

NINA P. AZARI
Heyendaal Institute
University of Nijmegen
The Netherlands

GEORGES BATAILLE: A THEORETICAL
RESOURCE FOR SCIENTIFIC
INVESTIGATION OF RELIGIOUS EXPERIENCE

RECENT TECHNOLOGICAL DEVELOPMENTS in human brain functional imaging offer new opportunities to explore the embodied aspects of religious experiences, and now there are two recent reports on the neural correlates of such phenomena. The interpretive tasks of such studies, and the design of future neuroscientific work on the matter require adequate theoretical resource. In so far as contemporary neuroscience has moved beyond the 'modern' science of the Enlightenment, modern theories of religion, similarly reliant on Enlightenment ideals, may no longer be the best theoretical resource for such projects. Thus, it is of interest to ask if post-modern theories of religion may be more valuable theoretical resources for a contemporary neuroscientific investigation of religious experience.

Post-modernism is a movement concerned with *challenging the rigid categories* of modernity and the Enlightenment, a spirit of *moving beyond*, and adopting an attitude of *critical self-consciousness*.¹ In the broadest sense, post-modernism signifies *transgression*. In as much as the 'scientific' was born, and, thus, has been considered a hallmark of, the Enlightenment,² post-modern theories may be often seen as standing opposed to scientific investigation. But this view of post-modernism is questionable. Moreover, contemporary science has similarly moved beyond modern science, becoming an acutely self-conscious enterprise with new understandings of difficult distinctions between 'objectivity' and

¹ Flannagan, K. (1996). *Postmodernity and culture: Sociological wagers of the self in theology. Postmodernity, Sociology and Religion*. K. Flanagan and P. C. Jupp. London, Macmillan Press Ltd.: 152-173; Best, S. and D. Kellner (1997). *The Postmodern Turn*. New York, The Guilford Press.

² Ambler, R. (1996). The self and postmodernity. *Postmodern, Sociology and Religion*. K. Flanagan and P. C. Jupp. London, Macmillan Press Ltd.: 134-151.

'subjectivity.'³

Science⁴ 'moves beyond,' reshapes itself by investigating new questions, developing new experimental paradigms, and offering new interpretations. Paradigmatic 'transgressions' in science seem, in fact, to occur discontinuously.⁵ One of the most exciting challenges for today's science is that of investigating individual human experience,⁶ which includes religious experience. Today's human brain functional imaging technologies (e.g., positron emission tomography [PET] and functional magnetic resonance imaging [fMRI]) offer new opportunities to explore the embodied aspects of religious experience, and now there are two very recent reports on the neural correlates of religious and mystical experiences.⁷ The interpretation of the results from such investigations (and the design of future studies), requires appropriate theoretical resource.⁸ In so far as contemporary science has moved beyond the modern science of the Enlightenment, modern theories of religion, which similarly rely on Enlightenment values and concerns, may no longer be the best theoretical resource for such neuroscientific work. Thus, it is of interest to ask if post-modern theories of religion may be a more valuable theoretical resource for a contemporary scientific investigation of religious experience.

In this paper, I explore the potential value of Georges Bataille's thought for a neuroscientific investigation of religious experience. More specifically, I ask how Georges Bataille's thought may be a useful theoretical resource for a neuroscientific study of religious experience. In order to address this question, I first attempt to identify a 'cluster of concerns', which may characterize post-modernism. Second, I discuss how post-modern science may be differentiated

³ Batson, C. D., P. Schoenrade, et al. (1993). *Religion and the Individual: A Social-Psychological Perspective*. New York, NY, Oxford University Press, Inc.

⁴ To the extent that religion is a human concern, the human behavioral experimental sciences are of concern to this paper. Moreover, I will limit my treatment of science to human behavioral neurosciences (i.e., I will not examine the theoretical, physical, non-human behavioral, or non-brain biological sciences). This means that I will focus on the experimental sciences that deal with human brain-behavior relations. In this regard, for example, human experimental psychology will be relevant only in so far as it may consider the human brain. Accordingly, hereafter, 'science' will refer to the experimental human behavioral neurosciences.

⁵ Kuhn, T. S. (1996). *The Structure of Scientific Revolutions*. Chicago, IL, University of Chicago Press.

⁶ Metzinger, T. (1995). The problem of consciousness. *Conscious Experience*. T. Metzinger. Paderborn, Imprint Academic, Ferdinand Schoeningh: 564.

⁷ Azari, N. P., J. Nickel, et al. (2001). "Neural correlates of religious experience." *Eur J Neurosci* 13(8): 1649-52, Newberg, A., A. Alavi, et al. (2001). "The measurement of regional cerebral blood flow during the complex cognitive task of meditation: a preliminary SPECT study." *Psychiatry Res* 106(2): 113-22.

⁸ Ross, B., A. Febbraro, et al. (1996). Is there a season for theory? *Problems of Theoretical Psychology*. C. W. Tolman, F. Cherry, R. van Hezewijk and I. Lubeck. Ontario, Captus Press: 228-241.

from modern science, and attempt to identify the minimum conditions necessary to perform a contemporary neuroscientific investigation of human experience. Third, I consider more closely Bataille's reflections on religion, with special attention to 'individual' and 'collective' experience, 'reality', 'knowledge', and the 'religious', examining how his thought may reflect the concerns of post-modernity, and be of theoretical value to a neuroscientific investigation of religious experience. Finally, I speculate on what such an investigation may look like, and how Bataille's thought may offer theoretical insight for both the experimental design and data interpretation thereof. I conclude that Bataille may be appropriately considered a post-modern theorist, and that his theoretical reflections may serve as a valuable resource for contemporary scientific investigation of religious experience.

Although some have argued that 'theory' itself may be highly problematic when talking about post-modernism,⁹ this very objection may be taken to mean that there is a 'core' to post-modern thought, one that makes talking about theory difficult. Thus, it worthwhile to identify exactly what it is that makes the term 'theory' difficult for post-modernism. Is there is a 'cluster' of concerns or theoretical orientations that may be associated with post-modernism? If there is, then it will be important, for the aims of this paper, to see if Bataille's thought is consistent with such a 'cluster'.

Postmodernism is a term used to signify a historical-cultural, and more broadly, aesthetic transformation that began shortly after WWII.¹⁰ It is a reaction against 'modernism', the historical-cultural trend that began in the 17th C Enlightenment.¹¹ Post-modernity, then, brings into question—but does not reject out of hand—the entire modern project.

At the heart of this movement is an open ended-ness, a deep skepticism about classical values and definitions such as foundationalism, essentialism and realism.¹² For the 'antifoundationalist' postmodernist, forms of life are best understood as relative, ungrounded, self-sustaining, consisting of cultural

⁹ Findlay, L. M. (1995). A way ahead for the human sciences: Paul Ricoeur's ideology and utopia. *Constructive Criticism: The Human Sciences in the Age of Theory*. M. Kreiswirth and T. Carmichael. Toronto, University of Toronto Press: 190-200, p.190ff.

¹⁰ Capps, W. H. (1995). *Religious Studies: The Making of a Discipline*. Minneapolis, Fortress Press, Surber, J. P. (1998). *Culture and Critique*. Boulder, CO, Westview Press.

¹¹ Eagleton, T. (1998). *Literary Theory: An Introduction*. Minneapolis, MN, University of Minnesota Press.

¹² Audi, R., Ed. (1999). *The Cambridge Dictionary of Philosophy*. Cambridge, UK, Cambridge University Press.

convention and tradition, without any identifiable origin or grandiose goal.¹³ Knowledge, then, is not understood as an accurate representation of Truth, nor does it correspond to Reality. In this sense, post-modernism is concerned with challenging rigid categories and distinctions.

But while post-modernism challenges accepted, foundationalist modes of thought and behavior, it also looks for new avenues of inquiry.¹⁴ Promoted are new ways of seeing, writing, experiencing.¹⁵ It is an effort to rethink (not reject) modernity. And, in this regard, post-modernity is simply a different manifestation of modernity, a different interpretation thereof.¹⁶ Thus, post-modernism is marked by theoretical and methodological liberation, by a commitment to rethinking, recasting, and then *moving beyond*.

Finally, a post-modernist discourse critiques the notion of the autonomous, rational subject. That is, the discursive project is framed in terms of open, constantly changing processes. There can be no claims to historical privilege,¹⁷ which means that a presumed 'objectivity' is heavily influenced by the theorist's own context. Moreover, there is a concern for self-'other' distinctions, a de-centering of the subject (or death thereof). Hence, the division between 'subjectivity' and 'objectivity' is now hopelessly confused.¹⁸ No longer can the 'observer' self escape time, enjoy a moment of transcendence and self-assertion as it presumed it could in modernity.¹⁹ But, simply acknowledging this precarious position of the 'observer', is not enough. For, unlike the modern self, the post-modern self is not identical to consciousness; the self is not self-transparent.²⁰ Indeed, for the post-modern self, 'difference' is the key.²¹ Hence,

¹³ Eagleton, T. (1998). *Literary Theory: An Introduction*. Minneapolis, MN, University of Minnesota Press.

¹⁴ Flannagan, K. (1996). Postmodernity and culture: Sociological wagers of the self in theology. *Postmodernity, Sociology and Religion*. K. Flanagan and P. C. Jupp. London, Macmillan Press Ltd.: 152-173.

¹⁵ Best, S. and D. Kellner (1997). *The Postmodern Turn*. New York, The Guilford Press.

¹⁶ Ambler, R. (1996). The self and postmodernity. *Postmodern, Sociology and Religion*. K. Flanagan and P. C. Jupp. London, Macmillan Press Ltd.: 134-151, p. 146.

¹⁷ Surber, J. P. (1998). *Culture and Critique*. Boulder, CO, Westview Press.

¹⁸ Kugelman, R. (1995). Phenomenological analysis of mental and physical pain. *Problems of Theoretical Psychology*. C. W. Tolman, F. Cherry, R. van Hezewijk and I. Lubeck. Ontario, Captus Press: 342-350.

¹⁹ Ambler, R. (1996). The self and postmodernity. *Postmodern, Sociology and Religion*. K. Flanagan and P. C. Jupp. London, Macmillan Press Ltd.: 134-151. p. 134ff.

²⁰ Ibid. p 143.

²¹ Hill, D. (1995). The postmodern reconstruction of self. *Problems of Theoretical Psychology*. C. W. Tolman, F. Cherry, R. van Hezewijk and I. Lubeck. Ontario, Captus Press: 265-273. For example, a post-modern concern for 'difference' is reflected in a search for spiritual diversity. This quest has resulted in two seemingly contradictory movements in religion: the quest for a New Age spirituality, on the one hand, and Fundamentalism (i.e., the effort to rehabilitate tradition in mainstream religions) on the other. And continuously emergent from the dynamic interactions of such expressive

the post-modern 'observer' must be ever vigilant. The post-modern movement, then, pursues a cautious *critical self-consciousness*.

In sum, there seems to be a 'cluster' of concerns that may be identified with post-modern thought, concerns that, in the end, render 'theory' itself problematic for post-modernism: (1) *challenging rigid categories and distinctions*, (2) a spirit of *moving beyond*, and (3) adopting a *critical self-consciousness*. In the broadest sense, postmodern thought offers not only a means of 'fine-tuning' existing paradigms, but, as well, a critical spirit of *transgression*, applicable to any theoretical, expressive, or experimental endeavor. In this regard, a postmodern 'theory' is one, which itself must resist a stand-alone status.

Although often left unacknowledged, experimental science has been affected just as much by post-modernism as has been theoretical reflection. Hence, there are important distinctions to be made between the post-modern and modern investigative scientific projects as well.

Post-modern science is a 'new mode of thought', but one that is not viewed as discontinuous with that of modernity.²² One may express this new mode of thoughts as a fundamental shift in worldview from modernism to post-modernism. The modern world was closed, simple, un-mysterious, a rigidly programmed machine. As such, whatever dynamism or change was present, was fully capable of being determined. The world was complete in and of itself, and completely knowable, with no surprises, no inherent spontaneity. In contrast, post-modern science takes the world to be unbounded, uncompleted, changing, still becoming, relational, complex, unlimited, mysterious, and full of possibilities for novel emergences. Thus, while modern science presumed a world of substance, fixity, and eternality, post-modern science has a world of action, event, and change.²³ The world for the post-modern scientist is the realm of possibilities for action, an objective structure of shared meanings.²⁴ 'Life' is the pretext for every post-modern systematic pursuit of knowledge, where

spiritual polarities have been other forms of religious expression Flannagan, K. (1996). Postmodernity and culture: Sociological wagers of the self in theology. *Postmodernity, Sociology and Religion*. K. Flanagan and P. C. Jupp. London, Macmillan Press Ltd.: 152-173.

²²Schilling, H. K. (1973). *The New Consciousness of Science and Religion*. Philadelphia, PA, United Church Press. p 43. This is a claim with which Kuhn may take issue.

²³Ibid. p 43ff.

²⁴Tolman, C. W. (1996). The critical psychological view of subject and subjectivity. *Problems of Theoretical Psychology*. C. W. Tolman, F. Cherry, R. van Hezewijk and I. Lubeck. Ontario, Captus Press: 49-54.

knowledge is lived in personal experience.²⁵ In this sense, 'experience' is the starting point for post-modern science. Science is henceforth charged with the task of validating all understandings at different levels of consciousness.²⁶

But this new worldview, poses some difficult pragmatic problems, and, hence, new challenges for post-modern science. For today's science (in the true spirit of post-modernity) has not made a complete break from modern science. For example, if 'reality' is better understood in terms of 'relational dynamics', then how are 'causal' relations to be understood now? Is correlation the same as cause (the answer to which used to be an unqualified, no)? Such discussions are central to current human brain mapping studies;²⁷ neural connectivity analyses render results very difficult to interpret. The issue is far from being resolved. Also, if substance is 'out', then how is the post-modern scientist to 'grasp' his/her 'data'? What exactly are we 'looking' for? And, if those 'data' are a snapshot in time, where 'reality' is a-temporal, then what, if anything, can those *frozen* 'data', in fact, mean? Additionally, if the scientist as supreme, non-contextualized 'knower' has been demoted, such that the 'subject' also has epistemic license, then how are we to access the individual consciousness (which is not necessarily completely transparent to the 'subject' either)? Indeed, investigating consciousness is one of the newest areas for science today.²⁸ And, finally, how much does the scientist-'observer' (a questionable status in itself) confound the 'results'?²⁹ These issues challenge the post-modern scientist to develop new experimental paradigms, and new 'data' interpretive approaches.

With the sophistication offered by latest neuroimaging tools, we may begin to consider questions of personal or subjective experience such as consciousness, emotion, and imagination.³⁰ The problem of interest here is that of investigating

²⁵ Mos, L. P. *Ibid. Immanent critique of experience: Dilthey's hermeneutics*, Captus Press: 368-377. In post-modern science, meaning of the concept 'life' should not be confused or identified with a 19th century vitalism, which held that the functions of a living organism are due to a 'vital' principle distinct from physicochemical forces. On a post-modern scientific understanding, even as such forces may not determine 'life', they most certainly condition it.

²⁶ *Ibid.* p 370.

²⁷ C.f., Horwitz, B., M.-A. Tagamets, et al. (1999). "Neural Modeling, Functional Brain Imaging, and Cognition." *Trends in Cognitive Sciences* 3(3): 91-98, Horwitz, B., K. J. Friston, et al. (2000). "Neural modeling and functional brain imaging: An overview." *Neural Networks* 13: 829-846.

²⁸ Metzinger, T. (1995). The problem of consciousness. *Conscious Experience*. T. Metzinger. Paderborn, Imprint Academic, Ferdinand Schoeningh: 564. p 3ff.

²⁹ *Ibid.* p 25ff.

³⁰ To date, many such studies have been identified within the domain of affective neuroscience and emotion research, in general (C.f., Damasio, A. R. (1994). *Descartes' Error*. New York, NY, Putnam, Damasio, A. R. (1999). *The Feeling of What Happens: Body and Emotion in the making of Consciousness*. Orlando, FL, Harcourt, Inc, Iacoboni, M. (2000). Mapping human cognition. *Brain Mapping: The Systems*. A. W. Toga and J. C. Mazziotta. San Diego, CA, Academic Press: 523-534, Rolls, E. T. (2001).

neuroscientifically individual religious experience. What are the *minimum conditions* needed to carry out such a post-modern scientific study? First, 'data' must be acquired on *individuals*. Second, these 'data' must be '*real*' to the extent they will capture some degree of '*truth*' as regards that individual's experience. And, third, whatever is '*observed*' in an individual must, in some sense, be *generalizable to a group* of individuals. That is, the individual experience must have inherent in it detectable '*traces*' of a group experience.

But science needs appropriate theoretical resource, which has become more and more difficult to find.³¹ Clearly, modern theory is not going to fully adequate to post-modern scientific projects. To what extent may post-modern theories useful for today's science? Is the thought of Georges Bataille an appropriate '*representative*' post-modernism? And, to what extent are his theoretical reflections a valuable resource for a neuroscientific investigation of religious experience?

Georges Bataille (1897-1962) has been considered one of the most important thinkers of the 20th century.³² Having lived through both WWI and WWII, he has been 'located' historically as pre-post-modern, and then post-modern. This 'in-between' intellectual locale is evident in his theoretical reflections, as he is traditionally associated with not only the very beginnings of post-structuralism and post-modernism, but as well with the more mature forms of these movements.³³ Given the characterization of post-modern thought I have offered above, to what extent may Bataille be considered a '*representative*' post-modern theorist? To what extent may be his thought a valuable resource for a neuroscientific study of religious experience?

Although considered 'before his time', Bataille's reflections are taken to be consistent with post-modern concerns for moving beyond modernity,

The Brain and Emotion. Oxford, UK, Oxford University Press.. That this is the case may be, in fact, beneficial to the neuroscientific study of religious experience. That is, religious experience is pre-understood as having a tight relation to emotion. This has led to the approach of studying religious experience by studying its emotional content (an approach not unique to empiricists, but as well as of some philosophers of religion, e. g. , Proudfoot, W. (1985). *Religious experience*. Berkeley, University of California Press.). Once the emotional content of a religious experience has been determined, one can gain direct insight into the nature and structure of religious experience. However, this kind of approach relies on implicit pre-understandings of emotion for, how emotion is understood determines directly how religious experience is understood. Thus, an adequate understanding of emotion is crucial to conceptualizing religious experience.

³¹ Ross, B., A. Febraro, et al. (1996). Is there a season for theory? *Problems of Theoretical Psychology*. C. W. Tolman, F. Cherry, R. van Hezewijk and I. Lubeck. Ontario, Captus Press: 228-241.

³² Richardson, M. (1994). *Georges Bataille*. London, Routledge.

³³ Ibid.

challenging the rigid categories thereof, and promoting a radically critical self-consciousness. His discourse has been characterized as one primarily of ‘transgression’.³⁴ He forces the reader to consider the extent to which an analysis may serve to reduce and domesticate the ‘wildness’ of thought, and refused any idea of absolute truth.³⁵ But while he problematized the notion of knowledge, Bataille still believed that there was a general truth to the Universe, one that *must be* sought, even if we could never grasp it.³⁶ Bataille, in other words, has been cast as a post-modern thinker. How is this presumed discursive ‘identity’ more specifically reflected in his thought regarding ‘individual’ and ‘collective’ experience, ‘reality’, ‘knowledge’, and the ‘religious’?

It is especially with respect to a spirit of *transgression* that Bataille offers his thoughts on individual human ‘experience’. That is, the nature of individual experience at once gives rise to one’s ‘character’ and, paradoxically, reduces one to nothing. Individual experience oversteps, transgresses its own bounds of realization, it gives us over to the surprise of impossibility. Does this mean that individual experience isn’t ‘real’? If not, is ‘reality’ located in the collective? But, if individual experience is ‘real’, what does Bataille take as ‘reality’? And how does that ‘reality’ relate to collective experience? In as much as a prospective scientific investigation of religious experience relies upon the presumed ‘reality’ of data from the individual subject,³⁷ the answer to this question will have important implications regarding the theoretical resourcefulness of Bataille’s thought for such investigations.

Although post-modernism may be sometimes associated with an intellectual move to ‘destroy the subject’, rendering the ‘individual’ ‘unreal’,³⁸ this is not always the case. And Bataille provides an example of a post-modernist regard for the reality of individual experience. For Bataille, individual human experience, is every bit as real as is collective experience³⁹ (a view easily contrasted with that of Durkheim, who believed that the only *real* ‘reality’ was collective/social⁴⁰).

That said, experience of the collective is qualitatively different from that of the

³⁴ Botting, F. and S. Wilson (1998). *Experience. Bataille: A Critical Reader.* F. Botting and S. Wilson. Malden, MA, Blackwell Publishers Ltd.: 1-23.

³⁵ Richardson, M. (1994). *Georges Bataille.* London, Routledge. p viiff.

³⁶ Ibid. p viii.

³⁷ Batson, C. D., P. Schoenrade, et al. (1993). *Religion and the Individual: A Social-Psychological Perspective.* New York, NY, Oxford University Press, Inc.

³⁸ Richardson, M. (1994). *Georges Bataille.* London, Routledge. p 10.

³⁹ Hollier, D. (1998). *The College of Sociology.* Minneapolis, University of Minnesota press. p 80

⁴⁰ Richman, M. (1995). The sacred group: A Durkheimian perspective on the College de sociologie. *Bataille: Writing the Sacred.* C. B. Gill. London, Routledge: 58-76.

individual, says Bataille, such that the collective is more than the sum of its very real, individual parts.⁴¹ An individual being can never be dissociated from social circumstances.⁴² It is precisely these realizations, warns Bataille, that should lead us not to be 'content with the unique importance' of the individual consciousness,⁴³ regardless of its 'reality'. But, as well, *neither* the reality of the individual experience, *nor* that of the collective experience, considered on its own, offers a comprehensive grasp of the (ultimately unknowable) *really* 'real'. In other words, Bataille urges us to *move beyond*, to gain greater insight into the optimal way in which we can be as experiencing humans—'reality'.⁴⁴

For Bataille, reality, the fullest of human experience is to be found in the interplay between the social 'composite being' and the individual 'person'. And this relational dynamic is exactly the locus of a complete and real human experience. But this 'space' is one of impossibility; the impossible is the 'mark' of reality. And, for Bataille, it is the 'mark' of the religious as well.⁴⁵ For the dynamic interrelation between society and the individual, is played out in a domain of impossible resolution between the sacred and the profane, between objectification and the absence of presence on the one hand, and pure consciousness and the presence of absence on the other.⁴⁶ This impossible atemporal moment is the moment of confusion effected by the sacred upon the profane, a moment or sense of blurring the lines of opposition and distinction. This space of impossibility is the moment religious, and the religious is the reality of the impossible. In this sense, 'truth', 'reality', 'religious' is located in a borderland, between knowledge and non-knowledge.⁴⁷

But what transpires in individual religious experience? How does the individual religious experience relate to that of the collective? And how does one recognize, 'know' that mark of impossibility? After all, if no 'trace' of such an experience is available to an individual or to an observer, no matter how 'real' that experience may be, it certainly cannot be accessed by science, even a postmodern self-conscious science (i.e., one with much less rigid notions of subjectivity-objectivity). And finally, is individual religious experience a volitional event (self-induced), or one entirely externally imposed?

⁴¹ Richardson, M. (1994). *Georges Bataille*. London, Routledge. p 7ff.

⁴² Ibid. p 24ff.

⁴³ Hollier, D. (1998). *The College of Sociology*. Minneapolis, University of Minnesota press. p 335.

⁴⁴ Ibid. p 335-336.

⁴⁵ Bataille, G. (1992). *Theory of Religion*. New York, Zone Books. p 110-111.

⁴⁶ Hollier, D. (1998). The dualist materialism of Georges Bataille. *Bataille: A Critical Reader*. F. Botting and S. Wilson. Malden, MA, Blackwell Publishers Ltd.: 59-73. p 59.

⁴⁷ Richardson, M. (1994). *Georges Bataille*. London, Routledge. p viii

According to Bataille, although the ‘essence’ of religious experience is characterized by the relational dynamics between the collective and individual, the sacrificial act renders the sacred, i.e., it catalyzes the transition from profane to sacred. This sacred is discerned in the communication it engenders and in the formation of ‘new beings.’⁴⁸ Thus, although a relational process, there are transformed ‘individual products’ of religious experience, which presumably harbor ‘traces’ of the event. It would seem, then, that a scientific investigation thereof is promising.

But, to whom and how are these ‘traces’ ‘known’? Can the scientist study the experience without consulting and taking seriously a subjective report thereof? Or must the scientist defer to a knowing subject? On Bataille’s account, religious experience for the individual is the a-temporal moment when clear consciousness is conscious of that which exactly paralyzes it⁴⁹—namely, evil. In short, it is the impossibility of an unconscious awareness of consciousness that ‘marks’ a religious experience.⁵⁰ This suggests, then, that the experiencer is exactly *the last one* who may at all be consciously aware of his/her religious experience, the *last one* to be able to identify the quality and moment of the experience. For consciously ‘knowing’ (in even the most inadequate sense that Bataille tells us is possible⁵¹) one has ‘the experience’ is sure proof that one has *not* had a religious experience.⁵² Thus, understanding (in the sense of conscious explication thereof) religious experience cannot be a task for the one who ‘has it’. It seems that once we know we’ve had one, we know we have not. Again, Bataille’s notion of individual religious experience would appear to support a scientific investigation thereof.

Is a religious experience self-induced, or can it be? Again, bringing religious experience—an (impossible) awakening to The Truth, to Reality—into the context of his discussions of expenditure, it would seem that Bataille thought that one can ‘think’ oneself to that moment. That is, ‘[t]hinking expenditure, for a subject, means first of all thinking of a scene from which he has been evacuated. It means to push self-sacrifice...to the point of entering a space where the ego...is endowed with the glory of not being there.’⁵³ In terms of a scientific investigation

⁴⁸ Richman, M. (1995). The sacred group: A Durkheimian perspective on the College de sociologie. *Bataille: Writing the Sacred*. C. B. Gill. London, Routledge: 58-76. p 73.

⁴⁹ Bataille, G. (1992). *Theory of Religion*. New York, Zone Books. p 56-57.

⁵⁰ Ibid. p 111.

⁵¹ Ibid. p 23; Hollier, D. (1998). *The College of Sociology*. Minneapolis, University of Minnesota press. p 80.

⁵² Bataille, G. (1992). *Theory of Religion*. New York, Zone Books. p 27ff.

⁵³ Hollier, D. (1998). The dualist materialism of Georges Bataille. *Bataille: A Critical Reader*. F. Botting and S. Wilson. Malden, MA, Blackwell Publishers Ltd.: 59-73. p 71.

of religious experience, this would mean that religious experience is a self-induced, cognitively mediated event. And, as such, in order to study it, one would have to employ a self-induction experimental paradigm. That is, the investigator must ask the subject to induce in him/herself, with subject-requested cues, the desired (religious) state. External stimulation will not work.

Thus, perhaps it should come as no surprise that, for Bataille, science has great potential in this quest for 'seeking beyond', for understanding religious experience (but not for *realizing* an 'ideal' as such⁵⁴). In this sense, Bataille was representative of post-modernism, in that he clearly had no intentions of rejecting blindly the modernist Enlightenment legacy; he fundamentally supported the modern framework of science, liberally using biology as a model for his arguments,⁵⁵ and arguing for the necessity of rationality.⁵⁶ Nonetheless, in keeping with a post-modern spirit of 'moving beyond', it is evident that Bataille expected science to be flexible enough to embrace the most daunting challenge of understanding the religious experience.⁵⁷ Indeed, he even suggested that the idea joining two people's brains *could* become familiar. So, if we ask, why is science the experience of choice for understanding 'reality'? Because science, says Bataille, may bring 'the maximum disorder into habitual perspectives'.⁵⁸ How did Bataille understand the project science?

Bataille's understandings of the science of his time are extraordinarily consistent with those held by the post-modern scientist. This does not mean, however, that Bataille viewed the science of his day as already beyond itself, or had 'arrived'. Indeed, there was, and on his account will always be, substantial need for a scientific critical self-consciousness. In the context of Bataille's concerns for expenditure, science, he holds, is the 'intellectual, ideological version of the earthly refusal of expenditure'.⁵⁹ Science is still (and necessarily) caught up in a Pre-Copernican anthropomorphism. 'Even if human existence is really in the process discovering the universe that sustains it, this existence must acknowledge the universe as a spectacle external to it or else deny itself'.⁶⁰ That is, the scientist risks his/her very life by acknowledging himself/herself 'as

⁵⁴ Richardson, M. (1994). *Georges Bataille*. London, Routledge. p 10.

⁵⁵ Champagne, R. A. (1998). *Georges Bataille*. New York, Twayne Publishers.

⁵⁶ Bataille, G. (1992). *Theory of Religion*. New York, Zone Books. p 71; Richardson, M. (1994). *Georges Bataille*. London, Routledge. p 7.

⁵⁷ Hollier, D. (1998). The dualist materialism of Georges Bataille. *Bataille: A Critical Reader*. F. Botting and S. Wilson. Malden, MA, Blackwell Publishers Ltd.: 59-73. p 69ff

⁵⁸ Hollier, D. (1998). *The College of Sociology*. Minneapolis, University of Minnesota press. p 336.

⁵⁹ Hollier, D. (1998). The dualist materialism of Georges Bataille. *Bataille: A Critical Reader*. F. Botting and S. Wilson. Malden, MA, Blackwell Publishers Ltd.: 59-73. p 69.

⁶⁰ Ibid. p 70.

spectacle viewing itself.⁶¹ In short, Bataille maintained that reductionism is a myth, 'every element in nature is an aggregate of its parts.'⁶² But, that scientists are practicing good science (and, in fact, must do so) when reducing and objectifying objects of study. Rationality and objectification is necessary, it is, in fact, the way we are.⁶³ Science is a process of imagining that the scientist is the exception to the 'world invaded by the moment'.⁶⁴ Nonetheless, Bataille felt that scientists must be *aware* of this myth, must have no illusions that the knowledge gained is The Truth,⁶⁵ and that the observer is neutral and detached from context or the 'subject'.⁶⁶ Scientists, in other words, must be critically self-conscious, a view accepted by today's scientists.⁶⁷

It seems that Bataille's theoretical reflections on individual religious experience may meet the minimum conditions necessary to carry out a neuroscientific investigation of religious experience: 'data' acquired from the individual experience are 'real', and have important (and presumably detectable) relevance to group experience. In fact, his thoughts suggest a particular experimental paradigm for investigating religious experience. That is, a prospective neuroscientific investigation of religious experience would have to employ a self-induction paradigm, thereby allowing the subject to be the 'knower' in the initial (and final?) phase. Simply showing the subject 'religiously meaningful' stimuli would not be effective. And, the investigator would have to rely on the self-report of the subject (i.e., success of attaining the desired 'state'). This first stipulation already challenges the flexibility of contemporary science. For, as noted above, today's scientist still operates according to the rule of the 'knowing' investigator (vs. subject). But Bataille's theoretical reflections offer an additional challenge, for he predicts an interesting 'turn' during such an investigation. That is, Bataille's theory would predict a critical 'time-point' during which the status of 'knower' shifts from subject to investigator. But how can the investigator 'know' he/she is now the 'knower'? In as much as Bataille suggests that religious experience may be marked by an *unconscious* awareness (of consciousness), that critical 'time-point' may be that moment when neural circuitry subserving conscious awareness is altered. That said, neuroscience is only just now

⁶¹ Ibid. p 70.

⁶² Hollier, D. (1998). *The College of Sociology*. Minneapolis, University of Minnesota press. p 336.

⁶³ Bataille, G. (1992). *Theory of Religion*. New York, Zone Books. p 30-32; Richardson, M. (1994). *Georges Bataille*. London, Routledge. p 7ff.

⁶⁴ Hollier, D. (1998). The dualist materialism of Georges Bataille. *Bataille: A Critical Reader*. F. Botting and S. Wilson. Malden, MA, Blackwell Publishers Ltd.: 59-73. p 70.

⁶⁵ Richardson, M. (1994). *Georges Bataille*. London, Routledge. p 26ff.

⁶⁶ Bataille, G. (1992). *Theory of Religion*. New York, Zone Books. p 31.

⁶⁷ Batson, C. D., P. Schoenrade, et al. (1993). *Religion and the Individual: A Social-Psychological Perspective*. New York, NY, Oxford University Press, Inc. p 17-18.

beginning to address questions of consciousness.⁶⁸ So, to 'look for' altered 'consciousness' circuitry is, at this time, premature. Nonetheless, premature does not automatically imply impossible.

Now, suppose such an investigation is carried out, and neural patterns are observed. How could Bataille's theoretical reflections assist in the interpretation of the results? First, whatever was observed would be observer-influenced, and hence any interpretation would have to take into account the context of the investigator. As such, the data would render 'facts' hopelessly confounded with the cultural-historical moment of the experiment/experimenter. Second, whatever conclusions were to be offered would not be able to be communicated as The Truth, in the sense of eternal, rigid, final. And lastly, supposing that that hypothetical 'moment' corresponded to a specific pattern of altered neural circuitry (shown previously to be activated in conscious-unconscious states), the most one could offer would be a statement about neural correlates of the state, rejecting the as yet unclarified word 'cause.'

There are now two very recent neuroscientific studies of religious and mystical experiences, both of which employed self-induction paradigms, for which the experimental subjects were asked to induce in themselves the target states (e.g., a self-understood religious state).⁶⁹ Newberg et al. performed a neuroimaging study (using single photon emission tomography [SPECT]) of Buddhist meditation. They reported that brain areas involved in so-called 'higher-order' cognitive processes (i.e., complex visual perception, attention, orientation, and verbal conceptualization) were integral to the experience (e.g., areas such as the posterior parietal lobe, thought to be involved in creating mental representations of the self and orientation in space). Based on this study, and earlier work, Newberg et al. have hypothesised that religious and mystical experiences are mediated by complex patterns of neural activity involving brain structures of the autonomic nervous system, the limbic system, and neocortical areas (i.e., occipital, parietal, and prefrontal cortex). Thus, different mystical (or religious experiences⁷⁰) are marked by variable and relative contributions of each of these

⁶⁸ Metzinger, T., Ed. (1995). *Conscious Experience*. Paderborn, Imprint Academic, Ferdinand Schoeningh.

⁶⁹ Azari, N. P., J. Nickel, et al. (2001). "Neural correlates of religious experience." *Eur J Neurosci* 13(8): 1649-52, Newberg, A., A. Alavi, et al. (2001). "The measurement of regional cerebral blood flow during the complex cognitive task of meditation: a preliminary SPECT study." *Psychiatry Res* 106(2): 113-22.

⁷⁰ Newberg et al. focus on mystical vs. religious experiences, even though they make reference to both in their interpretations and theorizations.

structures.⁷¹ On this account, one cannot simply 'locate' religious experience (or God). Central to their view is that the meaning of the experience for the subject is critical.⁷² On Newberg et al.'s account, the essential cognitivity of such experiences is functionally multidimensional, involving seeing the world as a whole, reducing the whole into analysable parts, abstract thinking (i.e., generating theories, beliefs, assumptions), mathematical calculation, causal explanation/interpretation, binary reduction, and assignment of what exists (i.e., what is real).⁷³

Azari et al. studied a group of self-identified Protestant Christians. These subjects held the conviction that the biblical text was the literal word of God. PET scanning during states which they themselves identified as typical religious states showed a brain activation pattern that corresponded to their individual self-perspectives. The activated brain areas were those associated with learned cognitive activity, sparing limbic areas. This also study provides support for the view that religious experience is a cognitively-mediated phenomenon, for which the perspective of the experiencer is central.⁷⁴ But, even as these findings suggest that religious experience is a matter of thinking (i.e., cognitive activity), they also reveal that such an experience feels uniquely religious, even though there was no evidence of a concomitant autonomic arousal (i.e., of limbic activity). These investigators have concluded that the feeling aspect of the experience was bound up with the thinking, and did not necessarily come before it. In this sense, religious experience emerged as 'thinking that feels like something.'

Taken together these recent neuroscientific findings suggest that religious experience is, at the very least, cognitively-mediated, for which the perspective/interpretation of the experiencer is crucial, and that the cognitivity of religious experience is not just about explaining (giving a causal explanation for) a bodily arousal (i.e., a cognitively empty 'feeling'). Importantly as regards

⁷¹ Newberg, A. B. and E. d'Aquili (2001). *Why God won't go Away: Brain science and the biology of belief*. New York, NY, Ballantine Books. p 117ff.

⁷² Ibid. p 111.

⁷³ Ibid. p 46ff.

⁷⁴ Further data analysis Azari, N. P., J. Nickel, et al. (2001). *Neural circuitry of religious experience*. 31st Annual Meeting of the Society for Neuroscience, San Diego, CA, Society for Neuroscience. provided information which supports the view that religious experience as such cannot be reduced to any specific brain region or collection of regions. This interpretation relies on the presupposition that brain function is afforded by complex patterns of neural interconnectivity, known as a 'connectionist' or 'network' conception of brain activity (C.f., Horwitz, B., M.-A. Tagamets, et al. (1999). "Neural Modeling, Functional Brain Imaging, and Cognition." *Trends in Cognitive Sciences* 3(3): 91-98, Horwitz, B., K. J. Friston, et al. (2000). "Neural modeling and functional brain imaging: An overview." *Neural Networks* 13: 829-846, McIntosh, A. R. (2000). "Towards a network theory of cognition." *Neural Networks* 13(8-9): 861-70.).



the aims of this paper, these recent brain imaging studies show how Bataille's thought is current with neuroscientific understandings of brain function, and, thus, can be a useful resource for the design and interpretation of prospective studies on the embodied aspects of religious experiences.

In sum, Bataille's reflections on religion may be a valuable resource for the neuroscientific investigation of religious experiences. In as much as his theoretical projects adequately represent post-modern concerns, other post-modern theories of religion may provide additional important theoretical resource for contemporary scientific investigations of religious experience.

NINA P. AZARI, Ph.D., earned her first doctoral degree in human experimental psychology, and actively pursues human brain imaging research in Germany and The Netherlands. She is also completing a second Ph.D., in Religious & Theological Studies at the Iliff School of Theology/Denver University, and is writing a dissertation on the philosophical-theological implications of neuroscientific studies of religious experience—most specifically her collaborative work on the subject, a first-ever PET-rCBF neuroimaging study of a Christian religious experience.

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