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Normative Cognition in the Cognitive Science of Religion

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Introduction

The cognitive science of religion aims to gain insight into many religious phenomena by investigating its cognitive foundations and cultural expressions. Such investigation employs a wide range of methodologies with many of these utilising approaches and results from other fields of cognitive science. Cognitive science in general remains a methodologically contested area with the consequence that aspects of its appropriate application may be contentious. In the broadest terms normative cognition can be characterised as the processing of symbolically mediated normative information. It involves the acquisition, production, distribution and implementation of social concepts and norms through the cognitive ability to use symbols, concepts and norms as normative cognitive tools. Normative cognition encompasses both the logical features of norms in terms of what is required, permissible or prohibited and the psychology of norms in terms of norm governed behaviour. In doing so it enables the distinction of normative from normal and good from bad [Kelly and Davis p.58 2018]. Normative cognition in religion covers a wide variety of religious phenomena including shared religious practices and beliefs [Jensen 2010 and Jensen 2013]. Knowledge of what is right and wrong, and pure and impure is a guide to cognition and an assistance to predicting probable behavioural ranges in oneself and others. For example, normative cognition has a central role in the observation of religious ritual [Boyer and Lienard 2020]. Accounting for the nature and acquisition of normative cognition requires a proper understanding of general issues about the nature and status of claims in the cognitive science of religion. Philosophical problems about the nature and status of these claims quite often have clear affinities with ones about the nature and status of claims in cognitive science generally. These affinities will not be pursued here but recognising them is useful when assessing methodological questions in the cognitive science of religion.

How normative cognition should be understood is related to the important issue of the sense in which the cognitive science of religion is science. The development of cognitive science has blurred the distinction between natural and social science. The question of which of these it most closely resembles has significant implications for how issues about methodology should be approached. A central but frequently unrecognised issue in the cognitive science of religion is that of the difference between adopting an appropriately scientific attitude and favouring scientism [de Ridder 2018]. Approaches to the cognitive science of religion which emphasize causal explanation and reduce the significance of intentional explanation tend to view it as having significant affinities with natural science. Such approaches tend in varying extents to explain religious phenomena in terms of causal explanations about individual cognitive processes. Such explanations seek to demonstrate their scientific credentials but as will be argued below some tend towards scientism rather than being natural scientific. In contrast perspectives which accord an important role to intentionality and the social dimensions of religion favour aligning it with social science. Here the general approach of regarding the cognitive science of religion as aligned with social science will be preferred.

Wittgensteinian Methodological Approaches

Questions about methodology in the cognitive science of religion are importantly related to a number of key ideas in Wittgenstein. Specifically some central ideas from Wittgenstein are consistent with and support empirical evidence in the cognitive science of religion about the nature and acquisition of normative cognition. Before examining this further the issue of whether the fairly frequent criticisms of Wittgenstein as anti-scientific raise serious difficulties for the application of his thought to the cognitive science of religion should be considered. Whether and in what ways Wittgenstein might be deemed to be anti-scientific is a large and complex debate which will not be entered into here. For present purposes it will be claimed that it is reasonable to interpret Wittgenstein as making some philosophically significant claims (such as in Hacker [2005]) rather than any philosophical claims being purpose relative to the particular contexts of philosophical therapy they are invoked in (such as in the strong therapeutic readings of Crary and Read [2000] and Baker [2004]). Further to this it will also be claimed that any potential or actual inconsistency between Wittgenstein's own methodological precepts about the nature of philosophy as therapy and how he actually writes about philosophy does not in itself invalidate the value of particular philosophical points he makes. Taking these two interpretative approaches allow the possibility of being Wittgensteinian without being anti-scientific thereby permitting the utilisation of his work in the cognitive science of religion.

Wittgenstein's concept of philosophical therapy is methodologically valuable for the cognitive science of religion as it highlights the value of conceptual analysis for revealing implicit commitments to problematic assumptions in what appear to be unproblematic approaches and positions. This analytic approach includes exposing underlying patterns of argumentation (such as Cartesianism) with the objective of identifying root philosophical errors which have various different specific manifestations. Allied to this is the emphasis Wittgenstein places upon recognising that the most frequently philosophically misunderstood concepts are everyday ones (such as ability, belief, and thought) rather than technical philosophical (such as transcendental idealism) ones. His concept of philosophical therapy can be usefully applied to theoretical accounts in the cognitive science of religion with respect to whether these accounts are intended to serve a descriptive (that is to describe how things are), explanatory (to account for how things are), or prescriptive (to state how things should be) purpose. Distinctions between these types of theoretical accounts matter as there is evidence in the cognitive science of religion of cases where such accounts purport to be of one of these types but actually are of another. Descriptive accounts of religious phenomena may not be adequate explanations of these and likewise explanatory accounts of religious phenomena may not be adequate descriptions of these. The interest relativity of explanations has the consequence that an explanation may be inadequate because it is uninformative in relation to the desired information. For example, consider the difference between another how a robber and a priest would regard a robber answering a question about why he robs banks by saying that is where the money is [Putnam 1978 p.42]. Prescriptive accounts of religious phenomena which prescribe how these phenomena should be explained or interpreted (such as specifying particular kinds of causal explanation) can be problematic. This is because there can be a temptation to explain or interpret empirical data about religious phenomena in ways which accord with particular theoretical accounts rather than seeking to ensure that theoretical accounts provide illuminating insight into this empirical data. A

consequence is that such prescriptive theoretical accounts may lack genuine explanatory power or more colloquially put they offer explanations which are not really explanatory (such as the idea that paradigmatic cases of religion involve modestly counterintuitive representations [Boyer and Ramble 2001]).

The extent to which particular theoretical accounts of religious phenomena are adequate explanations matters because explanatory frameworks are linked to the theoretical positions they are embedded in or stem from. The nature of explanations also matters due to their connection with the aim of employing methodologies in the cognitive science of religion which permit the development of empirically testable theories. Empirically testability is a crucial differentiator between science and scientism [Trubody 2019]. Careful attention to the distinctions between description, explanation and prescription in theoretical accounts enables the identification of metaphysical commitments and armchair psychology involved in the formulation of scientific theories or research programs. Such identification enables an assessment of the extent to which such theories or research programs can be reformulated to enable methodologically sound psychological investigation (such that about the processes through which religious cognition is learnt). The methodological use of Wittgenstein in the cognitive science of religion offers the potential to ground theories and research programs in a way which better integrates and aligns the language, practice, and theoretical discussion of religion. In doing so this firmly avoids the not infrequently espoused but problematic position that an insider perspective on religion is necessary to study it properly [Day 2004 and Jensen 2011].

Methodological Approaches in the Cognitive Science of Religion

A general examination of issues about appropriate methodological approaches for the cognitive science of religion is required to understand those specifically pertaining to normative cognition. The sustained and systematic disagreement over appropriate methodologies in the cognitive science of religion has theoretical and empirical significance. There are a number of reasons for this:

- Various disciplines contributing to the cognitive science of religion differ in terms of language, concepts, methodologies and perspectives. Determining degrees of linguistic and cognitive equivalence between disciplines can be complex.
- Underdetermination of methodological approaches in the cognitive science of religion by the currently available empirical data on religion. This is not to say that all methodological approaches are underdetermined by the empirical data but this is a sufficiently important general issue [Laidlaw 2007].
- Methodological disagreement caused by selecting methodological approaches which are consistent with other desired attributes in cognitive science of religion theories. For example, a desired attribute could be the ability to collect particular kinds of psychological data.
- Methodological disagreement over whether the cognitive science of religion has most affinities with natural or social science (as previously discussed). This disagreement has direct implications for whether the cognitive science of religion should approach the study of religion from the perspective of understanding it entirely (or largely) as a cognitive phenomenon rather than as a cultural phenomenon.
- Methodological disagreement arising from divergent philosophical assumptions or commitments in the philosophies of cognitive science and mind.

Philosophical analysis is essential for identifying suitable methodologies underpinning effective interdisciplinary research programs in the cognitive science of religion. In the absence of such methodologies these research programs run the risk of becoming degenerative ones [Lakatos 1970]. As considered earlier quite frequently the philosophical assumptions or commitments informing the selection of appropriate methodologies in the cognitive science of religion are not readily apparent so philosophical analysis is required to expose them. For instance, philosophical assumptions may be hidden in substantive claims about particular kinds of data correlation religious phenomena show. Many theories in the cognitive science of religion have methodological commitments which have important but often unrecognised implications for the forms accounts of meaning and symbolisation should take. Similarly certain approaches to meaning and symbolisation lend themselves to particular kinds of methodological perspectives in ways which are not always readily recognised. In what follows there will be analysis of why the influential methodological approaches of reductionism and privacy are theoretically and empirically unsatisfactory for understanding normative cognition in the cognitive science of religion.

Reductionism and its Problems

Just as it is in cognitive science more broadly reductionism is an important sort of methodological approach in the cognitive science of religion. A general motivation for this approach is the position that the cognitive science of religion has significant affinities with natural science although as has been argued there are good reasons for regarding it as more properly aligned with social science. This position of affinity with natural science supports and is quite often allied with the view that reductionism is taking a properly scientific approach (with the model of physics often being taken as an ideal). Reductionism is supported by and linked to a common emphasis in the cognitive science of religion that all good explanations are causal in nature [McCauley 1996 and McCauley 2017]. In particular there is a strand within the cognitive science of religion which aims to provide a reductionist account of religious phenomena which explains them in purely cognitive and non-cultural terms. These methodological adherences to reductionism and explanation in purely cognitive terms result in a commitment to explanations in terms of methodological individualism.

There are substantial philosophical grounds for disputing the view that reductionism in the cognitive science of religion is taking a properly scientific approach particularly when questions of explanatory power are considered. The general philosophical objection to this kind of reductionism revolves around levels of explanation. Being clear about appropriate levels of description and explanation undermines much of the plausibility of reductionism. Finding appropriate levels of explanation which are not reductive in an unhelpful way is important. An essential part of doing this is to identify which kinds of explanation particular methodologies are aiming to satisfy. For example, the claims about individual cognitive systems each with specific functions termed modules made by Barrett [2004] and Whitehouse [2004] involve problematic reductionism. They claim the mind consists of a hypothesized module with shared interconnected submodules with religion being a consequence of the operation of these submodules rather than being a module in itself. Cognitive architecture is taken to be collection of mental tools involving submodules [Barrett 2004 pp.4-5]. For Barrett and Whitehouse more experimental empirical data is required for the discovery and validation of a successful model of this. Their accounts both presuppose and support a

causal model of scientific explanation because religious cognition is taken to be a result of the causal operation of the submodules. However, there are no metrics for what constitutes a module so rather than this being properly scientific it is a case of armchair psychology. The emphasis on modules moves the notion of intentionality and agency from individuals to mechanisms thereby engaging in reification. It follows that this is reductive explanation which is not particularly explanatory.

Due to the range of reductionist approaches in the cognitive science of religion only selected important methodologically individualist approaches favoured by Boyer [2001], Pyysiäinen [2003] and Sperber [1996] relevant to the understanding of normative cognition will be considered here. As exemplified by Boyer, Pyysiäinen and Sperber a core tenet of the cognitive science of religion is that all religious thought and action overwhelmingly depends upon the utilisation of perfectly ordinary forms of cognition available to all normally equipped people. For instance, Boyer argues that there is no need to assume that processing religious thoughts involves a special and unique way of functioning that is not shared by any other cognitive functions [Boyer 2001 p.311]. Thoughts and actions are characterised as natural if they possess attributes which rely on non-cultural foundations [Boyer 1994]. What these methodologically individualist approaches demonstrate is a commitment to notions about the privacy of mental representations [Jensen 2009] and as will be argued below there are good Wittgensteinian grounds for regarding this as problematic. In opposition to common presuppositions in both religious studies and anthropology the cognitive science of religion claims that understanding religion does not necessarily require extensive and detailed scrutiny of particular cultures [Boyer 2001, Pyysiäinen 2003 and Sperber 1996]. Patterns of individual and communal religious phenomena should be explained in ways which permit the formulation of testable theories about their non-cultural foundations. For example, the epidemiology of representations ensures that although particular religions can disappear religion does not and new religions routinely appear in human populations [Sperber 1996 pp.9-31]. Another unsatisfactory consequence of the favoured methodologically individualist approaches to cognition is the elimination of the social aspects of cognition with the result that the latter have to be theoretically reintroduced later in complicated and not particularly persuasive ways.

An important instance of an attempt to give the cognitive science of religion non-cultural foundations is the claim that norms in humans which have emanated from communication show remarkable similarities across individuals and that the distributions of such communicated norms demonstrates that cultural representations have a propensity to be transmitted if they have certain properties. Boyer and Ramble [2001] argue there is cross cultural evidence demonstrating there is swift and precise recollection of the modestly counterintuitive representations found in religion. From this evidence a group of cognitive science of religion theories have claimed that paradigmatic cases of religion involve modestly counterintuitive representations. This is used to characterise a concept of religion which is grounded in individual cognitive capacities and largely free from particular cultural dependencies. Proponents of this approach maintain that the concept has explanatory and predictive power. However, a serious limitation of the characterisation is that modestly counterintuitive representations are a very weak defining condition for religion since there many non-religious modestly counterintuitive representations such as famous cartoon characters like Mickey Mouse. This limitation is emphasized by the fact that even some of the representations which Boyer and Ramble characterise as religious due to their modestly

counterintuitive nature (such as zombies) are not obviously religious in character. What the weakness of this defining condition indicates is that it is not clear this approach has the capacity to fully explain religion especially with respect to its ritualistic dimensions. Consideration of these particular examples of methodological individualism illustrates the general importance of considering methodological approaches which accord appropriate weight to the place of culture in normative religious cognition [Laidlaw 2007]. According appropriate weight to the place of culture accords with the approach favoured here of assigning an important role to intentionality and regarding the cognitive science of religion as aligned with social science.

Reductionism and the Commitment to Privacy

Reductionist approaches favouring methodological individualism, such as those just considered, involve an implicit commitment to the concept of private mental representations. In passing it should be observed that these approaches have presuppositions and contextual framing which makes it unlikely that their proponents would recognise themselves as having a commitment to private mental representations. Generally the commitment which reductionist approaches favouring methodological individualism have to private mental representations is a consequence of how these approaches account for mental representations acquiring and exercising normativity. For example, Boyer [2001 p.98] claims that thoughts are invisible and unobservable with the consequence they must be inferred. This clearly commits him to the view that the mental representations of others are not directly accessible so inferences about these are constantly required. Having taken this position it is then natural to develop it by attempting to systematically explain the kinds of inferences involved in religious phenomena. However, there is no empirical evidence from psychology that individuals constantly make inferences about the mental representations of others as opposed to doing this as and when required by the situation. It follows that if this position is at all plausible it must be the case that such inferences about the mental representations of others are being made unconsciously. The problem with taking the approach that such inferences are unconscious is that it is no longer clear how Boyer's position about inferences can be empirically tested in a methodologically sound psychological way and this suggests he is tending towards scientism rather than natural science.

There is a vast and complex literature on interpretations of Wittgenstein's private language argument. However, these readings share the view that there are problems with the intelligibility of the concept of private mental representations as this requires a methodological commitment to the intelligibility of the concept of a private language and that no such language is possible. For present purposes it will be assumed that an interpretation of Wittgenstein which offers plausible reasons for denying the existence of a private language can be constructed without going into detail about precisely what form it should take. Boyer's position and ones which are committed to the same methodological precepts about the mental representations of others not being directly accessible can be objected to on grounds raised by Wittgenstein's private language argument. Wittgenstein argued that it is mistaken to claim that individuals can directly observe mental representations through introspection whilst others can only make inferences about mental representations through bodily and behavioural manifestations [1984 §246]. It follows that it is also erroneous to maintain that since knowledge of the mental representations of others cannot be acquired by introspection it can never be as certain as knowledge about one's self. Another crucial problem with Boyer's

commitment to the privacy of mental representations is that the intersubjectivity required for normative cognition has to be theoretically reintroduced instead of it being present from the start. This is because although norms are mental representations they are quintessentially shared and thus cannot be private [Sinha 2009]. Assuming Wittgenstein's criticism of the concept of private language and related notions to be correct there are significant consequences for the kind of philosophical approach to a theory of meaning which should be sought.

Normative Cognition

The preceding discussion of problems associated with reductionist methodologies in the cognitive science of religion for understanding normative religious cognition suggest alternative methodological approaches which give due weight to the importance of culture. These latter approaches recognise that religion is closely attached to the whole social world it is embedded in with the consequence that the richness and complexity of religious phenomena should be suitably articulated with reference to this. Following on from this understanding the acquisition and exercise of normative religious cognition requires an appreciation of both its cognitive and cultural dimensions and an acknowledgement that it lies somewhere between these two dimensions [Pachis and Panagiotidou 2017 and Shore 1996]. Accounts of and research programs about the acquisition and nature of normative cognition in religion are related to and dependent upon general accounts of normative cognition. It is thus important to identify features of an appropriate explanatory framework for normative cognition which can be appropriately refined for normative cognition in religion. Following on from earlier discussion an appropriate explanatory framework cannot treat normative cognition in a methodologically individualist way and must take the social dimensions of meaning and symbolisation into account. This explanatory framework must also consider that normative cognition in general and in religion in particular involves implicit learning [Birch and Heyes 2021]. This importance of implicit learning in these processes is supported by the fact that evidence from psychology shows that most learning is implicit. Most cognitive constructive processes are unconscious as they are neurologically embedded and operate automatically [Reber 1993].

One way in which implicit learning can occur is through the process of mimesis and this raises the question of whether an account of the acquisition of normative cognition in religion solely based upon mimesis is sufficient. One suggestion for the neurological processes involved in mimesis is that these utilise mirror neurons. It has been argued that mirror neurons have the potential to provide some empirical explanation of how mimesis might function [see for example Schilhab 2007]. In contrast Keestra [2008] claims that mirror neurons are used to explain too much. This is because neurons in themselves are transmission mechanisms which cannot imitate anything and there are potentially many other imitation mechanisms such as high level inferences from observation. Another problem is the adequacy of explanations in psychology and neuroscience which invoke the imitative and empathetic abilities of mirror neurons but without properly accounting for the attributes of mirror neurons which endow them with the ability to imitate or empathise [Hacker [2017 pp.381-385]. These criticisms of explanations involving mirror neurons are well justified and so much more theorisation of the idea of mimesis is required for a proper explanation of it. Aside from the particular issue of mirror neurons the general point is that mimetic mechanisms in

themselves are not an adequate explanation of the acquisition of normative cognition in religion and other elements are required for a fully satisfactory explanation.

In Donald's account of mimesis there is a cognitive craving for stability and familiarity with experience contributing to this acquisition of this [Donald 2004 p.51]. A loss of familiarity and stability is disorientating and often leads to a temporary experience of meaninglessness. The emphasis Donald places on stability and familiarity illustrates an important general point about the cultural dependence of normative religious cognition. Normative cognition in religion cannot result solely from mimesis because it requires some reasonably well defined form of cognitive content to operate upon. An adequate account of normative religious cognition needs to provide a cognitive and epistemological account of how cultural dimensions of normative religious cognition become internalised in individuals. Some proposals for the cognitive processes involved will be discussed here and later on the epistemological aspect will be covered with respect to Wittgenstein's conception of world pictures. Cultures create complex shared world views that balance the needs of large populations. Most religions utilise art, ritual, public spectacle and specific cultural practices to sustain a worldview and are aimed at cognitive governance. Cultural worlds are collectively and unconsciously created with a variety of mechanisms being suggested for this creation (for example see the accounts of cognitive schemas in Lakoff and Johnson [2003] or conceptual blending in Fauconnier and Turner [2002]). Despite this unconscious creation there can be conflicts between different kinds of normative cognition.

Donald argues that a world view offers a self-complete cognitive framework for living. He maintains that religion is the same kind of system as other systems which transmit world views. Donald claims that it is not really possible to have a meaningless world view and that meaning is always framed by a world view [2004 pp.49-52]. For Donald cognitive engineering is the deliberate expression of a world view and can be contrasted with the sense in which a Wittgensteinian world picture usually goes unnoticed because it is the inherited background. On his account world views evolve through cultural stages which have a cognitive dimension in a process of cultural learning. The mythic stage is a traditional form of human culture in language based cognitive governance by standard version narratives which Donald characterises as projective meaning in the mythic. The theoretic stage is based on the gradual assertion of the dominance of analytic thinking leading to de-mythologisation which Donald identifies as reflexive meaning in the theoretic stage [2004 pp.52-56]. As will be seen later Wittgenstein's concept of a cultural form of life provides an epistemological framework for the cognitive processes in Donald's conception of the mythic and theoretic stages. Having identified the importance of cultural learning in the acquisition and exercise of normative cognition it is now appropriate to turn to a discussion of a conception of social meaning which could support this kind of cognition.

Social Meaning and Shared Belief Systems

Wittgenstein's later philosophy of language can be used as a basis for developing an account of meaning that persuasively explains its collective nature. Such an account is required to satisfactorily explain the collective aspects of normative religious cognition (such as rituals) including their propagation and transfer. What is crucial here is providing a satisfactory explanatory framework for what goes on between individual minds in the acquisition of collective knowledge or, alternatively put, to adequately account for the acquisition of religious intersubjectivity [Day 2004 and Jensen 2013].

Wittgenstein's social approach to meaning fits well with empirical data about the social aspects of meaning (such as that about the processes of cultural transmission), normative cognition and social facts. This is consistent with the increasing emphasis in cognitive science of religion research on accounting for religion in socio-cultural terms with due weight being accorded to social processes [McCauley 2017 and Panayotis and Panagiotidou 2017].

Social facts are linguistically expressed objects of shared intersubjective knowledge. Social meaning and reductionist approaches to accounting for social facts offer conflicting epistemological and ontological accounts. A full resolution of these disputes will not be attempted here. However, there will be sufficient clarification of these issues to securely ground an account of normative cognition. Searle [1995] and Sperber [1996] will be examined as their approaches exemplify the divergences between the social meaning and reductionist approaches to accounting for social facts. Searle's approach originates in Wittgenstein's ideas about social meaning. For Searle social facts are any facts involving collective intentionality which are irreducible to psychological facts, structures and processes although they are both dependent upon and influence them [1995 p.26]. The objectivity of social facts is constituted by their independence from any individual, thought or will. Institutional facts clearly illustrate this as they are social facts of the general form 'X counts as Y in context C' such as a twenty dollar bill counting as a monetary token in the USA [Searle 1995 pp.31-57]. In contrast Sperber [1996] disputes whether social facts exist because of their collective acceptance offering an account of them via causal chains with alternating psychological and environmental links. He argues for a cognitive science account about the transmission of culture which claims that culture results from the causal interaction of mental and public representations. The majority of cultural change stems from alterations in the distributions of communicated beliefs in societies but these beliefs are only part of the whole set of cultural representations [Sperber 1996 p.25]. Sperber's account is subject to the problems about methodologically individualist reductive accounts and of adequately accounting for intersubjectivity due the commitment to the privacy of mental representations discussed above.

Normative cognition is linked to social facts where these are understood in Searle's sense of being any facts involving collective intentionality which are irreducible to psychological facts, structures and processes. It is important to develop a suitable philosophical framework for connecting normative cognition and social facts with part of this being an account of socially shared belief systems. Social facts can be included in Wittgenstein's account of meaning being socially constructed by a community of language users. Such inclusion enables his ideas, especially those from *On Certainty* about world pictures, to be usefully employed to clarify the ontological and epistemological status of social facts in a way which does not involve reification along with articulating their significance for normative cognition. Discussion of social facts naturally leads into the wider concept of socially shared belief systems which stems from it. Socially shared belief systems are concerned with the ideological bases for the distribution and exercise of power are large systems of social facts whose functions involve the generation of norms [Sinha 2009]. Importantly religion is a socially shared belief system whose intentionality is clearly evident [Donald 2004 and Jensen 2013]. As will be seen later Wittgenstein's world pictures serve the same explanatory functions as Sinha's socially shared belief systems although there are some differences in what underpins this explanatory function. An adequate account of the epistemological and

ontological character of socially shared belief systems must avoid reification of these systems or their aspects. Such an account can be usefully developed by considering the types of explanatory functions in socially shared belief systems [Sinha 2009]:

- existential- explaining how the living and the dead form a single community
- ideological- explaining why is power distributed and exercised in the way that it is
- metaphysical- explaining how is the universe ordered and how a community has agency in it

These types of explanatory functions provide a framework for identifying and articulating what purposes particular aspects of socially shared belief systems serve and why they are important to the communities in question.

Forms of Life

It is well known that Wittgenstein's account of social meaning is grounded in his concept of forms of life with latter having a role in explaining the relationship between normative cognition and socially shared belief systems. As with much of Wittgenstein his concept of a form of life is highly contested with an extensive literature. Although there are very few usages of the expression 'form(s) of life' in his writings it is plausible to think that Wittgenstein employed the phrase in two distinct ways [Addis 2013]. One use is to summarize the biological aspects of human nature in the sense of the common human way of acting, namely, that which is particularly and universally human. The cognitive science of religion's description of natural cognitive capacities shared by all normal people that underpin religion is consistent with Wittgenstein's idea about certain things being natural given a particular biological form of life. The other use is to refer to the cultural aspects of human nature in the sense of stressing the differences between societies. These aspects are broadly concerned with practices in ways which encompass both anthropology and sociology. The cultural forms of particular religions are consistent with Wittgenstein's idea about certain things being natural given a particular cultural form of life. Both strands of forms of life rest upon the very general facts of nature which are the background stabilities of the natural world. For Wittgenstein these very general facts of nature impose limitations upon which concepts are natural or unnatural to nearly all humans [1984 p.230 and 1980 §708]. Wittgenstein's treatment of the notion of forms of life is also consistent with the position prevalent in the much of the cognitive science of religion that language is a bio-cultural phenomenon resulting from evolutionary adaptation [Heyes 2018]. Although Wittgenstein never discusses evolution as he would have regarded it as the province of science or psychology rather than philosophy his treatment of biological and cultural forms of life and their interrelationships is clearly consistent with a conception of language as a bio-cultural phenomenon.

World Pictures

The cognitive mechanisms and their associated cultural underpinnings involved in the acquisition and exercise of normative cognition in religion have been considered previously. Here this account of the cognitive mechanisms and their cultural underpinnings will be theoretically strengthened by offering an epistemological framework for this account derived from Wittgenstein's concept of world pictures. Before discussing this, it is important to observe that on his conception of philosophy the cognitive capacities involved in the acquisition and exercise of normative cognition are the province of cognitive science and psychology and not matters for philosophical

consideration. The interpretation of *On Certainty* which will be preferred here although it has been controversial is that Wittgenstein claims that knowledge is comprised of two broad classes of core and empirical propositions.

Wittgenstein's concept of a world picture is a system of propositions which support one another. A world picture provides the context for meaningful knowledge claims and for inquiry. It is the background against which other knowledge is acquired and the context in which claims to knowledge are meaningful. World pictures are not based on reason but they are not unreasonable. The craving for familiarity and stability Donald [2004] stresses are crucial factors which relate to Wittgenstein's claim that people are strongly struck by a world picture which is not theirs and why existing world pictures are often unnoticed. In world pictures core propositions are surrounded by empirical propositions which are the result of investigation which is expressed by Wittgenstein's metaphor of the bed and waters of a river [1969 §§96-99]. Wittgenstein emphasized that although they take the form of empirical propositions core propositions differ in kind from empirical ones as they do not function as empirically testable propositions. A core proposition may take on the role of an empirical one and vice versa with almost every proposition being potentially revisable. A system of propositions is learnt gradually, some of which are certain and indubitable whilst others may be doubted to a greater or lesser degree. Propositions which are certain do not have this status because they are intrinsically obvious or especially convincing. It is rather that they are certain by virtue of those that shift around them [1969 §144]. The propositions adopted and whether a particular proposition, such that expressed by a social fact, is plausible depends upon the world picture. A difference in world picture propositions leads to a difference in what is counted as evidence.

Wittgenstein's concepts of biological and cultural forms of life have a role in the creation of world pictures. Certain things are natural given particular biological and cultural forms of life. This helps to account for the noticeable similarities and differences between many world pictures including their constitutive social facts as well as the fact that humans have many shared cognitive norms. Different world pictures are closer and less close to the truth in various respects. Wittgenstein argued that certain world picture propositions could not be revised or rejected because doing so would dismantle the world picture. Sufficiently different world pictures can be incommensurable. As with incommensurability generally arguments from the premises of the world pictures themselves will not be sufficient to resolve disagreement. However, it should be observed that in itself Wittgenstein's account does not provide a complete epistemological framework for the acquisition of normative cognition in religion. In *On Certainty* Wittgenstein offers very little insight into the important issue of how disagreement between incommensurable world pictures can be resolved as his examples only consider persuasion with limited reflection about how persuasion works in cases of this kind. For example, religious conflict can result from incommensurable religious world pictures being brought together through globalisation. Major ways of resolving this sort of disagreement are through intercultural dialogue and persuasion. An adequate account of how persuasion works in these instances needs to considerably expand upon the small basis that he provides by recourse to other ideas. In particular although Wittgenstein uses some religious cases [such as 1969 §§106-7 and 612] he only addresses the significant question of the relationship between altered normative cognition (such as through religious conversion) and changed world pictures (such as

becoming religious) in a very restricted way. Here empirical cognitive science of religion data from anthropology and sociology has an important role to play.

The cognitive science of religion idea holds that the acquisition of normative religious cognitive has far greater affinities with acquisition of a natural language than the gaining of the abilities and knowledge necessary to undertake scientific work. What underpins this idea is the view that acquiring religious knowledge and norms frequently occurs without explicit teaching as people are born into religious and linguistic communities and is thus an instance of implicit learning [1969 §107]. The notion of acquiring knowledge from the community which one is born into is arguably usefully expressed by the conception of a world picture. Wittgenstein claimed a world picture 'is the inherited background against which I distinguish between true and false' [1969 §94]. World picture propositions are not explicitly learnt but it is possible to subsequently find out which propositions these are [1969 §§279 and 152]. He argued that the accumulated knowledge of a culture is a collective human achievement [1969 §§288 and 298]. Wittgenstein claimed that learning was based on accepting the authority of a community and that adults as well as children must take much knowledge on trust [1969 §§159f., 170 and 508f.]. Accepting much knowledge on trust allows humans to undertake investigations which modify some of their beliefs [1969 §161]. Common religion is one traditional way of defining a community of deep trust. The concepts of a world view [Donald 2004] and of a shared social belief system [Sinha 2009] serve an equivalent function as shared cognitive worlds. This epistemological framework of world pictures provides a secure grounding for accounts of the cognitive mechanisms involved in the creation, acquisition and transformation of shared cultural worlds which underpin the acquisition and exercise of normative religious cognition.

It has been argued that a philosophical account of the role of normative cognition in the cognitive science of religion is important for furthering theoretical and empirical research in this area with Wittgenstein's work having a demonstrably valuable contribution to make to this. Although a number of unresolved problems about the precise nature of the cognitive and social processes involved in normative religious cognition remain the groundwork for future research agendas can be laid.

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