierarchical groupings of actions. It does so without any abstruse theorizing regarding linguistically necessary connections between syntax and semantics, and without recourse to purely conceptual representations of agent–action–object relationships, or other artificially truncated mentalistic explanations.

6. Concluding Summary

Rejections of the syntactic analysis of ritual are for the most part based on the thesis of the unity of syntax and semantics. These, however, fail to distinguish between theories of language production and syntax as a tool of analysis. The various versions of the claim that syntax and semantics form a unity, however, are grounded in theories of language production, as distinct from the analysis of syntax per se. Therefore rejections of syntactic analysis of ritual on the basis of the unity of syntax and semantics are irrelevant.

An emphasis on ritual as an embodied activity entails moving to a different perspective from the mentalistic presumptions of the dominant forms of the cognitive science of religion. In other words, cognition is much more broadly conceived as operating in the intersection of body, mind and environment—rather than as exclusively mental objects and operations. Further, grounding our inquiry in Bell’s conception of ritualization established a basis for avoiding the impasses created by dichotomous definitions of ritual, and opening the examination of a much wider range of activities.

The syntax of natural human language is organized both by sequencing and by hierarchical grouping. In contrast to the invariance of ritual, natural human language evidences freedom of organization, allowed by hierarchical grouping. Since rituals tend to be strongly invariant, then what is the nature of ritual syntax? Is it sequencing alone, or are there other factors involved? Since hierarchical grouping has been demonstrated in the case of the homa, it must be some other factor. That factor is the ordinary activity that serves as the model for a ritual. Most previous theories of ritual semantics have utilized a conception of meaning that attributes meaning to the elements that rituals comprise. The relationship between ritual and ordinary activity establishes a much more satisfactory understanding of ritual semantics as the metaphoric entailments from the ordinary activity.

Conflicts of Interest: The author declares no conflict of interest.

References

1. Frits Staal. "The Meaninglessness of Ritual." *Numen* 26 (1979): 2–22. [CrossRef]
2. Carl Andrew Seaquist. "Ritual Syntax." Ph.D. Dissertation, University of Pennsylvania, Philadelphia, PA, USA, 2004.
3. Naphthali S. Meshel. *The "Grammar" of Sacrifice: A Generativist Study of the Israelite Sacrificial System in the Priestly Writings, With a "Grammar" of Σ*. Oxford: Oxford University Press, 2014.
4. Laurie Patton. "The Enjoyment of Cows: Self-Consciousness and Ritual Action in the Early Indian Gṛhya Sūtras." *History of Religions* 51 (2012): 364–81. [CrossRef]
5. Hans H. Penner. "Language, Ritual and Meaning." *Numen* 32 (1985): 1–16. [CrossRef]
6. E. Thomas Lawson, and Robert N. McCauley. *Rethinking Religion: Connection Cognition and Culture*. Cambridge: Cambridge University Press, 1990.
7. Annette Wilke. "Basic Categories of a Syntactical Approach to Rituals: Arguments for a 'Unitary Ritual View' and the Paraśurāma-Kalpasūtra as 'Test-Case'." In *Grammars and Morphologies of Ritual Practices in Asia, Section I: Grammar and Morphology of Ritual*. Edited by Axel Michaels and Anand Mishra. Wiesbaden: Harrassowitz Verlag, 2010, pp. 215–62.
8. Axel Michaels. *Homo Ritualis: Hindu Ritual and its Significance for Ritual Theory*. Oxford: Oxford University Press, 2016.
9. Michael Tomasello. *Constructing a Language: A Usage-Based Theory of Linguistic Acquisition*. Cambridge: Harvard University Press, 2003.
10. Holger Diessel. "Construction Grammar and First Language Acquisition." In *The Oxford Handbook of Language Acquisition*. Edited by Thomas Hoffmann and Graeme Trousdale. Oxford: Oxford University Press, 2013, pp. 347–64.
11. David Lee. *Cognitive Linguistics: An Introduction*. Oxford: Oxford University Press, 2001.
12. Steven Pinker. *The Language Instinct: How the Mind Creates Language*. New York: HarperCollins, 1995.
13. Ray Jackendoff. *Foundations of Language: Brain, Meaning, Grammar, Evolution*. Oxford: Oxford University Press, 2002.
14. Michael Tomasello. "On the Different Origins of Symbols and Grammar." In *Language Evolution*. Edited by Morten H. Christiansen and Simon Kirby. Oxford: Oxford University Press, 2003, pp. 94–110.
15. Tim Murphy. *Representing Religion: Essays in History, Theory and Crisis*. London: Equinox, 2007.
16. Pascal Boyer. "Explaining Religious Ideas: Elements of a Cognitive Approach." *Numen* 39 (1992): 27–57. [CrossRef]
17. Ilkka Pyysiäinen. "The Cognitive Science of Religion." In *Evolution, Religion, and Cognitive Science: Critical and Constructive Essays*. Edited by Fraser Watts and Léon P. Turner. Oxford: Oxford University Press, 2014, pp. 21–37.
18. E. Thomas Lawson. "Cognition." In *Theorizing Rituals: Issues, Topics, Approaches, Concepts*. Edited by Jens Kreinath, Jan Snoek and Michael Stausberg. Leiden: Brill, 2006, pp. 307–19.
19. Phillip H. Wiebe. "Religious Experience, Cognitive Science, and the Future of Religion." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton. Oxford: Oxford University Press, 2008, pp. 503–22.
20. Catherine Bell. *Ritual Theory, Ritual Practice*. Oxford: Oxford University Press, 1992.
21. Lawrence Shapiro. "Embodied Cognition." In *The Oxford Handbook of Philosophy of Cognitive Science*. Edited by Eric Margolis, Richard Samuels and Stephen P. Stich. Oxford: Oxford University Press, 2012, pp. 118–46.
22. Jensine Andresen. "Introduction: Towards a Cognitive Science of Religion." In *Religion in Mind: Cognitive Perspectives on Religious Belief, Ritual, and Experience*. Edited by Jensine Andresen. Cambridge: Cambridge University Press, 2001, pp. 1–44.
23. Francisco J. Varela, Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge: The MIT Press, 1991.
24. George Lakoff, and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.
25. Robert A. Wilson, and Lucia Foglia. "Embodied Cognition." *The Stanford Encyclopedia of Philosophy*, Spring 2016. Available online: <http://plato.stanford.edu/archives/spr2016/entries/embodied-cognition/> (accessed on 8 April 2016).
26. George Lakoff, and Mark Johnson. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books, 1999.

27. Alva Noë. *Action in Perception*. Cambridge: MIT Press, 2004.
28. Lawrence Shapiro. *Embodied Cognition*. London: Routledge, 2011.
29. Andy Clark. *Being There: Putting Brain, Body, and World Together Again*. Cambridge: MIT Press, 1998.
30. Andy Clark. *Mindware: An Introduction to the Philosophy of Cognitive Science*. Oxford: Oxford University Press, 2001.
31. Anthony Chemero. *Radical Embodied Cognitive Science*. Cambridge: The MIT Press, 2009.
32. James V. Wertsch. *Mind as Action*. Oxford: Oxford University Press, 1998.
33. Frits Staal. *Rules without Meaning: Ritual, Mantras and the Human Sciences*. New York: Peter Lang, 1989.
34. Jean Aitchison. *The Articulate Animal: An Introduction to Psycholinguistics*. London: Routledge, 2011.
35. Maggie Tallerman. "What is syntax?" In *The Oxford Handbook of Language Evolution*. Edited by Kathleen R. Gibson and Maggie Tallerman. Oxford: Oxford University Press, 2011, pp. 442–55.
36. Catherine Bell. *Ritual: Perspectives and Dimensions*. Oxford: Oxford University Press, 1997.
37. Erik Braun. *The Birth of Insight: Meditation, Modern Buddhism, and the Burmese Monk Ledi Sayadaw*. Chicago: University of Chicago Press, 2013.
38. Gil Fronsdal. "Insight Meditation in the United States: Life, Liberty, and the Pursuit of Happiness." In *The Faces of Buddhism in America*. Edited by Charles S. Prebish and Kenneth K. Tanaka. Berkeley: University of California Press, 1998, pp. 164–80.
39. Jeff Wilson. *Mindful America: The Mutual Transformation of Buddhist Meditation and American Culture*. Oxford: Oxford University Press, 2014.
40. Robert N. McCauley, and E. Thomas Lawson. *Bringing Ritual to Mind: Psychological Foundations of Cultural Forms*. Cambridge: Cambridge University Press, 2002.
41. Ilkka Pyysiäinen. *Supernatural Agents: Why We Believe in Souls, Gods, and Buddhas*. Oxford: Oxford University Press, 2009.
42. E. Thomas Lawson, and Robert N. McCauley. "The Cognitive Representation of Religious Ritual Form: A Theory of Participants' Competence with Religious Ritual Systems." In *Current Approaches in the Cognitive Science of Religion*. Edited by Ilkka Pyysiäinen and Veikko Anttonen. London: Continuum, 2002, pp. 153–76.
43. Kate Crosby. *Traditional Theravada Meditation and its Modern-Era Suppression*. Hong Kong: Buddha Dharma Centre of Hong Kong, 2013.
44. Richard K. Payne, and Michael Witzel, eds. *Homa Variations: The Study of Ritual Change across the Longue Durée*. Oxford: Oxford University Press, 2016.
45. Richard K. Payne. "Homa." *Oxford Research Encyclopedia of Religion*, 2016. Available online: <http://religion.oxfordre.com/> (accessed on 10 August 2016).
46. Richard K. Payne. *The Tantric Ritual of Japan: Feeding the Gods, the Shingon Fire Ritual*. Delhi: Aditya Prakashan, 1991.
47. Richard K. Payne. "Ritual Studies in the Longue Durée: Comparing Shingon and Śaiva Siddhānta Homas." *Pacific World: Journal of the Institute of Buddhist Studies* 13 (2011): 223–62.



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