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Doing it the Other Way Round:
Religion as a Basic Case of 'Normative Cognition'

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Abstract

Religious traditions abundantly demonstrate how norms, rules, constraints and models are installed and transmitted in multiple media: myth, dogma, ritual, institutions, etc. These abound in cosmologies, classification systems, morality, and purity and they influence individual and collective human practice. The term 'normative cognition' is introduced here as a covering term for such enculturated and socio-culturally governed cognition. The 'normative cognition' approach deals with 'cognitive governance' effects of higher-order cognitive products on those of lower levels. Higher-order cognitive products range from religious purity rules, over highway codes to normative scripts, schemata and frames for all kinds of behavior. In short: socio-cultural products allow individual biological brains to interact and act on the world and thereby facilitate the existence of human society. I suggest that research on normative cognition not only casts new light on religion but that it contributes to a general understanding of the complex relations between cognition and culture.

Keywords

cognition, norms, rules

As an extension and modification of the 'Standard Cognitive Science of Religion Model' I suggest introducing the concept of 'normative cognition' as the generic term for human cognitive functions that are driven, modulated (i.e., changed and adjusted) and governed by inter-subjective, collective and social norms. These functions are the bases for the human ability to interact with the world on several levels: the physical, psychological, social, and symbolic. In the case of religion, normative cognition includes the creation of ultimate sacred postulates and often intense interaction with imagined superhuman agents.[1] Humans have a unique "Double Vision," as I would call it, through which they can integrate not only what they perceive, but also signs that refer to the intentions of others. They can meta-cognize their own behavior in rela-

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[1] On 'Ultimate Sacred Postulates' see Rappaport (1999), esp. 277-290.

tion to cultural models and designs for life. Normative cognition transforms human individuals into social persons. At the individual level normative cognition functions in the internalization of social norms and cultural models and at group level in the construction of society. Religious traditions provide ample examples of this. Anthropological and historical data demonstrate how important religion and ritual have been in processes of cultural evolution. Developmental, evolutionary, cultural and moral psychology, cognitive science, philosophy, social anthropology and the study of religion are here combined in a single matrix to explore the unique human ability to cognize the intentions of others through symbolic media and in relation to norms. The study of normative cognition thus contributes to an understanding of the complex relations between cognition and culture. Here is a specification and overview of 'normative cognition' in relation to and dependency on other modes of cognition. Normative cognition is cognition that is:

- collective: in joint attention and joint intentionality, in 'we'-intentionality;
- directed: controlled, influenced, modulated by the cognitive products of other humans (culture, tradition etc.) in multiple modes of cognitive governance;
- externalized / 'hybrid': objectivated, stored in media such as language, symbols, and artifacts by means of an encoding-decoding competence that is uniquely human;
- creative: brain plasticity and cognitive fluidity facilitate productions of 'false beliefs' and traditions as 'false memories' or cognition 'gone wild';
- imaginary: about how the world could be. Cognitive cybernetics and linguistic modalities provide the basis for 'world to mind' intentionality.[2]

The Normative Cognition Research Program

The normative cognition design originated in the research unit 'Religion, Cognition and Culture' (RCC) at the University of Aarhus, Denmark.[3] RCC is the cognitive study of religion in a 'different key' as it differs from the 'standard cognitive study of religion model' (e.g., Atran 2002, Boyer 2003, Pyysiäinen 2003, Jensen 2009) on a number of important parameters that become apparent when the theoretical objects are compared. In the 'standard cognitive study of religion' the theoretical object consists in explaining how religious universals are produced in fast, online, and (largely) subconscious

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[2] Comprehensive bibliographical references are beyond the space allowed here. Readers with an interest (but little prior knowledge) in these various 'dimensions' of cognition and recent advances should consult the introduction 'A short Primer on Situated Cognition' in Robbins and Aydede (eds.) 2009, 3-10

[3] See homepage: http://teo.au.dk/en/research/current/cognition/

cognitive (and emotive) mechanisms. These are 'reflexive' and function independently of consciousness and individual reflection. They are the products of a long evolutionary process, often distributed in (so-called) modules that drive specific cognitive functions (e.g., Boyer 2000). It is a strongly naturalistic 'inside-out' program since it proceeds from experimentally validated individual cognitive properties and mechanisms in the brain and explores how these processes produce and shape what is normally termed culture. This theoretical perspective does not engage the reverse processes. The questions of how culture and society influence individual cognition is overlooked, ignored or directly discouraged as methodologically intractable. Thus, this program is 'nativist' with innateness as a key notion. It is also 'epiphenomenalist' because the products of human cognition, say symbols and concepts are not considered to influence cognition in any relevant way and so it leads to 'cultural eliminativism.'[4] However, from such a point of view important matters are overlooked. Here is how Michael Tomasello characterized the neglect of general cultural aspects in mainstream cognitive science and cultural psychology in his 1999 book:

> Debates about the universals of human cognitive development are currently dominated by individualistic theorists, most of whom have a fundamental concern with the degree to which various cognitive skills and domains of knowledge are "innate" and / or "modular"... In none of these individualistic approaches is there any role for social and cultural processes in the development basic and universal cognitive structures, beyond their simple role in exposing the child / scientist / machine to different kinds of "input" or "data". Cultural psychologists, in contrast... have been so concerned with the culturally specific aspects of cognitive development that they have virtually ignored the role of social and cultural processes in the ontogeny of the most basic and universal aspects of human cognition... My own view is that social and cultural processes—of a type that is common across all cultures—are an integral and essential part of the normal ontogenetic pathways of many of the most fundamental and universal cognitive skills of humans, especially those that are unique to the species. Some of these socio-cultural processes are so obvious that they are rarely commented upon by any theorist (162).

On this question, RCC and the 'Aarhus school' sides with Tomasello and so it is a different kind of cognitive science of religion as the theoretical object consists in the *interaction* of cognition and culture (including religion) in the 'making of humankind.' It is an 'outside-in' program as culture plays a pivotal role in the ontogenetic development individuals (Tomasello 1999) as well as

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[4] 'Cultural eliminativism' is the theoretical position which claims that 'culture does not exist.'

in phylogenetic evolution of our species (Donald 2001). A recent addition to the theoretical perspective is the socio-genetic evolution of human society and culture (e.g., Wexler 2006). The normative cognition program is the latest offshoot of the RCC. It is decidedly 'anti-epiphenomenalist': for as incontestable it is that society and culture are made by brains and minds, then just as surely do these human products influence individual brains and minds. On the controversial and perennial 'mind—brain' issue, the RCC approach is plainly naturalist and recognizes all advances of science—there is nothing 'religious' about the program. It does, however, also consider the mind to be more than the physical brain: 'mind' also includes information, knowledge, 'meaning', symbolic competence, etc. These matters are (yet) difficult to engage in strict methodologies but nevertheless cultures must be considered real because they enable individual biological brains to interact and act on the world. Neuroscientists are beginning to work along such orientations (Vogeley and Roepstorff 2009). Mirror-neuron systems are at the basis of such interactions but it takes much more to complete the range of human symbolic interaction. Human socio-cultural practices must be seen in a more holistic perspective, one that ranges across the boundaries of bodies and of sign-systems in 'distributed cognition' (Hutchins 1995). It is a human achievement that we can operate on multimodal scales, that we can translate information and knowledge across various codes and formats, and that we can consider some things as 'something else', (e.g., paper as money). No other animal does that. The fundamental difference between human societies and other animals groups is that societies are made and governed by social rules that are symbolically mediated—rules that constitute what counts as what and how the entities covered by those rules are regulated (Searle 2000).

Normative cognition is crucial to the socio-cultural constructions that supervene on evolved human psychology. Human social relations, culturally mediated interactions, and mental functions have their roots in our evolved nature but they are also heavily overlaid with generations of imprinting, learning, cognitive capital accumulation etc. 'Nature and Nurture' determine the constraints, structures and rules of human behavior, in mind as well as in body: 'Bodies are not culture-free objects, because all aspects of embodied experience are shaped by cultural processes. Theories of human conceptual systems should be inherently cultural in that the cognition that occurs when body meets the world is inextricably culturally based' (Gibbs 2005, 13). The interplay between nature and cultures has evolved in human 'niche construction' and even in the biologically short time-span since the symbolic revolution have there been noticeable epigenetic changes in many human populations. Human cultural evolution accommodates and accumulates

much faster than biology. Genes and culture *do* co-evolve and develop. On the hypothesis of 'gene-culture co-dependence', Ramachandran notes that it:

> …suggests that the nature/nurture debate is meaningless in the contexts of human mental functions; it's like asking whether the wetness of water derives mainly from the H2 or the 2O that constitute H2O. Our brains are inextricably bound to the cultural milieu they are immersed in and, if raised in a cave by wolves or in a culture-free environment (like Texas), we would barely be human—just as a single cell cannot exist without its symbiotic mitochondria (2004, 108).

These considerations may not seem to present new data to the study of religion—it could even seem trivial. However, as I see it, the idea of 'normative cognition' covers spectra of cognition that are theoretically underdeveloped. On a philosophical note and in a more cross-disciplinary outlook, it becomes obvious that normative cognition is related to a series of very interesting questions. Prominent among these are the problems of 'emergence' and 'downward causation.' Normative cognition—as a unique human social and cultural skill—is one that has emerged as a new level of cognition, on the basis of lower level cognitive competencies, e.g., a feeling of horror when you file your tax return. Now, the tax system is (all things considered) a very high-level social invention that requires for its existence the deployment of such ideas as economy, welfare, social justice, equality of legal status and a host of other ideas that are so common that we tend not to think about them. 'Downward causation' indicates the influence of complex higher-order cognitive phenomena on those of lower levels as modes of 'Cognitive governance' (Donald 2001). There is disagreement in the philosophy of science over the ontological status or epistemic validity of the notion of downward causation, but there is no doubt that there are exceptionally powerful downward mechanisms in the worlds of mental and symbolic affairs. The power of religion attests to that (e.g., Jensen 2002). Downward causation often comes as 'scores' and scripts written by 'no-one' that cater to the orchestration of interaction. Higher-order cognitive products, such as religious norms and expectations, are installed in different kinds of media (myth, dogma, ritual, institutions, etc.), they are 'approachable' and 'up- and downloadable', especially in ritual. Examples of downward causation in cognitive governance range from cooking recipes, over highway codes and socially accepted scripts to schemata for all kinds of behavior. Procedures and techniques for the many intricacies of social life are downloaded for use in daily life (e.g., ritual purity rules in cooking) and special events (e.g., transforming a deceased person into an ancestor). By following the rules participants contribute to the validation of them through the 'up-loading' to the common pool of formulas and guide-

lines. This is how cultures and societies are kept alive. And—that is what religions and religious traditions are *made* of. Religion is, in all probability, *the* prime anthropological and historical example of normative cognition 'in the wild.' Here are some salient features of the normative cognition approach to religion:

> Myths, rituals, cosmologies, classification webs, patterns and systems are seen as evidence or 'windows' to the history of human socio-cultural development.

> Indigenous anthropologies and psychologies in religious traditions are regarded as important and pervading personality-systems and emotion regulation mechanisms.

> References of religious language are epistemically dubious but the language itself is factual subject matter. Symbolic realism is self-evident as the 'universes of the mind' do exist.

> Religious belief systems contain ontological postulates and reflections on what 'there is…' including revelations and imaginations that govern local epistemologies and forms of 'meaning.'

> Religious convention, norms and classifications are imbued with emotional valence and so govern patterns of belief and practice.

These features inevitably engage questions concerning the appropriate methods and theories, epistemic reflections on 'how we can know about it…', and the methodological problems regarding levels of explanation, interpretation and validation. Given the absence of controlled experimentation and replication on most of the features they have the status of 'proof by existence' only. To some extent this situation may be dealt with by reference to a growing body of research advances in a number of fields that contribute to the project. Recall that 'normative cognition' is an analytic term, a concept and not the name for a *sui generis* phenomenon, nor a 'natural kind' or 'primitive notion': it can be broken down into a set of components of which many are amenable to testing. Normative cognition consists of, e.g., human conformity bias, joint intentionality, moral psychology basics, symbolic mediation and linguistic modalities. It is a highly complex cognitive competence and there is a number of reasons why humans, and only humans, can 'do it.'

One of the crucial enabling factors in normative cognition is explained in the twin hypotheses of 'extended mind' and 'mental externalism' (Clark 2006, Wilson 2004, Rowlands 2003). These hypotheses are set to demonstrate how individual minds extend beyond the skull and the body into the world and how tool use extends and expands both physical and mental competences. A typical example is a person with a pencil and a piece of paper who does a piece of arithmetic using mathematical notation. Where do the person's cognitive capacities begin and end? It surely is a mathematicians

'nature' to include mathematical notation as part of her cognitive skills and it works through the complex coordination of brain, arm, hand, pencil, paper, notations, equations, etc. The external media are then not really that external they are an integral part of the cognitive task. As I am writing this on a laptop that I did not invent or make myself, writing in an language that is full of semantic intentions on which I have no command and that this entire process works back on my own feeling of who I am and what I am doing, I get the point. Minds extend into the world and the worlds of the extensions of the work of others work back on self and others. Humans fill their worlds with signs. That is how they work on it: Changing it into a place of their own design for that is (apparently) the only way they can understand it.

Furthermore, normative cognition is essentially constituted by theoretical and hypothetical cognition, because humans are able to invent and judge imagined scenarios. Whenever we consider what to do, we apply normative judgment: is this right or wrong, good or bad, permitted or prohibited etc.? Normative cognition is therefore very much a product of having 'reflective beliefs,' beliefs that result from interaction with others and institutions who tell us what do with the information we get from our individual perceptual contact with the world (Sperber 1996, 89-92). How else, for instance, would we know that pigs were unclean and pork to be avoided? There is no doubt that reflective beliefs normatively influence our intuitive beliefs, so the substantial issue is how, and how much, do normatively driven reflections influence our deeper intuitions? Having learned that pork is unclean food it may cause strong somatic reactions in a person unexpectedly exposed to pork. This single example suggests that there are direct links from symbolic systems and collective norms to somatic markers and responses. With recent advances in brain imaging techniques it has now become possible to probe into the neurobiology of social constructivism and how this in turn works back on the individuals who do the constructions (Zahn et al. 2009).

For as long as we can look back into human history, we find cognitive governance and normative cognition working on individuals in the direction of the interests of collectives. Such governance is infiltrated with all the intricacies of politics and power issues, from generation and gender to wealth and hierarchy. Politics are about the distribution of knowledge and cognition as much as they are about wealth and hierarchy. Religion is traditionally about just everything: From complex social norms to individual emotion regulation. Normative cognition is involved in all of it. In fact none of it could have happened without normative cognition. That is why 'normative cognition' opens new prospects in theorizing religion because it informs us of how and why humans have the ability first to construct and then to draw on collective systems of norms. In so doing, they govern their practices by the

means of a special kind of collective representations: the normative ones which tell us what 'ought to be the case.' Normative cognition is at the base of human culture and so it is the foundation of religion. Broadly speaking, the idea of normative cognition helps us fill the void between what is individual and what is collective.

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