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*The Jewish Mind:
A cognitive science of religion approach to and in Judaism*

INTRODUCTION

The *cognitive science of religion* (CSR) aims at understanding religion as a product of the human cognitive system. As Pyysiäinen (2012, p. 6.) puts it: “the main idea is to use the tools of cognitive science and cognitive psychology to explore the cognitive foundations of religious concepts and beliefs”.

The human cognitive system can be approached from several angles, and therefore CSR also offers a multitude of perspectives to study religion. Religion can be viewed either as a *cognitive neuroscientific phenomenon*, or as *mental computation*, depending on whether we focus on the brain or on the mind. Then, the brain-and-mind complex is enlarged into *embodied cognition*, also implicating other organs of the human organism; and into *embedded cognition*, also involving the individual’s physical and social environment. Finally, there is a *temporal dimension* to the study of human cognition: enter *cultural evolution* (including the history of religions) in historical times, and the *evolutionary history* of cognitive functions (comprising religiosity) in pre-historical times.

This quick overview of CSR gives one the impression that CSR is inherently a materialistic enterprise, explaining how humans created gods, and not how gods created humans. On the one hand, this is self-evident, for CSR is a paradigm within the academic study of religion: a secular social sciences and humanities discipline, which has studied religion for centuries as a phenomenon emerging in history (history of religion), in society (sociology of religion) or in one’s psyche (psychology of religion). The academic study of religion (and of specific religions) must not be confused with theology, which may study very different topics – often pertaining to physics, biology, history or ethics – as a denominationally informed discipline. Religion is the research subject in the former, and the methodology in the latter. Consequently, the theories advanced by CSR about how the human brain/mind creates gods and spirits, myths and mysticism, rules and rituals, priests and pyramids, have fuelled several authors of New Atheism, including Richard Dawkins (2006) and Daniel Dennett (2006).

On the other hand, many scholars in the CSR camp are theologians or otherwise believing scholars. “Copernicus claimed cosmology for science, and now the cognitive scholars claim the brain for science” – thus explained it to me my good friend, István

Czachesz, a Calvinist theologian by training, when he first introduced me to CSR. Indeed, Copernicus posed a challenge to the interpretation of Josh 10:12, Darwin posed a challenge to Gen 1–2, and Wellhausen to much of the narratives in the Hebrew Bible. But CSR does not pose any challenge, for a believing scholar would simply ask what kind of mind/brain God had *Homo sapiens* evolve, so that we can all perceive and understand Him.

In my contribution, I shall reverse the table, and pose the question: what can CSR contribute to the study and philosophy of Judaism? As we enter the third decade of the twenty-first century, *sui generis* approaches to religion have long belonged to the past. Judaism is a religious tradition that emerged and developed in history, which exists in certain communities, and which is experienced by certain individuals. It is a historical, sociological and psychological phenomenon; hence, the relevance of cognitive approaches. By better understanding the make-up of the human brain, we expect to better understand the history, sociology and psychology of Judaism; and vice versa, by employing the conceptual tools and research techniques of CSR to Judaism, we hope to contribute to the study of the human mind in general.

This paper aims at a postmetaphysical God-talk (cf. Bentley, 2017) to facilitate the dialogue between Judaism and science. Informed by CSR, we shall replace ontological statements by epistemological ones. Central notions in Jewish theology – such as God, revelation, commandments, reward and punishment, purity and impurity, Shabbat and holidays, the biblical narratives, the Holy Land, etc. – are viewed as *mental representations* in the Jew’s mind, dismissing both positive and negative ontological, historical and ethical claims. As explained in the next section, the concept of *mental representations* is itself an epistemological tool, without arguing for identifiable neural correlates thereof in the brain. In turn, the dialogue shall focus on these representations: on their nature, their meaning, their features, as well as on their connections to each other, to the believers and to their communities.

RELIGION AS A NETWORK OF MENTAL REPRESENTATIONS OF CONCEPTS AND ACTIONS

The key tenet of the cognitive paradigm since its inception has been the computer metaphor of the brain (cf. Daugman, 2001). The working hypothesis assumes that our mind stores representations of entities and events around us, keeping track of their features, properties, histories and interrelations. Religious concepts, narratives and rituals are similar pieces of information to be encoded and processed.

The long-standing debate about the nature of the mental representations is hardly relevant to us here. Are they symbols, physically realised in the brain? Or perhaps a pattern of brain cell activations distributed in space and time? Are other organs of the body also involved? Do those representations really “stand for” abstract concepts?

These questions are fascinating in general, and they certainly propel novel research on lower cognitive functions, which have been studied for many decades.

However, religion belongs to *higher cognition*, and its study from a cognitive perspective is still in its infancy. Consider linguistics: although the field underwent the cognitive turn more than half a century ago, most linguists still develop models with symbolic representations, without asking how their theoretical constructs can be represented in the brain. Therefore, I argue, it is a more successful research strategy to think of religious concepts, narratives and rituals in this early phase as some kinds of data structures handled by the mental computer. Observed cultural phenomena are first recast as symbolic mental computations, before being gradually turned into algorithms implementable on the human wetware (cf. Biró, 2014, and references therein). Symbolic models of religious phenomena are bridge piers that help build the bridge of explanation, connecting higher cognition to low-level neural mechanisms.

Thus, religious concepts such as gods, spirits, priests and sacred objects have been perceived by CSR as (a peculiar kind of) mental representations of entities. Similarly, mythologies and eschatologies, but also rituals are perceived as mental representations of events. Independently of the “real world”, a religious person’s mind will entertain these representations. A religion is a *network* of such representations (Czachesz, 2014).

This network connects representations of narratives with the representations of deities appearing therein; representations of rituals with the representations of religious specialists performing them; representations of sacred spaces with the representations of narratives or rituals associated to them; representations of sacred objects with the representations of narratives about how and why they work; and so on. Moreover, this network is also connected to representations of the self (activating autobiographical memories), to representations of social and natural phenomena, of knowledge from other domains, and so on. In fact, religion is but a loosely circumscribable subnetwork of the network of all mental representations. I concur with many contemporary scholars of religion who argue that religion is a modern Western concept, without precise equivalents in pre-modern and non-Western cultures, while the frontier between the “religious” and the “non-religious” domains is at best vague.

An essential feature of the subnetwork called *religion* by the modern Western scholar is that many mental representations therein are *culturally postulated*. The “epistemological status” (cf. Biró, 2013a, p. 126.) of a mental representation can be *real*, or *culturally postulated*, or *fictive*, or *hypothetical*, among others. In general, much of our learnt knowledge is culturally postulated, including scientific concepts (cf. McCauley, 2011). For instance, the flow of electricity in a circuit is something you learn about, but you cannot observe it directly. A science teacher’s demonstration is grounded on a series of culturally postulated ideas and axioms, to be accepted by the pupils. Members of a specific culture assume these ideas and axioms have been verified by earlier members of the culture. In fact, there is an evolutionary advantage to accepting prior knowledge from elders and peers without undergoing (at times, hazardous, and at times, unpleasant) personal experience (Biró, 2011, p. 172.). Subsequently, new situations

will repeatedly corroborate this culturally postulated network of ideas and axioms. Thus emerges a culturally postulated *framework* (scientific or religious) that help members of the culture in interpreting the world. At the same time, a comparison to other cultures reveals the cultural constructedness of this framework.

Certain mental representations are shared by all (healthy adult) members of the *Homo sapiens* species. The epistemological status *real* could be a shorthand for this case. Being unable to check all humans, however, the observer will simply compare his or her perception to the representations found in the observed culture. But the distinction between *real* and *culturally postulated* is not simply a judgement made by the outsider. The distinction also influences how members of the culture process these representations.

A wonderful example is provided by Lawson and McCauley (1990, p. 12.): “Why do the Dorze of Ethiopia say that the leopard is a Christian animal which observes the fast days of the Orthodox church while protecting their goats from marauding leopards on those same fast days?” A Jewish version of this question from 2020: how did the two strategies to cope with the pandemic – the religious strategy (including communal prayers and Torah study) and the scientific strategy (physical distancing) – relate to each other? And why will the failure of the former not weaken religiosity among orthodox Jews?

In general, why can the culturally postulated subnetwork be often replaced temporarily by a real (“more scientific”) subnetwork, without being displaced permanently? How can seemingly contradicting mental subnetworks co-exist? This is the most fascinating question, I believe, for any cognitive approach to religion.

The next section poses similar questions to the liberal and scientifically minded rabbi.

LIBERAL THEOLOGY, SCIENCE AND MENTAL REPRESENTATIONS

Religious mental representations are, consequently, culturally postulated. This statement reconciles the emic perspective of the theologians with the etic perspective of the scholars of religions. The former are entitled to adhere to the truth of their own culturally postulated mental representations, and at the same time, admit cross-cultural variations. Like Lessing’s Nathan the Wise in the Ring Parable, an open-minded theologian accepts both his or her own emic truth, and other theologians’ beliefs.

No cognitive dissonance occurs. *My* culturally postulated representations belong to a network of representations that includes *me*, as well as *my* feelings, *my* knowledge and *my* personal experiences. Upon reflection, I obtain a second order representation of *my* culturally postulated representations embedded into this network, that is, *my* religion. (Remember that a religion is a network of culturally postulated representations.) Yet, I entertain others’ beliefs differently: as second order representations about those beliefs belonging to other people. Comparing these second order representations,

I conclude that those beliefs belong to those people, exactly like my beliefs belong to me.

Science is yet another network of representations. For instance, I may hold a personal narrative about the Israelites' exodus from Egypt, strongly embedded into a cultural and religious network of narratives, precepts, rituals, personal experiences, and so on. I remember the Seder night last year with my family, on the first day of Passover, when the Biblical narratives were retold to my children in a specific way... Simultaneously, I may also acknowledge that it is "only" a culturally postulated narrative, and evaluated as untrue in a different subnetwork, that of historiography. This second subnetwork contains the representations of different concepts and methodological axioms, bringing about different narratives in my mind (according to which the Exodus is only a legend). Importantly, both subnetworks are also connected to the representation my mind entertains about myself. Yet, these subnetworks activate different aspects ("identities") of the self (myself as a Jew, and myself as a scholar), which are associated to different autobiographical memories (representations of narratives), to different social contexts (representations of social relations), to different behavioural patterns (representations of normative actions), and so on.

The tension between scientific (philosophical) truth and revealed (religious) truth has been a central question for philosophers of religions since the Middle Ages. While the myriads of different solutions proposed cannot and need not be repeated here (for an overview in Jewish context, refer to Rosenberg, 2015), I suggest considering CSR as a tool for reformulating some of the past answers.

The approach just proposed focuses on the thinker's thinking processes (*cognition* in its old sense): the scientific and the religious worldviews are separate (even if at times overlapping) subnetworks of mental representations. Cognitive dissonance can be avoided and a *duplex veritas* state-of-mind can be maintained if the two subnetworks are indeed associated to separate identities of the self, and if they are activated in different social contexts (such as in the congregation and in the academia). The concept of objective truth is put in parentheses, but not rejected – after all, mental representations *should* (or *aim* to, or are *meant* to) represent something in the outside world, even if they do not *do* so necessarily. On the long term, neuroscience shall help us understand how and why a religious thinker entertains those scientific representations along with those religious representations of the world.

TEXTS AND CULTURALLY POSTULATED NARRATIVES

The foundational act, the key narrative of rabbinic Judaism is laid down in the Mishnah:¹

Moses received the Law from Sinai and committed it to Joshua, and Joshua to the elders, and the elders to the Prophets; and the Prophets committed it to the men of the Great Synagogue (...) (Mishnah Avot 1,1)

The foundational act is a *giving-receiving* action: *matan Tora* in Hebrew, the ‘giving of the Torah’. The mental representation of this action involves a verb with three arguments (roles): the *giver* (subject or agent/source), the *given* (direct object or patient) and the *givee* (indirect object or recipient/target). From the perspective of a postmeta-physical God-talk (cf. Bentley, 2017), it is significant that the quotation does not contain a reference to the agent. A possible interpretation of this surprising fact is that the source of the Law could be left out from the system.

Rabbinical Judaism is based on the interpretation of the Law, and it focuses on its ritual enactment; therefore, one might think, the source of the Law must *naturally* appear in a prominent position. *Naturally* is a pun in the previous sentence, referring to the title of the book of Robert McCauley (2011). Indeed, the intuitive religious system – the network of religious mental representations – by most observant Jews includes some representation of God: a superhuman agent that fills the subject (agent/source) role of the *matan Tora* action. The same representation also develops many more connections to other culturally postulated representations – typically, to narratives, while its connections to rituals are at best indirect [causing a problem for mainstream CSR approaches to rituals (cf. Biró, 2013a; 2013b)]. It is hence natural, cognitively optimal to include a culturally postulated supernatural agent into the system.

However, Avot 1,1 hints to the possibility of a rabbinical Jewish system without such a representation. It would be fascinating to explore the prospects of a system that lacks the supernatural and takes the Torah received by Moses as its starting point.

In this quotation, the *Law*, or the *Torah*, is not specified. It was handed down from Moses via the key figures of the biblical period to – as described in the rest of chapter 1 of Avot – the rabbis. This is the foundational narrative of rabbinical Judaism. Importantly, Moses did not simply receive the two tablets and the Ten Commandments, but much more: the full text of the Pentateuch, together with a body of oral teachings.² For Pharisaic, later, rabbinic Judaism, the *Oral Law* is a complex body of explicit and implicit knowledge, information, difficult to define and to delineate, which simultaneously explains and complements the *Written Law*, the five books of Moses.

¹ Translation by Herbert Danby (*The Mishnah*, 1933 [1950], p. 446.).

² While the text of the Mishnah does not make it clear, the word *tora* is universally understood as referring to the Oral Law (*tora she-be-al-pe*). Cf. Danby’s footnote *ad loc*. Cf. Maimonides’ introduction to his *Mishneh Torah*.

Knowledge and information are very abstract concepts. Instead, the foundational narrative of rabbinical Judaism posits that Moses was verbally communicated all possible teachings that can be voiced in accordance with the Torah. Quoting one of the most famous formulations thereof (based on a midrashic exegesis of Deut 9:10 and Eccl 1:10):

[Moses was given] *the Scriptures, the traditional law, the oral legal teachings and the homiletic explanations. Even that which a senior student will ever expound in front of his master was already told to Moses on Sinai.* (Jerusalem Talmud *Peah* 2:4, 13a; similar found in Lev. Rabbah *Aharei Mot* 22, and in parallel sources elsewhere)

Thus, the Law becomes text: either written, or orally transmitted, either already known, or yet to be penned or uttered. Note how an abstract concept (law, knowledge, information) is decomposed into simpler mental representations: specific texts of the rabbinical literature, as well as an indefinite series of past and future actions (tiny narratives). Hereby any past and future rabbinic teaching and enunciation becomes normative, as it was already revealed to Moses on Sinai. An observant Jew must behave *accordingly*. In other words: the mental representation of one's behaviour must align with the mental representations of the enouncements in those tiny narratives.

Hereby emerges the idea of the divinely sanctioned interpretation of the Bible, which is transmitted to and by the rabbis. Historically, this narrative served to legitimise the rabbinical tradition challenged by contemporaneous rival groups. The Sadducees, the Essenes, the Samaritans, the Gnostics and the Christians, later the Karaites and many other streams produced their own exegeses of the Bible. Yet, the rabbinical tradition goes further: not only the correct reading of the plain text is authorised, but also a broad range of ritual practices, laws and customs, as well as para-biblical stories and theological statements, which do not appear verbatim in the text on the Torah scroll, but are postulated to originate at Mount Sinai.

By accepting the above narrative, a community is created, which is an interpretive community and a ritual community at the same time, delineating themselves from other communities. Here enters social cognition. As Christine Hayes put it: "At the heart of the rabbinic self-understanding lies a text. A rabbi is one who devotes himself to this text and associated traditions of learning and practice as developed by the class of sages" (Hayes, 2007, p. 262). In the course of the first millennium CE, Judaism became dominated by this class.

Judaism thus emerged as a mental network of texts (the Bible, the Mishnah, etc.), of narratives (about Moses, about past rabbis, about future rabbis, about me learning those texts), of persons (Moses, past rabbis, me and my rabbi, my community) and of actions (normative actions and my concrete actions) – as well as the interaction of all these mental representations.

THE MIND OF THE HALAKHIC MAN

In his books, *Halakhic Man* (Soloveitchik, 1983) and *The Halakhic Mind* (Soloveitchik, 1986), *Joseph B. Soloveitchik*, an important rabbi and original orthodox Jewish thinker in the twentieth century, a scion of a leading family of Lithuanian Talmudists, developed a “mitnagged phenomenology” [a term suggested by Eugene Borowitz (Soloveitchik, 1983, p. vii)]. He adopted the notion of *homo religiosus* from Kierkegaard, Karl Barth and Rudolf Otto, and contrasted it to the *cognitive man*, before adding a third prototype to the picture: the *halakhic man*. These three prototypes represent three aspects of human (or Jewish) existence. Beside the numinous and the rational, he describes a third kind of experience, that of the Jewish law (*halakha*).

For Soloveitchik (1983, p. 17), “[h]alakhic man differs in his world view from the universal *homo religiosus*. He resembles in various ways cognitive man, yet, he differs in many respects from him as well.” The halakhic man lacks the esoteric attitude of the *homo religiosus*: “Halakhic man’s approach to reality is, at the outset, devoid of any element of transcendence”. Similarly to the cognitive man, the halakhic man tries to grasp reality, instead of praising the ungraspable character of the world. Nonetheless: “When halakhic man approaches reality, he comes with his Torah, given to him from Sinai, in hand. He orients himself to the world by means of fixed statutes and firm principles. An entire corpus of precepts and laws guides him along the path leading to existence” (p. 19.). Moreover, “halakhic man prefers the real world to a transcendent existence because here, in this world, man is given the opportunity to create, act, accomplish, while there, in the world to come, he is powerless to change anything at all” (Soloveitchik, 1983, p. 32.). This prototype is illustrated by Soloveitchik’s own family, most notably by his grandfather, Haim Soloveitchik, “the Brisker rebbe”, the founder of a novel analytical approach to Talmudic study.

Transposing Soloveitchik’s phenomenology into a CSR perspective, we can view Talmudic-legalistic Judaism as a mental toolbox for cognising the world, and for operating therein. Yet, halakha is a revealed conceptual framework, “given to him from Sinai”, unlike the man-made toolbox of the cognitive man. For instance, time is measured not by astronomical considerations, but for ritual purposes. The units employed for measuring length, weight and volume are not defined by some human authority, but by the authority of the tradition, which relates that these were given to Moses on Sinai. Legal concepts in family law and private law arise not from tradition, ethical considerations or common sense, but from biblical exegesis. Similarly, history is also interpreted in terms of biblical antecedents. The Torah revealed at Sinai is thus the conceptual framework at the disposal of the halakhic man offering him or her “the opportunity to create, act, accomplish” in this world. In CSR terms, this is a set of culturally postulated mental representations closely associated to the narrative of the revelation.

The three prototypes of Soloveitchik are best understood as three modes of human functioning, or as three aspects of the human existence. A given person does not belong

to a single type, but rather combines them. The prototypes described by Soloveitchik only emerge in extreme cases. Some people, some contexts, some rituals, some literary genres and some religious streams may accentuate some aspects rather than other ones; that is, the proportions can vary across various phenomena in Judaism.

As suggested earlier, a person would entertain both “real” and culturally postulated mental representations. These are organised into concurrent subnetworks, which in turn might offer alternative solutions to problems such as marauding leopards or COVID-19. Which of them is active when a decision is actually made? In Soloveitchik’s terms: what are the roles of the cognitive man in a person’s life, and which are the situations that prefer the halakhic man (a special rabbinic case of the culturally postulated religious subnetwork)? These are probably the most intriguing questions in CSR.

Let us not forget about the *homo religiosus*, either. The cognitive mechanisms underlying this aspect of human existence have been another main topic in the cognitive science and neuroscience of religion. Emotions are also cognitive phenomena in the sense that they are regulated by the brain and strongly interfere with other cognitive functions (cf. e.g., Damasio, 2003). They undoubtedly play an important role in the mental network of Judaism (Biró, 2013b). The details are still unclear, though.

According to the Mishnah (Avot 2,15–16), “rabbi Tarfon said: the day is short, and the work is plentiful...”; but he also used to say: “it is not your duty to finish the work, but neither are you at liberty to neglect it.” So do I believe. There is still a long way to go to understand the mental mechanisms underlying religion, and in particular, *homo religiosus*. We may stop for a moment and wonder how mysterious and awe-inspiring the religious mind is. But we must remember that we are primarily scientists, cognitive men and women, striving to understand as much as we can.

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