

Olga Louchakova-Schwartz*

Theophanis the Monk and Monoimus the Arab in a Phenomenological-Cognitive Perspective

DOI 10.1515/oph-2016-0005

Received August 31, 2015; accepted October 26, 2015

Abstract: Two brief Late Antique religious texts, respectively by the monk Theophanis and by Monoimus the Arab, present an interesting problem of whether they embody the authors' experience, or whether they are merely literary constructs. Rather than approaching this issue through the lens of theory, the article shows how phenomenological analysis and studies of living subjectivity can be engaged with the text in order to clarify the contents of introspective experience and the genesis of its religious connotations. The analysis uncovers a previously unnoticed form of embodied introspective religious experience which is structured as a ladder with a distinct internal structure with the high degree of synchronic and diachronic stability. This approach also helps one identify the specific introspective techniques in the canonical and non-canonical literature of early Christian tradition, as related to the concepts of “*theosis*” and “*kenosys*”, as well as to suggest some neurological correspondents of religious cognition.

Keywords: cognitive historiography, human neuroscience, introspection, subjectivity, ladder imagery, Monoimus the Arab, phenomenology, Philokalia, Prayer of the Heart, religious experience, Theophanis the Monk

In this paper, we will explore two brief Late Antique religious texts, respectively by the monk Theophanis and by Monoimus the Arab. These texts present an interesting problem of whether they embody the authors' experience, or whether they are merely literary constructs. Rather than theorizing around this issue, I shall show how phenomenological analysis and studies of living subjectivity can be engaged with the text in order to clarify the contents of introspective experience and the genesis of its religious connotations¹. This approach also helps one identify the specific introspective techniques in the canonical and non-canonical literature of early Christian tradition, as well as to suggest some neurological correspondents of religious cognition.

To illustrate the problem, here I cite a quotation from Theophanis's poem in the *Philokalia*, a compilation of Patristic sources written in Greek during the period from the 4th to 15th century. *Philokalia* was put together by St. Nikodemos of the Holy Mountain (1749-1809) and St. Makarios of Corinth (1731-1805)² as a reference manual for Orthodox monastics. The poem entitled “The Ladder of Divine Graces which experience has made known to those inspired by God” begins as follows:

1 For the methods of phenomenological analysis, see Schmicking, “A Toolbox”.

2 For more on *Philokalia*, see McGuckin, “Making”; Ware, “St. Nicodemos”.

*Corresponding author: Olga Louchakova-Schwartz, University of California at Davis; Patriarch Athenagoras Orthodox Institute, Graduate Theological Union, Berkeley; Sofia University, Palo Alto, CA, E-mail: olouchakova@gmail.com

- (1) “The first step is that of purest prayer,
- (2) From this there comes warmth of heart,
- (3) And then a strange, a holy energy,
- (4) Then tears wrung from the heart, God-given.
- (5) Then peace from thoughts of every kind.
- (6) From this arises purging of the intellect,
- (7) And next the vision of heavenly mysteries.
- (8) Unheard of light is born from this ineffably,
- (9) And thence, beyond all telling, the heart’s illumination.
- (10) Last comes – a step that has no limit
- (11) Though compassed in a single line –
- (12) Perfection that is endless.
- (13) The Ladder’s lowest step
- (14) Prescribes pure prayer alone.
- (15) But prayer has many forms:
- (16) My discourse would be long
- (17) Were I now to speak of them.
- (18) And, friend, know that always
- (19) Experience teaches one, not words.³”

The poem is valued in the Orthodox tradition for its apologetics of experience⁴, as is manifest directly in (19), and in (46) “experience alone can teach these things, not talk”, and also in (33) “your heart can inwardly experience it”. While practitioners of traditional Orthodox introspective prayer assert that the steps of the Ladder are an actual experience⁵, non-contemplatives view it as a symbol. In the constitution of the text, experience may be masked by historical ideas, amalgamated with the religious symbolism of the time, metaphorized, creatively changed by the author, altered in cultural stimulus diffusion, or simply invented, as a literary exercise⁶. Since I wish to find out whether the author’s references to experience of the Ladder indicate an actual experience, and what kind of experience that would be, I will bracket out the philosophical questions of the reality of experience as such or the questions of relationships between experience and language, and focus on the contents and structure

³ Theophanis, “The Ladder”.

⁴ See the introductory note to the poem by the editors of *Philokalia* G.E.H. Palmer, P. Sherrard and K. Ware, in Theophanis, “The Ladder”, 66. For apologetics of experience in Eastern Orthodox mystical theology, see Lossky, *The Mystical Theology*, Lourié, “Theophaneia School”; Louth, “Influence”, 59: “...[W]e participate in this [Patristic] tradition not just by learning..., but by praying, by living out the theology we discern and proclaim. The *Philokalia*... initiates us into a participation in the divine life, the divine energies, by... a process of purification, illumination, and perfection”.

⁵ For an example of ascertainments of the poem being a literary description of experience, see Cutsinger, “Yoga”.

⁶ For articulation of mystical experience, see Sells, *Mystical Languages*; Louchakova-Schwartz, “Approach”, 1056. For problems with the generalizability of introspective data, see Nisbett and Wilson, “Telling more”. For an opposite point of view in classical phenomenology, see Mohanty “Noema”; Mohanty, “Phenomenology”. For the ontological status of experience, see Searle, *Intentionality*. For the reality of experience, see Molyneux, “The Logic”. For epistemological issues in religious experience, see the review by Webb, “Religious Experience”. For introspective self-knowledge disputed, see Brueckner and Ebbs, *Debating*; for self-knowledge vindicated, see Elshof, *Introspection*. For a problem of experience in cognitive historiography, see Taves, *Religious Experience*; for more on difficulties in the study of religious experience, including in the texts, see Flannery et al., “Introduction”.

of experience as it is lived by all of us, that is, in the natural attitude⁷. Such bracketing is routinely done in human science and phenomenological psychology in the study of human experience; neuroscience does the same in the research of cognition. Since we already have an indication that live subjects experience a similar introspective Ladder⁸, our task here will be to understand the reason for their resonance with the experience allegedly lived by the early antique author while being incorporated into the textual evidence.

Clarifying a presence of introspective experience in historical evidence seems to me important for the following reasons: first, introspection can be of different kinds⁹. Even though introspection is “the privileged point of departure” for the formation of a religious sense¹⁰, no definitive connection has yet been established between the particular kind of introspective experience and a particular religious idea¹¹. With diachronic changes in the sociology of experience, experience is reinterpreted, and some forms of it become obscure¹². Therefore, the study of experience in the texts of antiquity may help to rescue such obscure or even commonly unknown forms of experiential consciousness¹³.

Second, the naturalization of religion has explained rituals, beliefs, magic and morality in terms of social cognition and by application of evolutionary biology¹⁴. Experience *per se* remains outside of the scope of these studies. Even though Slingerland points to the importance of the study of experience for cognitive historiography¹⁵, the theories of social cognition or evolutionary biology provide no means for the study of experience. At the same time, both data-driven and theory-laden approaches in

7 For more on the natural attitude, see Luft, *Subjectivity*; in science, see Gurwitsch, *Phenomenology*. For the study of human experience in phenomenological psychology and human science, see Frie, *Understanding*; Giorgi, *Psychology*. For the natural attitude in religious experiencing, see Louchakova-Schwartz, “The Seal”; for an example of an early mystical text in which the problem of experience is treated specifically as a philosophical problem, and therefore, the author departs from the natural attitude, see Louchakova-Schwartz, “Phenomenological Approach”. For more on the “innate” character of religiosity, see Ales Bello, *The Divine*; Barrett, *Born Believers*.

8 Flood, *The Truth*.

9 For the introspective origins of religious experience, see Alston, *Perceiving*; Chittick, *The Self-Disclosure of God*; Dadosky, *The Structure*; *Hā'irī Yazdī*, Principles; Crowe, *Theology*, 124-143; Louchakova-Schwartz, “Intuition of Life”, 2011; Louchakova-Schwartz, “Direct Intuition”; Louchakova-Schwartz, “Di(a)Logos”; Louchakova-Schwartz, “The Seal”. For a history of introspection, see Lyons, *Disappearance*. For introspection as an exegetical category for a number of different processes, see Stern-Gillet, “Consciousness”, 145. For scientific or philosophical research of introspection, see Alderson-Day and Fernyhough, “Relations”; Allo, “Many Faces”; Zedelius, Broadway, and Schooler, “Motivating Meta-Awareness”. For discussions on introspection, and its various types, see Brueckner and Ebbs, *Debating*; Crisp, *Oxford Handbook*; Schwitzgebel, “Introspection?”; Paul, “How we know”; Feest, “Introspection”; Zahavi, “Varieties”. For spatiality of introspection, see Mehta, “Beyond Transparency”, 2. For introspection in antiquity, see Diuk et al., “Quantitative Philology”; Stramara, *Gregory*; Stramara, *Introspection*.

10 Ales Bello, “Husserlian Approach”, 65.

11 Crowe, *Theology*, 124-143.

12 For an example of a reinterpretation of the forms of experience, see Lukoff, “Spiritual Emergency”. For the forms of experience “invisible” in the zeitgeist, see Greenwell, “Energies”.

13 Cf. the analysis of the uncommon levels of the cognition evidently participating in the formation of religious experience according to Indian and Tibetan texts, in Bronkhorst, “Levels of Cognition”.

14 For the biological origin of religious thought, see Atran, *Gods*; Boyer, *Cognitive Aspects*; Boyer, *Religion*; Bloom, *Babies*; Cohen, Mundry, and Kirschner, “Religion”; Heintz, “Cognitive History”; Parker, “Commentary”; Whitehouse, *Modes*; Whitehouse and McCauley, *Mind*; Whitehouse and Laidlaw, *Religion*; Xygalatas, *Burning Saints*. For social cognition as the substratum of religion, see McCorkle and Xygalatas, *Mental Culture*. For the naturalization of religion, see Sperber, Coubray, and Schmitt, “Entretien”.

15 For the importance of the study of experience in cognitive historiography, see Slingerland, “Towards a Second Wave”; for an example of early studies of introspective religious experience in the natural attitude, in which experience is taken for granted, without philosophical reflection or historical analysis, see Wilber, Engler and Brown, *Transformations*.

cognitive science use a heuristic decomposition of normative cognition for their hypotheses building¹⁶. Whether or not the same can be performed on introspective or religious experience, that is, whether the latter has a structure which can be decomposed, has not been researched and remains unclear¹⁷.

To find out whether there is a structure of experience in Theophanis' poem, I shall implement a sequential research design with steps hermeneutically building on one another¹⁸. I shall first examine whether the overarching metaphor of the Ladder¹⁹ may possibly refer to the phenomenological structure of experience²⁰. This should furnish a direction of analysis, as reflected in the section entitled Research Design. In the first stage of analysis, I shall treat the text as a compound of ideas, subject to cultural stimulus diffusion (see below the section entitled Poetic Metaphor and the Structure of Experience)²¹, in order to extract the phenomenological structure of experience out of its historical matrix and separate it from the number symbolism clearly present in the poem (see the section entitled Ideas in Theophanis' Poem). Then, I shall search for a similar experience in the oral (non-textual) tradition of introspective prayer associated with *Philokalia*, and examine whether the experience in question has diachronic and synchronic stability (see the section entitled An Anthropological-Phenomenological Bridge to Experience: "Purest Prayer"). To overcome the constraint of self-referencing I will use second-person reporting²².

In order to fully understand the ways this experience is incorporated in the tradition, I shall examine a fragment from another early writer, Monoimus the Arab, whose doctrine was recorded, among other heresies, by Hippolytus of Rome²³. Finally, I shall show how this kind of introspection generates the ideas of the Gnostic *kenosis* (emptying oneself) and the Christian *theosis* (union with God). In the Conclusion, I shall discuss the relevance of the findings to cognitive science.

16 For data-driven approaches, see the recent literature on neural networks analysis: Pedone et al., "Efficacy"; Silva et al., "Real-Time Ultrawide Field Image Evaluation". For an example of a theory-laden approach, see Keil, "Committee Report", 2: "The predictions should directly relate to the theories and previous findings". For the heuristic decomposition of experience in the creation of a cognitive experiment, see Kosslyn, "Imagery"; Kosslyn et al., "Imagery Used"; Koshevnikov et al., "The Enhancement"; Krans, de Bree, and Moulds, "Cognitions", Kreplin and Fairclough, "Effects"; Louchakova-Schwartz, "Cognitive Phenomenology". For heuristics in the study of cognition, see Gonzalez and Leber, "Cognitive Architectures". For normative cognition, see Jensen, "Normative Cognition". For secularization of cognition, see Swatos and Olson, *Secularization Debate*, 37. For the creation of the term "religious experience" in the nineteenth century, see Sharf, "Rhetoric". The exclusion of religious experience from dominant discourse must be contrasted with earlier centrality of religious experience, e.g. in "Is God what the mind first knows?" in St. Thomas Aquinas, *Faith, Sent.* 1, d.3, q1, a 2; *De veritate* 10.12; *Contra gentiles* 1.10-11; *Summa theol.* 1.2.1, 1.88.3, a.

17 For the variability of introspective experience, see Nisbett and Wilson, "Telling more"; Lutz et al., "Guiding". Petitmengin et al. in "Gap" suggests overcoming variability by using second person research approaches, such as interviewing a large number of subjects. This approach was utilized in the present paper. For a critique of isomorphism in designing a scientific experiment, see Gallagher, "Phenomenology and Experimental Design". For a review of classic phenomenological writings on the structures of religious experience, see Dadosky, *The Structure*.

18 For mixed methods design in social sciences, see Creswell and Plano, *Designing*. The hermeneutics of sequential mixed methods design are applied here to historical research in order to integrate the data from a variety of data streams in critical historical analysis and phenomenological research of living participants.

19 As an example, the folk-psychological Islamic understanding of the Mi'rāj journey as a real event should be compared with Hämeen-Anttila's "Descent" for an analysis of the same myth before any correlation to experience can be claimed.

20 For an analysis of the somatic aspects of mystical perception, see Louchakova and Warner, "Via Kundalini"; Louchakova, "Ontopoiesis and Union"; Louchakova-Schwartz, "The Seal"; Louchakova-Schwartz, "Phenomenological Approach". For the loss of the embodied component in translation, listen to Louchakova, O. "Mediating intimacy: Essential Ibn 'Arabi for education and psychotherapy".

21 Kroeber, "Stimulus".

22 For rigor in studying human experience, see Colaizzi, *Reflection*; Frie, *Understanding*; Giorgi, *Descriptive Phenomenological Method*.

23 St. Hippolytus, *Refutatio*.

Research Design

How do we extract the structure of experience from under the layer of ideas in the poem? In following Table 1 below, I indicate some aspects of the problem.

Table 1. Analytic problems in the extraction of experience from textual evidence

Problem	Example	Solution
(1) The experience is masked by ideas or literary conventions.	The poem is viewed as a purely symbolic Ladder which has no correspondence to any experience.	Traditional critical historical and philological analysis of ideas in the text helps separate cultural construction from the core structure of possible experience. In the case of the Ladder, the core structure will be not the number of steps, but the fact of stratification (see below the section entitled Ideas in Theophanis' Poem).
(2) The experience does not exist.	The poem is a mere exercise in a literary genre.	Phenomenological correlation of the text with reports of live subjects in first (autoethnographic) ²⁵ and second person (interviewing) approaches. ²⁶ Positive only in the presence of a generalizable phenomenological structure. ²⁷ (See the section titled An Anthropological-Phenomenological Bridge to Experience: "Purest Prayer").
(3) The experience is unrecognizable. ²⁸	There is no experience which has the neat stratification of the ten steps (number symbolism).	Same as above.
(4) Evidence of experience in the text is skimpy or confusing.	For example, the fragment from Monoimus by itself is insufficient for claims to the experiential character of evidence.	Comparative analysis with other texts (see below the section entitled Attentional Strategies of Theophanis the Monk and Monoimus the Arab).

After the solutions in Table 1 are implemented, the next step of analysis must focus on the references to the "heart" (lines 4, 33, 57 of the poem) that bridge the ideas in the poem with embodiment²⁸; this was addressed via anthropological data (see below the section entitled An Anthropological-Phenomenological Bridge to Experience: "Purest Prayer"). This included the analysis of the structure of practice in the oral tradition, as well as finding practitioners, screening them to select those whose experience resonated with the poem, interviewing the latter and performing the phenomenological analysis of their experience²⁹. Finally, the structures were verified in a reproduction of the experience in a guided introspective practice (a so-called quasi-experiment).

In the Figure 1 I summarize the stages of design and the tasks pertaining to each stage.

²⁴ For the reproducibility of phenomenological structures of experience, see the method of imaginal variations in Giorgi, *Descriptive Phenomenological Method*.

²⁵ For references to first-person experience in research, see Desbordes and Negi, "New Era"; Díaz, "Narrative Method"

²⁶ For situated and generalizable structures, see Giorgi, *Descriptive Phenomenological Method*.

²⁷ In addition, according to the lament of St. Hesychios already in the fifth century C.E., the experience of purity was already rare; nowadays, it may appear to be extinguished.

²⁸ For the experiential aspects of the concept of the "heart", see Louchakova, "Spiritual Heart"; Morris, *Reflective Heart*.

²⁹ Xygalatas ("On the Way") mentions that historians attempting to understand experience might benefit from experimental work in three ways: first, by employing "existing, experimental evidence from living subjects to make inferences about past people"; second, by using historical data to design experiments that test cognitive historiographical hypotheses; and finally, through "natural experiments" in which one applies systematic quantification and statistical analysis to historical material.

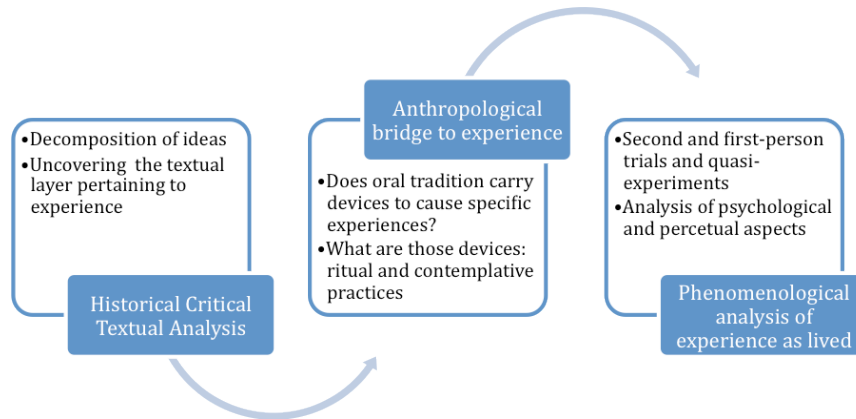


Figure 1. Stages of analysis of Theophanis' poem

Participants

The interviews for the analysis of phenomenological data were collected between 1994 and 2011 from self-directed practitioners of the Prayer of the Heart (N = 273) and from those who received guidance from a spiritual director (N = 175). The phenomenological structure discovered through the interviews was verified in guided practice of the prayer in the focus groups (N = 500)³⁰. About 75% of all participants were female, the rest were male. Participants were solicited from various monastic communities and churches, as well as California centers such as the Esalen Institute³¹ and the Mercy Center, and among the students of John F. Kennedy University, the California Institute of Integral Studies, the Institute of Transpersonal Psychology, the Starr King School for the Ministry, and the Patriarch Athenagoras Orthodox Institute in Berkeley. The data were compared with reports of regular introspection in non-praying subjects.

Note on Phenomenological Method

Phenomenological data were considered together with the data of historical analysis and textual research³². The study used a formalized genetic analytic phenomenological approach developed in psychology and phenomenology of religion to overcome the interpretive errors in the research of experience³³.

Poetic Metaphor and the Structure of Experience

The poem and its overarching metaphor of the Ladder must be understood in the context of experience-oriented Orthodox mystical theology and the corresponding practice of the Prayer of the Heart (PH)³⁴, both

³⁰ For a similar approach, see Price and Barrell, "Inner Experience", 16-19. For an adaptation of the method of the Prayer of the Heart for New Age audiences, see Louchakova, "Essence". For more on the growth of popularity of the Philokalia, see Ware, "St. Nicodemos".

³¹ A New Age version of the PH in non-traditional communities is described in Louchakova, "Essence".

³² Smart, "Foreword", xi.

³³ For examples of strict analytic approaches to experience, see Camic, Rhodes and Yardley, *Qualitative Research*, 2003; Colaizzi, *Reflection*, 1973; Embree, *Reflective Analysis*, 2006; Giorgi, *Descriptive Phenomenological Method*, 2009; Frie, *Understanding*, 2003; Denzin and Lincoln, *Handbook*. For the classic phenomenological method, see Steinbock, "Generativity"; Steinbock, *Home*. For the phenomenological analysis of religious experience, see Steinbock, *Phenomenology*.

³⁴ For the experience-oriented theology of *Philokalia*, see William, "The Theological World". For the connections between *Philokalia* and oral tradition, see Zecher, "Tradition". For the direct experience of God in the PH, see Liester, "Hesychasm"; Toti, "Anthropological Significance"; Louchakova, "Ontopoiesis and Union"; Louchakova, "Prayer of the Heart"; Louchakova, "Spiritual Heart". On the anthropological significance of the Prayer of the Heart, see Toti, "Anthropological Significance".

of which emphasize the importance of the direct internal experience of God. The Ladder is the means for the ascension to “heaven’s vault” (21) in ten steps which “strangely vivify the soul” (22) and are the “fruit of all the books” (29). The seventy one lines of the poem circle around the importance of this experience in preparation for dying: the Ladder is the path to heaven (30) and finding “life” (25), i.e., immortality, while still in this world (26), in which one’s “...heart can inwardly experience it [the Ladder] ” (33). Theophanis calls on the reader to identify what step he/she is on (40). From line 49 on, the antithesis is presented: “He who has no foothold on this Ladder” (50), will experience “terrible fear, terrible dread” (53) at the time of dying. This is completed with the traditional coda of humility, in which Theophanis condemns himself and states his “utter fruitlessness” (71).

On the cusp of the Pre-Christian and Common Era various symbolic ladders were posited all over the Mediterranean³⁵. Ladders and ascents are extremely polymorphic³⁶, including the difference in the amount of steps, from three to twelve, to many more. Origen, who lived ca.184/185 – 253/254, indicated that according to Celsus’ account of Mithraic initiation, the soul travels the celestial regions of the planets, symbolically depicted as a ladder with seven gates and an eighth gate on top³⁷. St. Jerome, who lived ca. 347-420 C.E., attests a broad use of the metaphor of the ladder in the Christian milieu: “Since many people have surmised that angels travel this ladder daily as they go about the Lord’s business, it has become a symbol of the comings and goings between heaven and earth of people, angels, and messages or prayers”³⁸. St. Jerome probably had in mind the Jacob’s Biblical dream of the Ladder in the Old Testament³⁹. Jacob’s Ladder probably served as a prototype for various later imageries of the Ladder because, as explained by the 15th century St. John of the Cross, the symbolism of the Ladder is especially appropriate for the “secret wisdom” of internal spiritual formation via “secret contemplation”⁴⁰.

In cases when the Ladders are not only symbolic, but metaphoric of some internal process, the underlying processes are also polymorphic. For example, the Ladder of St. John Klimakos designates the internal transformation which is not mentioned in context of the Ladders in the earlier Apophthegmata⁴¹. In turn, the psychological character of Klimakos’s Ladder is different from the one in Theophanis’ Ladder. Klimakos’ Ladder is, so to speak, clinical, while the separation of modalities of experience in Theophanis’ Ladder could have been a part of the decomposition of experience in cognitivist research. However, modalities of experience are not arranged in such an orderly manner. If the prayer (line 1) in question is indeed the PH⁴², the latter is known to produce messy and irregular experiences of thought and imagination with bursts of feeling and seemingly random instances of unitive consciousness, which do not accord with the neat geometrical beauty of the poem. The poem stands out from the rest of *Philokalia* in its nearly abstract quality, which suggests that the poem is either a mere literary composition, or embodies an uncommon form of experience which we do not know about.

35 For the diffusion of Ladders in the Mediterranean in Greek, Egyptian and Mithraic sources, see Ogawa, “Mithraic Ladder Symbols”; Foley, “Order Question”. For the ladder as a physical object in rituals in the Hekhalot texts of late antiquity see Van Uchelen, “Ethical Terminology”; for more abstract ladders of moral virtues, i.e. purification, the ladder of beauty, i.e. Eros, or the dialectical ladder of wisdom, see the three Platonic ladders mentioned by Socrates, in Dorter, “Three Disappearing Ladders”, 282.

36 For polymorphism of the ladders, see Kuntz and Kuntz, *Jacob’s Ladder*; Idel, *Ascensions*.

37 Ulansey, *The Origins*, 18; Ogawa, “Mithraic Ladder Symbols”.

38 As mentioned in Hardy, “Saint Gregory”.

39 For Jacob’s dream, see Genesis xxviii, 12.

40 St. John of the Cross, *Complete Works*. Volume 1, *Dark Night*, 432-434.

41 For Klimakos’ Ladder, see St. John Climacus, *Ladder*; for comments see Johnsén, *Reading John Climacus*.

42 Under Prayer of the Heart (PH) we need to understand a complex of methods such as “sobriety” (mindfulness), an internal repetition of the words of prayer, and a cultivation of internal stillness. The inner prayer consists of a devotional repetition of the name of Jesus or other suitable names of divinity, or of a full formula of the prayer “Lord Jesus Christ, the Son of God alive, have mercy on me, the (a) sinner”. PH is accompanied by somatic focusing in the chest, with mental motion inward, to the center of the inner space of the chest. The latter area is known in Hesychasm as the Spiritual Heart, see Špidlík, *Prayer*; Špidlík, *Spirituality*, 104-105.

The overarching “root metaphor” of the Ladder works in favor of this last proposition. In general, the metaphor indicates an ontic structure in the substratum of reference⁴³. The metaphor of the ladder was omitted in Pepper’s analysis of the epistemological function of metaphors, because of its being open-ended, theistic and not supported by scientific data⁴⁴. However, the ladder metaphor works well for psychological processes which have a stage-like development. The metaphor enables the reader to understand and predict a psychological process not available in immediate observation⁴⁵. In the structural organization of this metaphor, the processes signified by the Ladder are predicated on four main characteristics: the presence of a discrete phase or quantum conditions which are linear (homologous) within themselves; a step-like shift to the next condition; a hierarchical ordering of steps; and a teleological progression. In Patristic literature we can expect a close correspondence between the symbolism, borrowed or inherited, in the literary form, and the author’s subjective contemplative experience⁴⁶. Whether the characteristics of the metaphor pertain to the experience, or to the matrix of historical ideas, should become clear in the process of analysis⁴⁷.

Ideas in Theophanis’ Poem

Structural thematic analysis of the poem shows the diversity of sources which have been influential in the composition of the poem (Table 2).

Table 2. Structural Thematic Analysis of Ideas in Theophanis’ Poem

Theme	Complex	Source
Stratification. Travels of the soul.	Stratification and the travels of the soul are closely connected ⁴⁷ .	Stratification, travels of the soul and preparation for dying are themes belonging to various Ladders. Soul travels in steps already in the early material described Bousset, <i>Die Himmelresie der Seele</i> , later, in the Mi’rāj journey ⁴⁸ ; cf. The Nag Hammadi <i>Apocalypse of Paul</i> (see further below).
Preparation for dying.		The idea of preparation for dying can be traced back to Mithraic Ladder, Jewish, later Christian Ladders and St. John Klimakos.
Mystiques of the number ten.		Likely of Pythagorean origin. Central to an early influential Kabbalistic text <i>Sephir Yetzirah</i> . Strongly expressed by the Neoplatonizing Gnostic Monoimus the Arab; also, by Celsus (in Origen’s <i>Contra Celsum</i>) with regard to the Ophite diagram. Ten heavens are mentioned in the Nag Hammadi <i>Apocalypse of Paul</i> . The same idea in Monoimus the Arab.
Perfection compassed into a single line. Reference to the Heart.		Connects to embodiment and requires research in oral tradition.
Additional consideration: literary style of the time.		Imitates the laconic style of St. Paul.

⁴³ For root metaphors see Pepper, *World Hypotheses*; Pepper, “Root Metaphor”.

⁴⁴ For example, in St. Bonaventura’s symbolism of the universe as a Ladder with God being on top or beyond the last step, there is no possibility of establishing any structural connection between the metaphor and some kind of realistic substratum. In Kuntz and Kuntz, *Jacob’s Ladder*, 113.

⁴⁵ For metaphor in developmental psychology see Super and Harkness, “Metaphor”.

⁴⁶ Golitzin, “Theophaneia”; Lourié, “Theophaneia School”.

⁴⁷ For perspectives concerning the relationship between the structures of experience and the cultural matrix, see Katz, *Comparative Mysticism*; Forman, *Mysticism*.

⁴⁸ Collins and Fishbane, *Death*; Idel, *Ascensions*.

⁴⁹ Hämeen-Anttila, “Descent”.

Some of the ideas intrinsic to Theophanis' metaphor of the Ladder, such as the mystique of the number ten, or the final "perfection which is endless", appear to come from sources not associated with the Ladder or travels of the soul. Below, in the section entitled The Ladder and Related Ideas, I present a detailed analysis of each section of the compound. The much criticized historical critical analysis is absolutely necessary here because it helps to retrieve the reflective layer of constitution and uncover the pre-reflective experience with a stable structure. Without this analysis, it would also be impossible to understand how the poet conceptualizes introspective experience, and make inferences about how the same experience would contribute to the formation of ideas in other traditions (Tables 3 and 4, see p. 68 and 69).

The Ladder and Related Ideas

The morphology of the poem identifies it as a subtype of otherworldly journeys of the ascent and/or descent of the soul into the otherworld⁵⁰; the Ladder-like structure for those journeys is frequent but not obligatory. The Ladders serve in Christian and Jewish literature as a symbol of a structured and often narrow and restricted passage. In Theophanis' poem, the Ladder is narrow in a sense that it suggests the presence of *a very specific experience* (see below the section entitled "Purest Prayer" and Asymmetry in Introspective Experience). The specifics of experience becomes clear in comparison with Klimakos' famous Ladder. While Klimakos enumerates thirty steps equal to the thirty years of the hidden life of Christ, Theophanis stresses ten steps without any reference to Christ. The difference between the mental contents of the steps was already indicated in the section above entitled Poetic Metaphor and the Structure of Experience. The thirty steps of Klimakos' Ladder include other structures of numerical symbolism related to Trinitarian theology and the developmental stages of psychospiritual monastic life, as well as elements of literary concentric parallelism⁵¹; the steps in Theophanis' Ladder do not have numeric substructures; the only number symbolism is that of the decad. Klimakos' writing includes imaginal aspects, such as his treatment of monastic life emulating the life of angels⁵². Theophanis' laconic and concrete writing follows the literary style of the Apostle Paul. Paul's style was turned into a literary canon by St. Gregory the Theologian (fourth century C.E.), who said: "to write laconically is not to write a few syllables, but to say much in few words... I measure a poem by its contents, and not by the number of letters"⁵³. This style features clarity and plainness, hidden (implicit) character of depth and height, laconicism, ecclesiastical beauty and liveliness of the divine word. This form also implies humility⁵⁴; cf. Theophanis' claim to "utter fruitlessness" in line 71. The closeness of Theophanis' themes to those of St. Gregory is also visible in the repetitive emphasis on the need of first-person experience (of the Deity) for knowledge to occur, such as in (19), (46), (33), in resonance with a famous quotation from Gregory, "Practice is the way to knowledge"⁵⁵. Theophanis' poem demonstrates connection to early Christian sources.

Decadology and Unification

Theophanis says:

- (21) "Ten steps that strangely vivify the soul.
- (22) Ten steps that herald the soul's life...
- (27) Ten steps: a wisdom born of God.
- (28) Ten steps: fruit of all books.
- (29) Ten steps that point towards perfection.

⁵⁰ Culianu, *Psychanodia*, 10-11.

⁵¹ For concentric parallelism, see Lawrence, "Three-Fold Structure", and most comprehensively, Douglas, *Thinking in Circles*.

⁵² For more on "angelic life" in Klimakos, see Zecher, *Angelic Life*.

⁵³ Gregory the Theologian, Epistle 3, 769, as mentioned in Ullmann and Cox, *Gregory*, 287, footnote 1.

⁵⁴ Bezarashvili, "Michael Psellos".

⁵⁵ Gregory the New Theologian, as mentioned in Ullmann and Cox, *Gregory*, v.

- (30) Ten steps that lead one up to heaven.
 (31) Ten steps through which man knows God...
 (36) This ten-graced Ladder is the best of masters.

The number ten figures in the pre-Platonic cosmology as one of the perfect numbers operating in the cosmic harmony of rational proportions⁵⁶. In the numeric symbolism of antiquity, the numbers often become synonymous with ideas,⁵⁷ whereby ten indicates the unification of multiplicity in the central monad⁵⁸. Unlike Theophrastus' Ladder, in which the steps are clearly identified and numbered, in ancient Greek thought the stages of the soul's return to unity are hard to count and define sequentially⁵⁹; ten appears as a cosmological, not intra-psychic, principle. A closer connection between numbers and psychological states appears e.g. in Mithraism, which had absorbed Greek ideas merged⁶⁰; in this manner, the Mithraic journey of the soul through the seven planets (with the eighth step on top) possibly inspired a similar idea in non-orthodox Christian groups influenced by Greek thought, whereby a journey through the seven planets might have turned into a journey through ten spheres with the goal of the soul reaching God while still alive, *translatio ad deos*⁶¹. Such merging might have taken place in a classic account of the Gnostic initiatory soul's ascent in the Ophite diagram⁶². Similarly, a ten-stage ascent is found in the Nag Hammadi *Apocalypse of Paul*⁶³: it sends Paul traveling to the tenth heaven⁶⁴, which is, notably, not a living place of the righteous but The Throne of God (i.e., a place of monadic unification with phenomenological connotations similar to the "endless perfection" in Theophrastus' poem).

The count to ten often appears in Gnostic calculations as an event of unification, that is, an emergence of the monad in a series of preceding manifestation of other numbers, which, while either in natural sequence or added to one another, generate the number ten⁶⁵. Ten is signified by the Greek letter iota, which is also tenth letter of the Byzantine Greek alphabet; iota is also the first letter of the name Jesus. This appeals to the imagination: iota-ten becomes a symbol of Jesus, who is the Alpha and Omega, i.e. the beginning and the end, of all things, i.e. a metaphysical principle of unification⁶⁶.

Hippolytus' extract from Monoimus the Arab is another non-canonical example of cosmology built around the number ten signified by iota. The iota's single line symbolizes a single stroke by which creation is made. Monoimus associates many Biblical decadological ideas with this single line, which is viewed by him both as an axis of creation and an axis of unification⁶⁷. Using the language of the Gospels, e.g. "for the whole Pleroma was pleased to reside in the Son of Man in a bodily form"⁶⁸, Monoimus avoids mentioning

⁵⁶ For an example of numbers operating in cosmic harmony, see Posidonius, a Stoic philosopher with Platonizing tendencies, as mentioned in Burkert, *Lore*, 54-6. For perfect numbers in Pythagoreanism, see Kahn, *Pythagoras*, 25; Hopper 1938, 11; for the same in Gnosticism, see Kalvesmaki, *Theology*, 53-54. Valentinus' disciple Ptolemy (late second century) shows special appreciation for the number ten. Delatte (*apud* Culiianu, *Psychanodia*, 27) assigns the celestial eschatology of to an uninterrupted Pythagorean underground tradition (see Platner, *Topographical Dictionary*). According to Huffman, the cosmos of Pythagoreans (ca. fourth century B.C.E) included ten orbits belonging to ten divine celestial bodies (Huffman, "Philolaus").

⁵⁷ Kahn, *Pythagoras*, 81.

⁵⁸ For the number ten as a symbol of unification in Pythagoreanism, see Hopper, *Medieval Number Symbolism*, 44-45. For the number ten in early Christian writers, see *ibid.*, 69-70.

⁵⁹ For the stages of the soul in Neoplatonism, see Bennett, *Syzygy*; Dodds, *Proclus*, 313ff.

⁶⁰ Culiianu, *Psychanodia*.

⁶¹ Bianchi and Vermaseren, *La soteriologia*. The concept of *theosis*, which is the soul's union with God, in Eastern Orthodox theology is an experiential condition: Kharlamov, "Introduction"; Lossky, *The Mystical Theology*; Pelikan, *Christian Tradition*; Popov, "Idea", 74-75.

⁶² The Ophite diagram is found in Origen, *Contra Celsum*, vi, 24-38. For the research of ritual in Ophite diagram, see Welburn, "Reconstructing the Ophite Diagram"; DeConick, "The Road".

⁶³ MacRae, Murdock and Parrot, "The Apocalypse of Paul".

⁶⁴ Tabor, *Things*, 118-119.

⁶⁵ In the Valentinian *Gospel of Truth*, a multiplicity of decads resolves into unity. See Kalvesmaki, *Theology*, 56-57.

⁶⁶ The Greek iota is written as a vertical stroke, cf. lines 10-12 of Theophrastus' poem. The *Revelation to Marcus* (in Irenaeus of Lyon) symbolizes Jesus as iota, i.e., unification.

⁶⁷ Foerster and Wilson, *Gnosis*, 249.

⁶⁸ Col 2:9; same in Matthew 5.18; also Luke 16.17.

Jesus directly but the symbolic language he uses points to the Jesus of the Gospels. Analogously, the lines 10 – 12 of Theophanis' poem state:

(10) "Last comes -- a step that has no limit

(11) Though compassed in a single line --

(12) Perfection that is endless.

Jesus emerges in the poem as the tenth step of the Ladder, symbolized by single line in which all manifestations unite in the limitless monadic perfection. This is a common theme of both fragments, expressed by similar language. Theophanis might have been familiar with Hippolytus; he might have also encountered Monoimus' ideas via reading Clement of Alexandria, the first in the line of famous Alexandrian theologians, who argued extensively against Monoimus. For Clement, Christianity was gnosis, i.e. true knowledge, in the full and absolute meaning of the world [as distinct from Gnosticism used as an umbrella name for various syncretic cults which flourished on the territory of the border between the Greco-Roman world and the East between the last century B.C.E. and during the first three centuries C.E.]. Relevantly for our discussion, both Monoimus and Clement of Alexandria emphasized direct, immediate i.e. introspective, self-knowledge and knowledge of God. Clement says: "if the Gnostics were offered a choice between the salvation of the soul and the knowledge of God, supposing that these two things were distinct (although they are identical), he would chose knowledge of God"⁶⁹. Shmeman, one of the leading traditional Eastern Orthodox Christian historians, further says: "Gnosis is the vision of God face to face, the mystical illumination of His truth; the Christian prefers this knowledge of God to all else and sees the purpose of his whole life in it"⁷⁰.

Monoimus' fragment ends with a passionate call to seek God by means of introspective self-examination: "Omitting to seek after God, and creation, and things similar to these, seek for Him from thyself, and learn who it is that absolutely appropriates all things in thee, and says, "My God, my mind, my understanding, my soul, my body."⁷¹ And learn from whence are sorrow, and joy, and love, and hatred, and involuntary wakefulness, and involuntary drowsiness, and involuntary anger, and involuntary affection; and if you accurately investigate these, you will discover Himself, unity and plurality, in thyself, according to that title⁷², and that He finds the outlet to be from thyself"⁷³; or, in another translation: "you will find yourself within yourself, being both one and many like that stroke, and will find the outcome of yourself"⁷⁴. This call to experience resonates with Theophanis' fragment. When we consider all the above-mentioned sources together, there emerges not only a vision of a religious tradition gnoseologically rooted in introspection, but of an oral tradition with a specific form of introspective practice which possibly flourished in Greco-Christian and Gnostic thought long before the habit of writing down systematic instructions to inner practice was shaped in the written tradition.

An Anthropological-Phenomenological Bridge to Experience: "Purest Prayer"

Two themes, the theme of "experience teaches one, not words" (line 19, also repeated in line 33 and 46) and the theme of the heart in "...your heart can inwardly experience it [the Ladder]" (line 33) are typical for the actual contemplative practice of the PH. Instructions to prayer are have been passed traditionally

⁶⁹ Clement of Alexandria, as mentioned in Shmeman, *Historical Road*, 51.

⁷⁰ Shmeman, *Historical Road*, 51.

⁷¹ The five elements in Monoimus's self-analysis suggest a hierarchical order of categories which is interpreted by Kalvesmaki in *Theology*, 92, as a connection with the anthropology of the number five and the Pentateuch. Even though the general character of the text here is clearly self-referencing, there is not enough material to judge whether this ordering bears a connection with introspective contemplation, or whether it is purely analytic.

⁷² For the mysticism of serif in iota, see Kalvesmaki, *Theology*, 88.

⁷³ Salmon in <http://encyclopedia.thefreedictionary.com/Monoimos>. I am quoting it exactly, with vacillation in the second person pronoun.

⁷⁴ Monoimus in Foerster and Wilson, *Gnosis*, 248-250.

from the teacher to disciple, but most of the contemporary practitioners begin the practice on their own. All respondents in the in vivo trials resonated with the poem, but not all of them displayed the exact ladder-like phenomenological structure of experience. Below, I describe the conditions under which, according to the accounts of the practitioners of the PH, the ladder-like experience takes place.

The temporal extension of Theophanis' experience is contained within the two delimiters, the "purest prayer (line 1)⁷⁵ from which there comes the warmth of heart" (line 2), and the absorption in "perfection which is endless" (line 12). "Purest prayer" must be differentiated from the Prayer of the Heart in general. For example, the tenth century fragment "Three Methods of Attention and Prayer"⁷⁶ and the fifth century treatise "On Watchfulness and Holiness"⁷⁷ in *Philokalia* also refer to introspective experience in the PH, but these descriptions differ from what is described by Theophanis. Experience in the practice of the PH generally develops from vocal prayer, to mental prayer, the descent of focus into the chest, the switch from the verbal prayer to stillness and cultivation of presence resolving into "glorious nothingness"⁷⁸, without the stratification noted by Theophanis.

"Purest prayer" and Asymmetry in Introspective Experience

A traditional authority in introspective prayer, St. Isaac the Syrian, indicates that internal prayer progresses from invocation to abidance in a spiritual state that is beyond the activities of the mind⁷⁹. For this state, he uses the term "pure prayer", by which he means a state in which usual mental speech is suspended, the sense of free will ceases to be, and only "a certain divine vision remains and the mind does not pray a prayer. ... Intellect enters into spiritual movements..."⁸⁰. The prayer then happens on its own accord, without a sense of individual agency, in a state which Ware describes as "the continuous action of Another in me.... no longer a prayer to Jesus but the prayer of Jesus himself... 'self-acting' prayer"⁸¹. This state is followed by various internal manifestations, in which "we experience and *feel* the activity of the Spirit directly and immediately"⁸². Two crucial factors in attaining this state are a correct somatic attentional focus⁸³ which causes the inward absorption of attention, and self-referencing words of the PH; without absorption or self-referencing the process doesn't deepen and the pure prayer doesn't emerge. The condition of "purest prayer" is what causes the ordering of experience; unless pure prayer is reached, the mind wanders, the current of internal impressions will be chaotic, and the ladder-like organization of internal experience doesn't show up.

The accounts of the practitioners show that self-referencing in the prayer directs attention to the body, i.e. brings out somatic self-awareness⁸⁴. The egological awareness of the body-self associated with the chest is a necessary condition for the emergence of the ladder-like experience (Fig. 2, C).

⁷⁵ I thank Metropolitan Nikitas (Lulias) for pointing to the fact that Theophanis refers not simply to the Prayer of the Heart, but to the "purest prayer", and also for the insight that the poem may have a secret code. In this case, the iota indicating Jesus.

⁷⁶ This treatise is ascribed to St. Simeon the New Theologian.

⁷⁷ St. Hesychios the Priest, "On Watchfulness".

⁷⁸ For the developmental stages of prayer see Chirban, "Developmental Stages"; Dionysios cited by Chirban, "Developmental Stages", 307.

⁷⁹ St. Isaac, *The Ascetical Homilies*, 115-124.

⁸⁰ *Ibid.*, 116. For an example of this switch of agency, see a remarkable passage in Ware, *Power*, 2, in which he summarizes the quotations from the New Testament about "God within" taking over the prayer.

⁸¹ Ware, "Introduction", 19.

⁸² *Ibid.*, 3.

⁸³ For more on correct focusing, see St. Simeon the New Theologian, "Three Methods", 70-71; Ware, *Power*, 18.

⁸⁴ Benedetti et al., "Mind Operational Semantics", 2010; Hampe and Grady, "From Perception to Meaning"; Louwerse and Jeuniaux, "The Linguistic and Embodied Nature"; Talmy, *Toward a Cognitive Semantics*. Volume 1, *Concept*, and Volume 2, *Typology*.

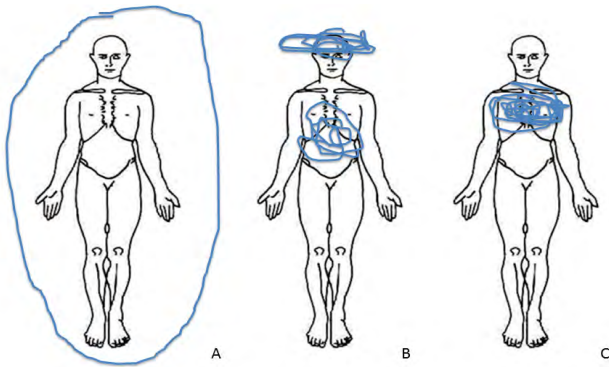


Figure 2. Configurations of somatic self-awareness.

The attentional strategies of practicing focus attention in the interiority of the chest⁸⁵; this intentional focus becomes automatic after the PH shifts to pure prayer. If in the beginning of practicing the PH, accounts of practitioners show self-awareness on the spectrum identified by Zahavi as minimal and maximal self-awareness⁸⁶, by the time of the “pure prayer” self-awareness is further intensified, is somatic, and is condensed. Among the three kinds of configurations of self-awareness which we observed in the participants and termed non-egological or distributed (Fig. 2, A), egological distributed (Fig. 2, B), or egological condensed (Fig. 2, C), the ladder is associated only with the condition in which self-awareness is condensed in the chest (Fig 2, C). The shift to “pure prayer” also involves an emerging sense of presence.

Multiple phenomenological investigations have demonstrated that “presence” is *de facto* a refined felt sense of embodiment, a hyletic (sensory) impression related to the materiality (tactility or density, or in cognitive terms, a haptic component of the body-sense) and co-constituting the sense of the sacred⁸⁷. These hyletic impressions in PH shape the matrix of gradually decreasing density which creates the continuity uniting the steps of the Ladder (Fig 3.)

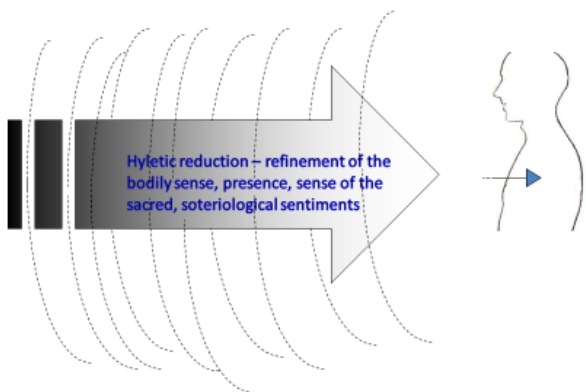


Figure 3. A gradual “thinning out” of hyletic sense-data in the process of absorption in the PH. As a sense-datum in the somatic sense of the self, it serves as an organizing matrix for the Ladder.

⁸⁵ For an example of attentional strategy focusing attention in the chest, see St. Simeon the New Theologian, “Three Methods”, 72: “Rest your beard on your chest...and search inside yourself with your intellect so as to find the place of the heart, where all the powers of the soul reside”.

⁸⁶ According to Zahavi, *Subjectivity*, minimal self-awareness is a natural self-awareness in pre-reflective experience, and maximal self-awareness is the condition in which self is brought into awareness reflectively; the intensity of self-awareness in two conditions differs. For more on the distribution of the center of self-awareness in the body, see Spiegelberg, “On the Motility”.

⁸⁷ For more on presence, see Henry, *Material Phenomenology*; Louchakova, “Ontopoiesis and Union”; Louchakova, “Reconstitution”. For embodiment of the sense of the sacred, see Ales Bello, “Husserlian Approach”; Ales Bello & Calcagno, “Sense”.

The accounts of participants show a major asymmetry in the process between the left and the right side of the body⁸⁸. On the left side, experience sustains an ordinary character of absorption, with some mental imagery and diffusion of the sense of self-awareness as attention moves inward. The ladder-like organization of experience appears only on the right side, where the sense of self extends inward in a condensed manner, like a root, directly to the introspectively perceived center of the chest (Fig. 3 and 4).

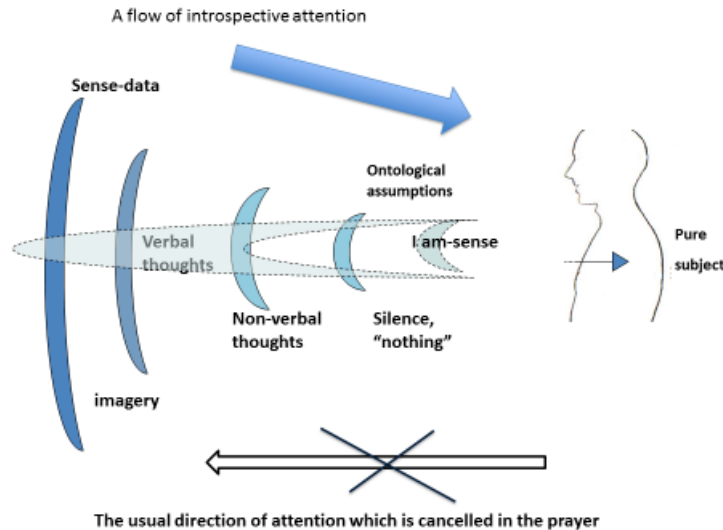


Figure 4. Constitution of the introspective somatic self-awareness in the process of the “purest” Prayer of the Heart on the right side of the chest.

This inward extension of the condensed hyletic sense of self is what organizes the sequencing of internal impressions; those, remarkably, emerge in a step-by-step progression, exactly as described by Theophanis⁸⁹. Not all the layers appear in one single session, as the mind may become “stationed” in a single condition before the next shift, but the general tendency is very clear.

Finally, the sense of self becomes absorbed in the perceived center of the chest, with an increase in the sense of internal expanse paradoxically combined with the sharpened absorptive focus. The practitioners usually interpret this internal landscape along the lines of one’s belief system⁹⁰. The sense of the sacred at the core of the chest appears regardless of the personal structure of belief⁹¹.

Above we’ve shown the diachronic stability, from Theophanis to modern practitioners, and the synchronic stability, among practitioners, of a distinct phenomenological structure. As against a view on introspection as a disparate phenomenon⁹², we’ve demonstrated that introspection can have stable structure in the presence of the organizing matrix related to embodiment, i.e. spatiality, engagement of the body-schema, and hyletic component of self-awareness. The asymmetry in phenomenology of introspection may have further interesting connections to the ancient arithmetic, such as in the Gnostic version of Neopythagorean cosmology in which the decad involves finger calculus and thereby switches the

⁸⁸ Similarly, the Indian saint Sri Ramana Maharshi, *Words of Grace*, termed the sense of self on the right side of the chest “*ahamsphurana*” (Sanskrit, ‘the radiance of the I’), and used this somatic impression as a platform for his method of religious introspection.

⁸⁹ For more details on the process of absorption in the PH, see Louchakova, “Ontopoiesis and Union”.

⁹⁰ For the spatial organization of impressions in introspection, i.e. internal “landscape”, see Louchakova-Schwartz, “Self and World”. For the constitutive influences of belief see Nescolarde-Selva and Usó-Doménech, “Topological Structures”.

⁹¹ For the invariability of religious sense to consciousness, see Ales Bello, “Husserlian Approach.”

⁹² For the randomness of introspection, see the seminal paper by Nisbett and Wilson, “Telling More than We Can Know”. For critical reassessment of this, see Froese, “Interactively Guided Introspection”; Jack, “Introspection”; Pasquali, Timmermans and Cleeremans, “Know Thyself”; Petitmengin et al., “Gap”.

count between the left and the right side of the body each time the count reaches the tenth step⁹³. A possible impact of such switch on introspective states requires further research.

Agency

In phenomenology of introspection in live subjects, the shift to the “pure prayer” happens in a context of the relationship with a deity posited within, with reallocation of the sense of agency from a praying individual to the deity⁹⁴. In the guided PH (in quasi- experiment), in which the inter-subjectivity was divided between the external other and introspective Other, same reallocation of agency takes place, and the same structure of stratified, asymmetrical experience showed up.

The Heart

Both non-canonic and canonic Christian literature refers to the heart as a locus of the divine⁹⁵. In line 33, Theophanis promises that “Your heart will inwardly experience it [i.e. the Ladder]”. The term “heart” is used in the textual evidence in two senses, as a reference to the internal organ on the left side of the body, and as a signifier of a phenomenological core of the embodied self-awareness and an embodied correlate of pure subjectivity⁹⁶. The compiler of *Philokalia*, Nikodemos of the Holy Mountain, clarifies the confusion between the physical heart and the perceived center of the chest, stressing the importance of a “para-natural” or “super-natural” center, i.e. what is given in perception⁹⁷. Theophanis’ “perfection which is endless” phenomenologically corresponds with the absorption of the mind in this center⁹⁸. In our study of live subjects, this core is accessible for attention through the right and left sides of the body, as well as through the center of the chest, but the stratification in the process of absorption appears only on the right side.

The Orthodox idea of Spiritual Heart as a junction between human being and God is similar to the Gnostic cosmological function of iota as a bridge between Man (the ontological ground of creation) and Son of Man (manifestation)⁹⁹. This inspires further exploration of possible commonalities of introspective experience in Christian and Gnostic contexts.

Attentional Strategies of Theophanis the Monk and Monoimus the Arab

Like Theophanis, Monoimus the Arab stresses the need of specific introspective experience; however, on the basis of the extract alone, it is impossible to say what kind of experience he refers to. The analysis of shared themes between two authors (Table 3) helps to identify the leading commonality between Monoimus’ introspection and Theophanis’ introspection, which is the shift in the sense of agency like the one in “purest prayer”.

⁹³ Kalvesmaki, *Theology* 2013, 80; also, the body decadology in *Sefer Yetzirah*.

⁹⁴ For more on the structuring of the introspective intersubjectivity, see Louchakova, “Ontopoiesis”.

⁹⁵ For the knowledge of The Farther in the heart in The Valentinian Gnosis, see Kalvesmaki, *Theology*, 30. For the Spiritual Heart in Christian mysticism see St. Nicodemus, *Handbook*, 154-155; For the phenomenology of experience of the Spiritual Heart see Louchakova, “Ontopoiesis”; Louchakova, “Spiritual Heart”.

⁹⁶ On the embodied constitution of transcendental subjectivity, see Henry, *Material Phenomenology*; Tito, *Logic*.

⁹⁷ St. Nicodemus, *Handbook*, 154-155.

⁹⁸ Louchakova, “Ontopoiesis”; Louchakova, “Spiritual Heart”.

⁹⁹ For heart as a junction between human being and God, see Špidlík, *Spirituality*, 104-105. For cosmological function of iota in Monoimus see Kalvesmaki, *Theology*. For the phenomenology of embodiment in PH, see Depraz, “Pratiquer la Réduction”, 87.

Table 3. References to Introspective Experience in Monoimus' Fragment in comparison with Theophanis' poem

Monoimus' fragment	Correlation with Theophanis' poem	Correlation with experience in live subjects
"Omitting to seek after God, and creation, and things similar to these, seek for Him from thyself..."	General introspective orientation of the traditional Prayer of the Heart.	Turning attention inward, onto and into the egological somatic self-awareness.
"...[L]earn who it is that absolutely appropriates all things in thee, and says, "My God, my mind, my understanding, my soul, my body." And learn from whence are sorrow, and joy, and love, and hatred, and involuntary wakefulness, and involuntary drowsiness, and involuntary anger, and involuntary affection..." [Stratification of experience in descending layers] "... He finds the outlet to be from thyself."	Purest prayer, with its phenomenology of self-acting prayer. Ladder-like stratification.	Sense of experience belonging to internal Other.
"...[Y]ou will discover Himself, unity and plurality, in thyself, according to that tittle...", whereby tittle is a reference to the stroke of iota.	(10) "Last comes – a step that has no limit, (11) Though compassed in a single line – (12) Perfection that is endless", whereby the "single line" is a reference to the line of iota.	When the introspection culminates in full absorption in the core of the chest, participants feel as if absorbed into a "point infinitely extending inward"(from a report). I.e., the simile of a line.

The correlations in Table 3 suggest that Monoimus also introspected into the embodied egological self-awareness in the chest, which might have been a predecessor of the fully developed Orthodox PH.

Both in the accounts of practitioners, and in Monoimus' fragment, the internal Other who appropriates all things in the self, i.e. a sense of disowned intentionality, appears predictably in response to the mental motion by which the introspective absorbing divests itself from mental qualities.

Reading mystical theology through phenomenological lenses¹⁰⁰, we see the same mental motion in *apophasis* and in the Gnostic ideal of *kenosis*, emptying oneself. Another group of practitioners reported experiences which resonate more with the mental motion of absorption which culminates in the Christian ideal of *theosis*, with the corresponding cataphatic theology of Divine Names. Both mental modes emerge in the introspective reversal (Fig. 5) of attention in the prayer, in which the mind can either become absorbed in its own origin (as in Theophanis), or can divest itself from its qualities, negating them till the awareness has no contents (as in Monoimus)¹⁰¹. In its asymmetry and hierarchical constitution of the internal landscape, egological introspection is spatial, and phenomenological spatiality, especially in the case of asymmetry, contributes to the formation of abstract thought.¹⁰² The correlations between the ladder-like structure of introspection and selective religious ideas are indicated in Table 4.

¹⁰⁰ For the phenomenological analysis of the mental disposition in generation of mystical philosophy, see Louchakova, "Seal"; Louchakova-Schwartz, "Phenomenological Approach".

¹⁰¹ Further connections can be established between the modes of introspection and religious ideas, such as e.g. for yoga as an absorptive mode, vs. Vedanta as a mode of negation (cf. Lakṣmidhāra, "Advaita"; or for the connection between the egological mode of self-awareness and the Vedantic ideal of Brahman-self, or non-egological awareness and the Buddhist concepts of no-self, etc.

¹⁰² Gattis, Spatial Schemas. For arguments on whether theology can emerge out of experience, see Webb, "Religious Experience".

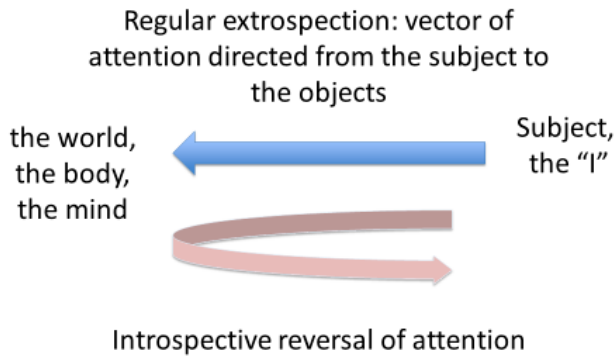


Figure 5. Introspective absorption of attention

Table 4. Forms of Embodied Introspective Transcendence and Corresponding Religious Ideas and Psychological Changes.

Form of Introspective Experience	Religious Ideas	Psychological Changes
Shifts between the stratified organized layers of introspective experience.	Idea of a stages in spiritual ascent or descent (see Table 2).	Gradual reconstitution of character. ¹⁰²
Gradual “thinning out” of haptic perception and an increase of the sense of internal space.	Idea of ascent to heaven. The concept of subtle bodies in Hinduism.	Gradual integration of the dissociative identities and “split-off” aspects of the self (unpublished observations).
Flip-flop of identity and non-spatial, non-symbolic consciousness at the core.	Idea of the Spiritual Heart in Hesychasm; ideas such as <i>Atman is Brahman</i> .	Loosening of obsessive mental habits, positive impact on the posttraumatic stress disorder (Author’s observations, unpublished).

Conclusions, and Back to Cognitive Science

Theophanis’ text helped us to identify and describe a specific introspective experience with a temporal-spatial stratification of mental faculties associated with the right side of the chest. This is a form of experience previously unnoticed by researchers. This experience appears in conjunction with the introspective shift in agency in internal prayer. Besides the historical considerations above, a conclusion can be made that embodied introspection can have phenomenologically stable spatio-temporal structures which can co-constitute religious ideatio¹⁰⁴. On a cognitive level, specific attentional strategy, such as the one involved in the Prayer of the Heart, can also be a factor supporting religious ideation¹⁰⁵. Because of the presence of this identifiable structure, this form of introspection is reproducible, generalizable, and can be researched scientifically¹⁰⁶.

Novel approaches such as neural computing and human neuroscience, and brain chaos, suggest that mental states can be correlated directly with brain states; these approaches depend on the phenomenology of experience¹⁰⁷. The spatio-temporal organization of mental experience can be directly correlated with the patterns

¹⁰³ Louchakova, “Ontopoiesis”; Louchakova, “Reconstitution”.

¹⁰⁴ For the generative analysis, see Steinbock, “Generativity”.

¹⁰⁵ For the role of attention in cognitive formation of religious beliefs, see Chasteen, Burdzy and Pratt, “Thinking of God”.

¹⁰⁶ For a perspective on scientific research of neurocorrelation in a similar situation with shifts in experience, see Bob and Louchakova, “States”.

¹⁰⁷ Dulany, “What Should Be the Roles?”; Josipovic, “Neural Correlates”; Lutz and Thompson, “Neurophenomenology”; Manna et al., “Neural Correlates”. For the complex informational relationship in the subjective dimension of experience which can be mapped onto the brain without the intermediacy of a computer metaphor, see Oizumi, Albantakis, and Tononi, “From the Phenomenology to the Mechanisms”; Lagzi and Rotter, “Markov Model”.

in spatio-temporal activity of the brain¹⁰⁸. The stratification of experience such as the ladder-like shifts can be linked to brain chaos¹⁰⁹, or measures of the nested fractal organization of non-linear brain patterns¹¹⁰.

Non-linear brain activation patterns have been linked to the dynamics of large-scale neuronal networks¹¹¹, including both networks with finite size and global adaptations of brain architecture¹¹². It has been reported that such adaptations also have layered temporal profiles linked to hierarchical feedback modules¹¹³. In the insula, which connects subjective emotional states to the interoception¹¹⁴, the modules can underlie the phenomenology of the continuous sense of self organizing the shifts in internal impressions in Theophanis' introspective experience.

In Theophanis' Ladder, mental states function as vectors predicting the emergence of the next state¹¹⁵, whereby the quanta of states in the ladder may be described through a quantum cognitive model¹¹⁶. Asymmetry may isomorphically mirror the geometry of space in neuronal populations¹¹⁷. The metaphor of the ladders conveys the paradoxical images of horizontal discreteness and vertical linearity¹¹⁸, which, however, work very well toward visioning the functioning of the brain. The resolution of the Ladder into a single line of endless perfection resonates with the "least effort" agenda of the brain¹¹⁹. Realized through a series of shifts in order and disorder in the transition from complexity to a determinate condition, the Ladder presents a special case of deterministic tendencies in cognitive aspects of chaos¹²⁰.

Even briefly outlined, these perspectives of the direct neurocorrelation of the phenomenological structure of introspection with the intrinsic functional architecture of the brain and its computational organization¹²¹ show that introspection with religious contexts, found in texts of antiquity, presents unique possibilities for scientific research¹²². Further studies of textual evidence are necessary to bring the phenomenological mapping of religious introspection to completion.

Acknowledgements: This study was supported by the grants from the Zimmer and Spitzer Family Foundations and by faculty mini-grants (2004-2011) from the Institute of Transpersonal Psychology, and by a research grant from Sofia University.

108 Fingelkurts, Fingelkurts, and Neves, "Natural World Physical, Brain Operational, and Mind Phenomenal Space-Time".

109 Bob and Louchakova, "States".

110 For more on the correlations between experience and non-linear network dynamics, see Di Leva et al. "Fractals", 2013; Ibáñez-Molina and Iglesias-Parro, "Fractal Characterization"; Noda et al., "Graph Structure"; Pereda, Quiroga and Bhattacharya, "Nonlinear Multivariate Analysis"; Sporns, "Network Analysis".

111 For the dynamics of large scale networks, see Block, "Two Neural Correlates"; Block, Flanagan, and Güzeldere, *Nature*; Freeman, *Societies*; Dehaene and Christen, *Characterizing*; Dehaene and Dehaene-Lambertz, *Apprendre*.

112 For the networks of finite size see Lagzi and Rotter, "A Markov Model". For global adaptations of brain functional architecture, see Freeman, *Neurodynamics*; Freeman, *Imaging Brain Function*; Raffone and Pantani, "Global Workspace Model". For more on the correlation between the phase shifts in fMRI or EEG and subjectively experienced cognitive events, see Barentsen et al., "An Investigation of Brain Processes Supporting Meditation"; Naruse et al., "Statistical Method"; Schwab et al., Time-Course; Luciani et al., "Neural Correlate"; Brockmeier et al., "Spatial Patterns"; Panagiotides et al., "Behavioral States". For fMRI, see Jang et al., "Increased Default Mode".

113 Xu and Lan, "Hierarchical Feedback Modules". For modularity, see Stanley et al., "Changes"; in cognition, see Barrett and Kurzban, "Modularity".

114 For the links between cortex, insula and limbic system, see Dijkerman and de Haan, "Somatosensory Processes"; Iacoboni and Lenzi, "Mirror Neurons"; Taylor, Seminowicz and Davis, "Two Systems". For connections between subjective emotional states and interoception see Terasawa, Fukushima and Umeda, "How Does Interoceptive Awareness Interact?"; Wiebking et al., "Interoception".

115 Cf. Stewart and Eliasmith, "Realistic Neurons".

116 For a quantum model in psychology, see Pothos and Busemeyer, "Quantum Principles". For a quantum cognitive model, see Wang et al., "Potential".

117 Cf. Sereno and Lehky, "Population".

118 Dorter, *Three Disappearing Ladders*, 294.

119 For example, memory retrieval decreases the system entropy; see Capolupo, Freeman, and Vitiello, "Dissipation". For the least effort agenda, see Losada, D'Adamo, and Fuentes; Buzsáki, *Rhythms of the Brain*.

120 Cf. Aiello, "Cognitive Aspects of Chaos in Random Networks".

121 Cf. Gorgolewski et al., "Correspondence"; Slagter, Davidson and Lutz, "Mental Training".

122 Fingelkurts and Fingelkurts, "Is Our Brain Hardwired?".

References

- Aiello, Gaetano L. "Cognitive Aspects of Chaos in Random Networks." *Nonlinear Dynamics Psychology and Life Sciences*, 16:1 (2012), 23–35.
- Alderson-Day, Ben, and Charles Fernyhough. "Relations among Questionnaire and Experience Sampling Measures of Inner Speech: A Smartphone App Study." *Frontiers of Psychology* 6:517 (2015). doi:10.3389/fpsyg.2015.00517.
- Ales Bello, Angela. "The Husserlian Approach to Religion." In Angela Ales Bello, *The Divine in Husserl and Other Explorations*, edited by A.-T. Tymieniecka, Analecta Husserliana 98.
- Ales Bello, Angela. *The Divine in Husserl and Other Explorations*, edited by A.-T. Tymieniecka, Analecta Husserliana 98, 3–23. Dordrecht: Springer, 2009.
- Ales Bello, Angela, and Antonio Calcagno. *The Sense of Things: Toward a Phenomenological Realism*. Analecta Husserliana 118. Cham: Springer, 2015.
- Alexander, Hieromonk [Alexander Golitzin]. "Theophaneia: Forum on the Jewish Roots of Orthodox Spirituality." In *The Theophaneia School: Jewish Roots of Eastern Christian Mysticism, Scrinium, Revue de Patrologie, d'Hagiographie Critique et d'Histoire Ecclésiastique*, 5:3, edited by B. Lourié and A. Orlov, xvii–xx. Saint Petersburg: Byzantinorossica, 2007.
- Allo, Patrick. "The Many Faces of Closure and Introspection: An Interactive Perspective." *Journal of Philosophical Logic* 42:1, 2013, 91–124. doi:10.1007/s10992-011-9214-2.
- Alston, William P. *Perceiving God: The Epistemology of Religious Experience*. Ithaca: Cornell University Press, 1991.
- Atran, Scott. *In gods we trust: The evolutionary landscape of religion*. Oxford: Oxford University Press, 2002.
- Baerentsen, Klaus B., et al. [Baerentsen, Klaus B., Hans Stødkilde-Jørgensen, Bo Sommerlund, Tue Hartmann, Johannes Damsgaard-Madsen, Mark Fosnæs, and Anders C. Green.] "An Investigation of Brain Processes Supporting Meditation." *Cognitive Processing* 11:1 (2010), 57–84. doi:10.1007/s10339-009-0342-3.
- Barrett, H. Clark, and Robert Kurzban. "Modularity in Cognition: Framing the Debate." *Psychological Review* 113:3 (2006), 628–47.
- Barrett, Justin L. *Born believers: the science of children's religious belief*. New York: Free Press, 2012.
- Benedetti, Giulio, et al. [Benedetti, Giulio, Giorgio Marchetti, Alexander A. Fingelkurts, and Andrew A. Fingelkurts.] "Mind Operational Semantics and Brain Operational Architectonics: A Putative Correspondence." *The Open Neuroimaging Journal* 4 (2010), 53–69.
- Bennett, David. "Syzygy of the Soul in the *Enneads*." M.A. thesis, Dominican School of Philosophy and Theology, Graduate Theological Union, Berkeley, 2002.
- Bezarashvili, Ketevan. "Michael Psellos: The Interpreter of the Style of Gregory the Theologian and the New Aspects of the Concept of Rhetorical Theories." *Studia Patristica*, XLVIII, 233–40. Leuven: Peeters Publishers, 2010.
- Bianchi, Ugo, and Maarten J. Vermaseren, eds. *La soteriologia dei culti orientali nell'Impero romano: Atti del Colloquio internazionale sulla soteriologia dei culti orientali nell'Impero romano, Roma, 24–28 settembre 1979*. Études Préliminaires aux Religions Orientales dans l'Empire Romain. Leiden: Brill, 1982.
- Block, Ned J. "Two Neural Correlates of Consciousness." *Trends in Cognitive Sciences* 9:2 (2005), 46–52. doi:10.1016/j.tics.2004.12.006.
- Block, Ned J., Owen J. Flanagan, and Güven Güzeldere. *The Nature of Consciousness: Philosophical Debates*. Cambridge, Mass.: MIT Press, 1997.
- Bob, Petr and Louchakova, Olga. "Dissociative States in Dreams and Brain Chaos: Implications for Creative Awareness". *Frontiers in Psychology*, 6 (07 September 2015). doi:10.3389/fpsyg.2015.01353
- Boyer, Pascal. *Cognitive Aspects of Religious Symbolism*. Cambridge, New York: Cambridge University Press, 1983.
- Bloom, Paul. *Just Babies: The Origins of Good and Evil*. New York: Crown, 2013.
- Brockmeier, Austin J., et al. [Brockmeier, Austin J., Mehrnaz Kh. Hazrati, Walter J. Freeman, Lin Li, and José C. Príncipe.] "Locating Spatial Patterns of Waveforms during Sensory Perception in Scalp EEG." In *Conference Proceedings: IEEE Engineering in Medicine and Biology Society* (2012), 2531–34. doi:10.1109/EMBC.2012.6346479.
- Bronkhorst, Johannes. "Levels of Cognition: Did Indian philosophers know something we do not?" *Asiatische Studien / Études Asiatiques*, LXVI, 2 (2012), 227–38.
- Bruce, Anthony, and Gary Ebbs. *Debating Self-Knowledge*. New York: Cambridge University Press, 2012.
- Burkert, Walter. *Lore and Science in Ancient Pythagoreanism*. Cambridge, Mass; Harvard University Press, 1972.
- Buzsáki, György. *Rhythms of the Brain*. Oxford and New York: Oxford University Press, 2006.
- Camic, Paul Marc, Jean E. Rhodes, and Lucy Yardley. *Qualitative Research in Psychology: Expanding Perspectives in Methodology and Design*. Washington, D.C.: American Psychological Association, 2003.
- Cantlis, Julie. *Calvin's Ladder: A Spiritual Theology of Ascent and Ascension*. Grand Rapids: Eerdmans, 2010.
- Capolupo, Antonio, Walter J. Freeman, and Giuseppe Vitiello. "Dissipation of 'Dark Energy' by Cortex in Knowledge Retrieval." *Physics of Life Reviews* 10:1 (2013), 85–94. doi:10.1016/j.plrev.2013.01.001.
- Chasteen, Alison L., Donna C. Burdzy, and Jay Pratt. "Thinking of God Moves Attention." *Neuropsychologia* 48:2 (2010), 627–30. doi: 10.1016/j.neuropsychologia.2009.09.029.

- Chirban John T. "Developmental stages in Eastern Orthodox Christianity". In Wilber K., J. Engler & D.P. Brown (eds.), *Transformations of Consciousness* (pp. 285- 323). Boston & London: Shambala, 1986.
- Chittick, William C. *The Self-Disclosure of God: Principles of Ibn al-'Arabi's Cosmology*. SUNY series in Islam. Albany: State University of New York Press, 1998.
- Cohen, Emma, Roger Mundry, and Sebastian Kirschner. "Religion, synchrony and cooperation." *Religion, Brain and Behavior*, 4(1), 20-30.
- Colaizzi, Paul F. *Reflection and Research in Psychology: A Phenomenological Study of Learning*. Dubuque: Kendall/Hunt, 1973.
- Collins, John J., and Michael Fishbane, eds. *Death, Ecstasy and Other Worldly Journeys*. Albany: State University of New York Press, 1995.
- Crisp, Roger. *The Oxford Handbook of the History of Ethics*. Oxford: Oxford University Press, 2013.
- Creswell, John W. and Vicki Plano Clark. *Designing and Conducting Mixed Methods Research*. Los Angeles: Sage, 2011.
- Crowe, Frederick E. *Theology of the Christian Word: A Study in History*. New York: Paulist Press, 1978.
- Culianu, Ioan P. *Psychanodia: Études Préliminaires aux Religions Orientales dans l'Empire Romain*. Leiden: Brill, 1983.
- Cutsinger, James S. "The Yoga of Hesychasm." *Parabola* 30:2 (2005), 54–62.
- Dadosky, John D. *The Structure of Religious Knowing: Encountering the Sacred in Eliade and Lonergan*. Albany: State University of New York Press, 2004.
- DeConick, April. "The Road for the Souls is through the Planets: The Mysteries of Ophians mapped. In edited by April DeConick, Gregory Shaw and John D. Turner, *Practicing Gnosis: Ritual, Magic, Theurgy and Liturgi in Nag Hammadi, Manichean and Other Ancient Literature. Essays in Honor of Birger A. Pearson*. Nag Hammadi and Manichean series, v. 85. Leiden: Brill, 2013.
- Dehaene, Stanislas, and Yves Christen, eds. *Characterizing Consciousness: From Cognition to the Clinic? Research and Perspectives in Neurosciences*. Berlin: Springer, 2011.
- Dehaene, Stanislas, ed. *Apprendre à lire: Des sciences cognitives à la salle de classe*. Sciences. Paris: Odile Jacob, 2011.
- Denzin, Norman K., and Yvonna S. Lincoln. *The Sage Handbook of Qualitative Research*. 4th ed. Thousand Oaks: Sage, 2011.
- Depraz, Natalie. "Pratiquer la Réduction; la Prière du Coeur". *Laval Théologique et Philosophique*, 59 :3 (2003), 503-519.
- Desbordes, Gaëlle, and Lobsang Tenzin Negi. "A New Era for Mind Studies: Training Investigators in Both Scientific and Contemplative Methods of Inquiry." *Frontiers in Human Neuroscience* 7 (2013). doi:10.3389/fnhum.2013.00741.
- Díaz, José-Luis. "A Narrative Method for Consciousness Research." *Frontiers in Human Neuroscience* 7 (2013). doi:10.3389/fnhum.2013.00739.
- Dijkerman, H. Chris, and Edward H. F. de Haan. "Somatosensory Processes Subservicing Perception and Action." *Behavioral and Brain Sciences* 30 (2007), 189–201. doi:10.1017/S0140525X07001392.
- Di Leva, Antonio, et al. [Di Leva, Antonio, Francisco J. Esteban, Fabio Grizzi, Włodzimierz Klonowski, and Miguel Martin-Landrove.] "Fractals in the Neurosciences, Part II: Clinical Applications and Future Perspectives." *Neuroscientist*, Dec. 20, 2013. [Epub ahead of print.] Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/24362814>. doi:10.1177/1073858413513928.
- Diuk, Carlos G., et al. [Diuk, Carlos G., D. Fernández Slezak, I. Raskovsky, M. Sigman, and G. A. Cecchi.] "A Quantitative Philology of Introspection." *Frontiers in Integrative Neuroscience* 6 (2012), 80. doi:10.3389/fnint.2012.00080.
- Dodds, E. R., ed. and trans. *Proclus: The Elements of Theology*. Oxford: Clarendon Press, 1963.
- Dorter, Kenneth. "Three Disappearing Ladders in Plato." *Philosophy and Rhetoric* 29:3 (1996), 279–299.
- Douglas, Mary. *Thinking in Circles: An Essay on Ring Composition*. Terry lecture series/ New Haven: Yale University Press, 2007.
- Dulany, Donelson E. "What Should Be the Roles of Conscious States and Brain States in Theories of Mental Activity?" *Brain, Mind, and Consciousness* 9:1 (2011), 93–112. doi:10.4103/0973-1229.77429.
- Embree, Lester. *Reflective Analysis*. www.zetabooks.com: Zeta Books, 2006.
- Feest, Ujana. "Introspection as a Method and Introspection as a Feature of Consciousness." *Inquiry: An Interdisciplinary Journal of Philosophy* 55:1 (2012), 1–16.
- Fingelkurts, Alexander A., and Andrew A. Fingelkurts. "Is Our Brain Hardwired to Produce God, or Is Our Brain Hardwired to Perceive God? A Systematic Review on the Role of the Brain in Mediating Religious Experience." *Cognitive Processing* 10:4 (2009), 293–326. doi:10.1007/s10339-009-0261-3.
- Fingelkurts, Alexander A., Andrew A. Fingelkurts, and Carlos F. H. Neves. "Natural World Physical, Brain Operational, and Mind Phenomenal Space-Time." *Physics of Life Reviews* 7:2 (2010), 195–249. doi:10.1016/j.plrev.2010.04.001.
- Flannery, Frances et al., [Flannery, Frances, Nicolae, Roddy, Colleen Shantz, and Rodney Alan Werline], Introduction. In *Experientia*, vol. 1, *Inquiry into Religious Experience in Early Judaism and Christianity*, edited by Frances Flannery, Colleen Shantz, and Rodney A. Werline, 83–104. Leiden and Boston: Brill, 2008.
- Flood, G. *The Truth Within*. Oxford, UK: Oxford University Press, 2013.
- Foerster, Werner, and R. McL. Wilson. *Gnosis: A selection of Gnostic texts*. Oxford: Clarendon Press, 1972.
- Foley, Richard. "The Order Question: Climbing the Ladder of Love in Plato's Symposium." *Ancient Philosophy* 30:1 (2010), 57–72.
- Forman, Robert K. C. *Mysticism, Mind, Consciousness*. Albany: State University of New York Press, 1999.

- Freeman, Walter J. *Imaging Brain Function with EEG: Advanced Temporal and Spatial Analysis of Electroencephalographic Signals*. New York: Springer, 2012.
- Freeman, Walter J. *Neurodynamics: An Exploration in Mesoscopic Brain Dynamics*. London: Springer, 2000.
- Freeman, Walter J. *Societies of Brains: A Study in the Neuroscience of Love and Hate*. Hillsdale: Lawrence Erlbaum, 1995.
- Frie, Roger. *Understanding Experience: Psychotherapy and Postmodernism*. London and New York: Routledge, 2003.
- Froese, Tom. "Interactively Guided Introspection Is Getting Science Closer to an Effective Consciousness Meter." *Consciousness and Cognition*, 22:2 (2013):672–76. doi:10.1016/j.concog.2013.04.004.
- Gallagher, Shaun. "Phenomenology and Experimental Design: Toward a Phenomenologically Enlightened Experimental Science." *Journal of Consciousness Studies* 10:9–10 (2003), 85–99.
- Gattis, Merideth. *Spatial Schemas and Abstract Thought*. Cambridge, Mass.: MIT Press, 2001.
- Gileadi, Avraham. *Isaiah Decoded: Ascending the Ladder to Heaven*. Escondido: Hebraeus Press, 2002.
- Giorgi, Amedeo. *Psychology as a Human Science: A Phenomenologically Based Approach*. New York and London: Harper and Row, 1970.
- Giorgi, Amedeo. *The Descriptive Phenomenological Method in Psychology: A Modified Husserlian Approach*. Pittsburgh: Duquesne University Press, 2009.
- Gonzalez, Cleotilde, and Christian Lebiere. "Cognitive architectures combine formal and heuristic approaches." *Behavioral Brain Sciences*, 36:3 (2014), 285-6. doi:10.1017/s0140525x12002956.
- Gorgolewski, Krzysztof J., et al. [Gorgolewski, Krzysztof J., Dan Lurie, Sebastian Urchs, Judy A. Kipping, R. Cameron Craddock, Michael P. Milham, Daniel S. Margulies, and Jonathan Smallwood.] "A Correspondence between Individual Differences in the Brain's Intrinsic Functional Architecture and the Content and Form of Self-Generated Thoughts." *PLoS One* 9:5 (2014), e97176. doi:10.1371/journal.pone.0097176.
- Graf, Fritz. "The Bridge and the Ladder. Narrow Passages in Late Antique Visions". In *Heavenly Realms and Earthly Realities in Late Antique Religions*, edited by R. S. Bousthan and A. Y. Reed, 19–33. Cambridge: Cambridge University Press, 2004.
- Greenwell, Bonnie. *Energies of Transformation*. Shakti River Press, 1995.
- Gurwitsch, Aron. *Phenomenology and the Theory of Science*. Northwestern University studies in phenomenology and existential philosophy. Evanston, IL: Northwestern University Press.
- Ḥā'irī Yazdī, Mahdī. *The Principles of Epistemology in Islamic Philosophy: Knowledge by Presence*. SUNY series in Islam. New York: State University of New York Press, 1992.
- Hämeen-Anttila, Jaakko. 2001. "Descent and Ascent in Islamic Myth." In *Mythology and Mythologies: Methodological Approaches to Intercultural Influences*, Melammu Symposia 2, edited by R. M. Whiting, 47–67. Helsinki: The Neo-Assyrian Text Corpus Project, 2001.
- Hampe, Beate, and Joseph E. Grady. *From Perception to Meaning: Image Schemas in Cognitive Linguistics*. Cognitive Linguistics Research 29. Berlin and New York: Mouton-de Gruyter, 2005.
- Hardy, Edward R. "Saint Gregory of Nazianzus." *Encyclopedia Britannica*, online edition. Retrieved from <http://www.britannica.com/biography/Saint-Gregory-of-Nazianzus>, 6/11/15.
- Heintz, Christophe. Cognitive History and Cultural Epidemiology. Chapter 2 in edited by L. Martin and J. Sørensen, *Past Minds: Studies in Cognitive Historiography*. London: Equinox Publishing, 2011.
- Henry, Michel. *Material Phenomenology*. New York: Fordham University Press, 2008.
- Hopper, Vincent Foster. "Medieval Number Symbolism: Its Sources, Meaning and Influence on Thought and Expression." Ph. D. dissertation, Columbia University, 1938.
- Huffman, Carl. "Philolaus." *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta. <http://plato.stanford.edu/archives/sum2012/entries/philolaus/>.
- Iacoboni, Marco, and Gian Luigi Lenzi. "Mirror Neurons, the Insula, and Empathy." *Behavioral and Brain Sciences* 25 (2002), 39–40. doi:10.1017/S0140525X02420018.
- Ibáñez-Molina, A. J., and S. Iglesias-Parro. "Fractal Characterization of Internally and Externally Generated Conscious Experiences." *Brain and Cognition* 87 (2014), 69–75. doi:10.1016/j.bandc.2014.03.002.
- Idel, Moshe. *Ascensions on High in Jewish Mysticism: Pillars, Lines, Ladders*. Budapest and New York: Central European University Press, 2005.
- Jack, Anthony Ian. "Introspection: The Tipping Point." *Consciousness and Cognition*, 22:2 (2013):670–71. doi:10.1016/j.concog.2013.03.005.
- Jang, Joon Hwang, et al. [Jang, Joon Hwan, Wi Hoon Jung, Do-Hyung Kang, Min Soo Byun, Soo Jin Kwon, Chi-Hoon Choi, and Jun Soo Kwon.] "Increased Default Mode Network Connectivity Associated with Meditation." *Neuroscience Letters* 487:3 (2011), 358–62. doi:10.1016/j.neulet.2010.10.056.
- Jensen, Jeppe Sinding. "Normative Cognition in Culture and Religion". *Journal for the Cognitive Science of Religion*, 1:1 (2013), 47–70.
- Johnsén, Henrik Rydell. *Reading John Climacus: Rhetorical Argumentation, Literary Convention and the Tradition of Monastic Formation*. Lund: Lund University Press, 2007.
- Josipovic, Zoran. "Neural Correlates of Nondual Awareness in Meditation." *Annals of the New York Academy of Sciences* 1307:1 (2013), 9–18. doi:10.1111/nyas.12261.
- Kahn, Charles H. *Pythagoras and the Pythagoreans : a brief history*. Indianapolis, IN: Hackett Pub, 2001.

- Kalvesmaki, Joel. *The Theology of Arithmetic: Number Symbolism in Platonism and Early Christianity*. Washington, D.C.: Center for Hellenic Studies, 2013.
- Katz, Steven T. *Comparative Mysticism: An Anthology of Original Sources*. Oxford and New York: Oxford University Press, 2011.
- Keil, Andreas, et al. [Keil, Andreas, Stefan Debener, Gabriele Gratton, Markus Junghöfer, Emily S. Kappenman, Steven J. Luck, Phan Luu, Gregory A. Miller, and Cindy M. Yee.] "Committee Report: Publication Guidelines and Recommendations for Studies Using Electroencephalography and Magnetoencephalography." *Psychophysiology* 51:1 (2014), 1–21. doi:10.1111/psyp.12147.
- Kharlamov, Vladimir. "Introduction." In *Theosis: Deification in Christian Theology*, vol. 2, edited by Vladimir Kharlamov, 1–41. Eugene: Pickwick, 2011.
- Kosslyn, Stephen M. "Mental Imagery." In *Visual Cognition: An Invitation to Cognitive Science*, vol. 2, edited by Stephen M. Kosslyn and Daniel N. Osherson, 267–96. Cambridge, Mass.: MIT Press, 1995.
- Kosslyn, Stephen M., et al. [Kosslyn, Stephen M., C. Seger, J. R. Pani, and L. A. Hillger.] "When Is Imagery Used in Everyday Life? A Diary Study." *Journal of Mental Imagery* 14:3–4 (1990), 131–52.
- Kozhevnikov, Maria, Olga Louchakova, Zoran Josipovic, and Michael A. Motes. "The Enhancement of Visuospatial Processing Efficiency through Buddhist Deity Meditation." *Psychological Science* 20:5 (2009), 645–53.
- Krans, Julie, June de Bree, and Michelle Leanne Moulds. "Involuntary cognitions in everyday life: exploration of type, quality, content, and function." *Frontiers of Psychiatry*, 6 (2015), 7. doi:10.3389/fpsyt.2015.00007.
- Kreplin, Ute, and Stephen H. Fairclough. "Effects of Self-Directed and Other-Directed Introspection and Emotional Valence on Activation of the Rostral Prefrontal Cortex during Aesthetic Experience." *Neuropsychologia* 71 (2015), 38–45. doi:10.1016/j.neuropsychologia.2015.03.013.
- Kroeber, A. L. Stimulus Diffusion. *American Anthropologist*, New Series, Vol. 42, No. 1 (Jan. – Mar., 1940), pp. 1–20 Published by: Blackwell Publishing on behalf of the American Anthropological Association Stable URL: <http://www.jstor.org/stable/663339>
- Kuntz, Marion Leathers, and Paul Grimley Kuntz. *Jacob's Ladder and the Tree of Life: Concepts of Hierarchy and the Great Chain of Being*. American University Studies, series 5, Philosophy. New York: Lang, 1987.
- Lagzi, Fereshteh, and Stefan Rotter. "A Markov Model for the Temporal Dynamics of Balanced Random Networks of Finite Size." *Frontiers in Computational Neuroscience* 8 (2014). doi: 10.3389/fncom.2014.00142.
- Lakṣmidhāra. *Advaita makaranda*. Trans. Ann Berliner. Bombay: Ananda Jaisingh for Jaisingh and Mehta Publishers in arrangement with Shri Gangadganeshwara Trust, Ahmedabad, 1990.
- Lawrence Richard T. "The Three-Fold Structure of the Ladder of Divine Ascent." *St. Vladimir's Theological Quarterly* 32:2 (1988), 101–18.
- Liester, Mitchell B. "Hesychasm: A Christian Path of Transcendence." *Quest* 88:2 (2000), 54–59.
- Lossky, Vladimir. *The Mystical Theology of the Eastern Church*. Crestwood: St. Vladimir's Seminary Press, 1976.
- Louchakova, Olga.¹²³ "Essence of the Prayer of the Heart." In *Gasping for Air in a Vacuum*, edited by L. Lozowick, 35–50. Prescott: Hohm Press, 2004.
- Louchakova, Olga. "Ontopoiesis and Union in the Prayer of the Heart: Contributions to Psychotherapy and Learning." In *Logos of Phenomenology and Phenomenology of the Logos*, Book 4, *The Logos of Scientific Interrogation: Participating in Nature–Life–Sharing in Life*, Analecta Husserliana 91, edited by A.-T. Tymieniecka, 289–311. Dordrecht: Kluwer, 2005.
- Louchakova, Olga. "Ontopoiesis and Spiritual Emergence: Bridging Tymieniecka's *Phenomenology of Life* and Transpersonal Psychology." In *Phenomenology of Life from the Animal Soul to the Human Mind*, Book 2, *The Human Soul in the Creative Transformation of the Mind*, Analecta Husserliana: 94, edited by A.-T. Tymieniecka, 43–68. Dordrecht: Kluwer, 2007.
- Louchakova, Olga. "Prayer of the Heart: Ego-Transcendence and Adult Development." *Existential Analysis* 18:2 (2007), 261–87.
- Louchakova, Olga. "Spiritual Heart and Direct Knowing in the Prayer of the Heart." *Existential Analysis* 18:1 (2007), 81–102.
- Louchakova, Olga. "Reconstitution of the Self during the Study of Advaita Vedānta (Traditional Indian Teachings of Non-Dual Consciousness): Phenomenological Investigations." In *Toward a Science of Consciousness*, n.315, 194, April 8–12, 2008, Tucson, AZ, Consciousness Research Abstracts, 194. Tucson: University of Arizona, Center for Consciousness Studies, 2008.
- Louchakova-Schwartz, Olga. "Self and World: Vedanta, Sufism, and Presocratics in a Phenomenological View." In *Phenomenology/Ontopoiesis: Retrieving Geo-Cosmic Horizons of Antiquity—Logos and Life*, edited by A.-T. Tymieniecka, 423–38. Dordrecht: Springer, 2011.
- Louchakova-Schwartz, Olga. "Cognitive Phenomenology in the Study of Tibetan Meditation: Phenomenological Descriptions versus Meditation Styles." In *Neurophenomenology: Its Applications to Psychology*, edited by S. Gordon, 61–87. Dordrecht: Springer, 2013.
- Louchakova-Schwartz, Olga. "Direct Intuition: Strategies of Knowledge in the *Phenomenology of Life*, with Reference to the Philosophy of Illumination." In *Phenomenology and the Human Positioning in the Cosmos*, Book 1, *The Life-World, Nature, Earth*, Analecta Husserliana 113, edited by A.-T. Tymieniecka, 291–315. Dordrecht: Springer, 2013.
- Louchakova-Schwartz, Olga. "Dia-log(os): Genesis of Communicological Virtues in the *Phenomenology of Life*, with Reference to the Advaita Vedānta of Ādi Śaṅkara." In *Phenomenology of Space and Time: The Forces of the Cosmos and the*

123 Louchakova and Louchakova-Schwartz is the same author.

- Ontopoietic Genesis of Life*, Book 2, *Analecta Husserliana* 117, edited by A.-T. Tymieniecka, 193–205. Cham: Springer, 2014.
- Louchakova-Schwartz, Olga. “The Seal of Philosophy: Tymieniecka’s *Phenomenology of Life* in Islamic Metaphysical Perspective.” In *Islamic Philosophy and Occidental Phenomenology in Dialogue*, vol. 7, *The Logos of Life and Cultural Interlacing*, edited by A.-T. Tymieniecka, N. Muhtaroglu, and D. Quintern, 71–101. Dordrecht: Springer, 2014.
- Louchakova-Schwartz, Olga. “A Phenomenological Approach to Illuminationist Philosophy: Suhrawardī’s *Nūr Mujarrad* and Husserl’s Reduction.” *Philosophy East and West*, 65, 4 (2015), 1052–81.
- Louchakova, Olga, & Warner, Arielle S. „Via Kundalini: Psychosomatic excursions in transpersonal psychology.“ *The Humanistic Psychologist*, 31(2-3) 2003, 115-158.
- Lourié, V. M. (2007). *The Theophaneia School: An ekphrasis of the heavenly temple*. In Lourié, B., and A. Orlov, eds. *The Theophaneia School: Jewish Roots of Christian Mysticism*. *Scrinium, Revue de Patrologie, d’Hagiographie Critique et d’Histoire Ecclésiastique*, 5:3. Saint Petersburg: Byzantinorossica, 2007.
- Louth, Andrew. “The Influence of the *Philokalia* in the Orthodox World.” In *The Philokalia: A Classic Text of Orthodox Spirituality*, edited by B. Bingaman and B. Nassif, 50–69. Oxford and New York: Oxford University Press, 2012.
- Louwerse, Max M., and Patrick Jeuniaux. “The Linguistic and Embodied Nature of Conceptual Processing.” *Cognition* 114:1 (2010), 96–104. doi:10.1016/j.cognition.2009.09.002.
- Luciani, Massimiliano, et al. [Luciani, Massimiliano, Marco Cecchini, Daneila Altavilla, Letizia Palumbo, Paola Aceto, Giuseppe Ruggieri, Fabrizio Vecchio, and Carlo Lai. “Neural Correlate of the Projection of Mental States on the Not-Structured Visual Stimuli.” *Neuroscience Letters* 573 (2014), 24–29. doi:10.1016/j.neulet.2014.05.008.
- Lukoff, David. 1998. “From Spiritual Emergency to Spiritual Problem”. *Journal of Humanistic Psychology*, 38(2), 21-50.
- Luft, Sebastian. *Subjectivity and Lifeworld in Transcendental Phenomenology*. Evanston, IL: Northwestern University Press, 2011.
- Lutz, Antoine, and Evan Thompson. “Neurophenomenology: Integrating Subjective Experience and Brain Dynamics in the Neuroscience of Consciousness.” *Journal of Consciousness Studies* 10:9–10 (2003), 31–52.
- Lutz, Antoine, et al. [Lutz, Antoine, Jean-Philippe Lachaux, Jacques Martinerie, and Francisco J. Varela.] “Guiding the Study of Brain Dynamics by Using First-Person Data: Synchrony Patterns Correlate with Ongoing Conscious States during a Simple Visual Task.” *Proceedings of the National Academy of Sciences of the United States of America* 99:3 (2002), 1586–91. doi:10.1073/pnas.032658199.
- Lyons, William. *The Disappearance of Introspection*. Cambridge, Mass. and London: MIT Press, 1986.
- Manna, Antonietta, et al. [Manna, Antonietta, Antonino Raffone, Mauro Gianni Perrucci, Davide Nardo, Antonio Ferretti, Armando Tartaro, Alessandro Londei, Cosimo Del Gratta, Marta Olivetti Belardinelli, and Gian Luca Romani.] “Neural Correlates of Focused Attention and Cognitive Monitoring in Meditation.” *Brain Research Bulletin* 82 (2010):1–2, 46–56.
- MacRae, George W., William R. Murdock, trans. *The Apocalypse of Paul (V,2)*. In Robinson, James M., and Coptic Gnostic Library Project. Pp. 239–241. 1977. *The Nag Hammadi library in English*. San Francisco: Harper & Row.
- McCorkle, William W., Jr, and Dimitris Xygalatas, eds. *Mental Culture: Classical Social Theory and the Cognitive Science of Religion*. Religion, Cognition and Culture. Durham, U.K.: Acumen, 2014.
- McGuckin, and John Anthony. “The making of *Philokalia*: A tale of monks and manuscripts.” In B. Bingaman & B. Nassif (ed.), *The Philokalia. A classic text of Orthodox Spirituality*, pp. 36–49. Oxford, New York. Oxford University Press, 2012.
- Mehta, Neil. “Beyond Transparency: The Spatial Argument for Experiential Externalism.” *Philosophers’ Imprint* 13:8 2013, 1–19.
- Mohanty, J. N. “Noema and Essence”. In Mohanty, J. N., *Phenomenology: Between Essentialism and Transcendental Philosophy*. Northwestern University Studies in Phenomenology and Existential Philosophy, pp. 46–51. Evanston, IL: Northwestern University Press, 1997. doi:10.1007/978-94-017-3425-7_4.
- Molyneux, Bernard. “The Logic of Mind-Body Identification”. *Ergo*, 2(11), 2015. doi:http://dx.doi.org/10.3998/ergo.12405314.0002.011.
- Morris, James Winston. *The Reflective Heart: Discovering Spiritual Intelligence in Ibn ‘Arabi’s “Meccan Illuminations.”* Louisville: Fons Vitae, 2005.
- Naruse, Yasushi, et al. [Naruse, Yasushi, Ken Takiyama, Masato Okada, and Hiroaki Umehara.] “Statistical Method for Detecting Phase Shifts in Alpha Rhythm from Human Electroencephalogram Data.” *Physical Review E: Statistical, Nonlinear, and Soft Matter Physics* 87:4 (2013). doi:10.1103/PhysRevE.87.042708.
- Nescolarde-Selva, Josué-Antonio, and José-Luis Usó-Doménech. “Topological Structures of Complex Belief Systems.” *Complexity* 19:1 (2013), 46–62. doi:10.1002/cplx.21455.
- Nisbett, Richard, and Timothy Wilson. “Telling More than We Can Know: Verbal Reports on Mental Processes.” *Psychological Review* 84 (1977), 231–59.
- Noda, Atsushi, et al. [Noda, Atsushi, Hino Hideitsu, Masami Tatsuno, Shotaro Akaho, Noboru Murata. (2014). Intrinsic graph structure estimation using graph Laplacian. *Neural Computation*, 26, 1455-1483. doi:10.1162/NECO_a_00603.
- Ogawa, Hideo. “Mithraic Ladder Symbols and the Friedberg Crater.” In *Hommages à Maarten J. Vermaseren: Recueil d’études offert par les auteurs de la série études préliminaires aux religions orientales dans l’Empire romain à Maarten J. Vermaseren à l’occasion de son soixantième anniversaire le 7 Avril 1978*, vol. 2, edited by M. B. de Boer and T. A. Edridge, 854–73. Leiden: Brill, 1978. doi:10.1163/9789004295438_021.

- Oizumi, Masafumi, Larissa Albantakis, and Giulio Tononi. "From the Phenomenology to the Mechanisms of Consciousness: Integrated Information Theory 3.0." *PLoS Comput Biol* 10:5 (2014): e1003588. doi:10.1371/journal.pcbi.1003588.
- Origen. *Contra Celsum*. Edited by Henry Chadwick. Cambridge: Cambridge University Press, 1953.
- Panagiotides, Heracles, et al. [Panagiotides, Heracles, Walter J. Freeman, Mark D. Holmes, and Dimitrios Pantazis.] "Behavioral States May Be Associated with Distinct Spatial Patterns in Electroencephalogram." *Cognitive Neurodynamics* 5:1 (2011), 55–66. doi:10.1007/s11571-010-9139-4.
- Parker, Robert. "Commentary on *Journal of Cognitive Historiography*, Issue 1." *Journal of Cognitive Historiography* 1:2 (2014), 186–92.
- Pasquali, Antoine, Bert Timmermans, and Axel Cleeremans. "Know Thyself: Metacognitive Networks and Measures of Consciousness." *Cognition* 117:2 (2010), 182–90. doi:10.1016/j.cognition.2010.08.010.
- Paul, Sarah K. "How We Know What We Intend." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 161:2 (2012), 327–46. doi:10.1007/s11098-011-9741-2.
- Pedone, Claudio, et al. [Pedone, Claudio, Francesca Flavia Rossi, Annagrazia Cecere, Luisa Costanzo, and Raffaele Antonelli Incalzi.] "Efficacy of a Physician-Led Multiparametric Telemonitoring System in Very Old Adults with Heart Failure." *Journal of American Geriatric Society* (2015). doi:10.1111/jgs.13432.
- Pelikan, Jaroslav. *The Christian Tradition: A History of the Development of Doctrine*. Volume 2, *The Spirit of Eastern Christendom, 600–1700*. Chicago: University of Chicago Press, 1977.
- Pepper, Stephen C. "The Root Metaphor Theory of Metaphysics." *The Journal of Philosophy* 32:14 (1935), 365–74.
- Pepper, Stephen C. *World Hypotheses: A Study in Evidence*. Berkeley and Los Angeles: University of California Press, 1942.
- Pereda, Ernesto, Rodrigo Quián Quiroga, and Joydeep Bhattacharya. "Nonlinear Multivariate Analysis of Neurophysiological Signals." *Progress in Neurobiology* 77:1–2 (2005), 1–37. doi:10.1016/j.pneurobio.2005.10.003.
- Petitmengin, Claire, et al. [Petitmengin, Claire, Anne Remillieux, Béatrice Cahour, and Shirley Carter-Thomas.] "A Gap in Nisbett and Wilson's Findings? A First-Person Access to our Cognitive Processes." *Consciousness and Cognition* 22:2 (2013), 654–69. doi:10.1016/j.concog.2013.02.004.
- Platner, Samuel Ball. *A Topographical Dictionary of Ancient Rome*. Completed and revised by Thomas Ashby. London: Oxford University Press, 1929.
- Popov, Ivan V. "The Idea of Deification in the Early Eastern Church." In *Theosis: Deification in Christian Theology*, vol. 2, Princeton Theological Monograph 156, edited by Vladimir Kharlamov, 42–82. Eugene: Pickwick, 2011.
- Pothos, Emmanuel M., and Jerome R. Busemeyer. "Quantum Principles in Psychology: The Debate, the Evidence, and the Future." *Behavioral and Brain Sciences*, 36 :3 (2013), 310–27. doi:10.1017/S0140525X12003226.
- Price, Donald D., and James J. Barrell. *Inner Experience and Neuroscience: Merging Both Perspectives*. Cambridge, Mass.: MIT Press, 2012.
- Raffone Antonino, and Martina A. Pantani. "A Global Workspace Model for Phenomenal and Access Consciousness." *Consciousness and Cognition* 19:2 (2010), 580–96. doi:10.1016/j.concog.2010.03.013.
- Ramana Maharshi, and Bhagavan Shri. 2005. *Words of Grace*. Tamil Nadu: Sri Ramanasramam.
- Sephir Yetzirah*. W.W.Wescott, trans. 1987, <http://www.sacred-texts.com/jud/yezirah.htm>
- Sells, Michael A. *Mystical Languages of Unsaying*. Chicago: University of Chicago Press, 1994.
- St. Hesychios the Priest. 1979. "On Watchfulness and Holiness: Written for Theodulos." In *The Philokalia*, vol. 1, edited and translated by G. E. H. Palmer, P. Sherrard, and K. Ware, 161–98. Boston: Faber and Faber.
- St. Hippolytus. *Refutatio Omnium Haeresium*. Edited by Miroslav Marcovich. *Patristische Texte und Studien* 25. Berlin and New York: de Gruyter, 1986.
- St. Irenaeus. *St. Irenaeus of Lyons: Against the Heresies*. Translated and with introduction and notes by Dominic J. Unger, John J. Dillon and M. C. Steenberg. Ancient Christian Writers 55. New York.: Paulist Press and Newman Press, 1992.
- St. Isaac the Syrian. *Ascetical Homilies of St. Isaac the Syrian*. Translated by Holy Transfiguration Monastery. Boston: Holy Transfiguration Monastery.
- St. John Climacus. *The Ladder of Divine Ascent*. Translated by C. Luibhead and N. Russell. New York: Paulist Press, 1982.
- St. John of the Cross. *The Complete Works*. Volume 1, *Dark Night of the Soul, Book 2*. Edited and translated by Allison Peers. London: Burns Oats and Washbourne, 1935.
- St. Nicodemus. *A Handbook of Spiritual Counsel*. Translated by Peter A. Chamberas. Classics of Western Spirituality. New York: Paulist Press, 1989.
- St. Simeon the New Theologian. "The Three Methods of Prayer." In *The Philokalia: The Complete Text, Compiled by St. Nikodemus of the Holy Mountain and St. Makarios of Corinth*, edited and translated by G. E. H. Palmer, P. Sherrard, and K. Ware, 67–75. London: Faber and Faber, 1995.
- St. Thomas Aquinas. *Faith, Reason and Theology: Questions I–IV of His Commentary on the "De Trinitate" of Boethius*. Translated by Armand A. Maurer. Mediaeval Sources in Translation 32. Toronto: Pontifical Institute of Mediaeval Studies, 1987.
- Schmicking, Daniel. "A Toolbox of Phenomenological Methods." In *Handbook of Phenomenology and Cognitive Science*, edited by Daniel Schmicking and Shaun Gallagher, 35–56. Dordrecht: Springer, 2010.

- Schwab, Daniela, et al. [Schwab, Daniela, Mathias Benedek, Ilona Papousek, Elisabeth M. Weiss, and Andreas Fink.] "The Time-Course of EEG Alpha Power Changes in Creative Ideation." *Frontiers in Human Neuroscience* 8 (2014), 310. doi:10.3389/fnhum.2014.00310.
- Schwitzgebel, Eric. "Introspection, What?" In *Introspection and Consciousness*, edited by Declan Smithies and D. Stoljar, 29–48. Oxford: Oxford University Press, 2012.
- Searle, John. *Intentionality, an essay in the philosophy of mind*. Cambridge: Cambridge University Press, 1983.
- Sereno, Anne B., and Sidney R. Lehky. "Population coding of visual space: comparison of spatial representations in the dorsal and ventral pathways." *Frontiers in Computational Neuroscience*, 4 (2011). doi: 10.3389/fncom.2010.00159.
- Sharf, Robert H. "The Rhetoric of Experience and the Study of Religion." *Journal of Consciousness Studies* 7:11–12 (2000), 267–87.
- Shmeman, Aleksandr. *The Historical Road of Eastern Orthodoxy*. New York: Holt, 1963.
- Silva, Paolo S., et al. [Silva, Paolo S., Jerry D. Cavallerano, Ann M. Tolson, Jessica Rodriguez, Sashida Rodriguez, Radwan Ajlan, Dorothy Tolls, Bina Patel, Mina Sehzadeh, Komal Thakore, Jennifer K. Sun, and Lloyd Paul Aiello.] "Real-Time Ultrawide Field Image Evaluation of Retinopathy in a Diabetes Telemedicine Program." *Diabetes Care* (2015). doi:10.2337/dc15-0161.
- Slagter, Heleen A., Richard J. Davidson, and Antoine Lutz. "Mental Training as a Tool in the Neuroscientific Study of the Brain and Cognitive Plasticity." *Frontiers of Human Neuroscience* 5 (2011), 17. doi:10.3389/fnhum.2011.00017 [eCollection 2011.]
- Slingerland, Edward. "Toward a Second Wave of Consilience in the Cognitive Scientific Study of Religion." *Journal of Cognitive Historiography* 1:1 (2014), 121–30. doi:10.1558/jch.v1i1.121.
- Smart, Ninian. "Foreword." In G. van der Leeuw, *Religion in Essence and Manifestation: A Study in Phenomenology*, translated by N. Smart and J. E. Turner, ix–xix. Princeton: Princeton University Press, 1986.
- Sperber, Dan, Anne Coubray, and Yann Schmitt. Entretien avec Dan Sperber: Naturalisme, sciences cognitives et religion. Revue en ligne *ThéoRèmes* mis en ligne le 06 février 2011. URL: <http://theoremes.revues.org/153>
- Špidlík, Tomáš. *Prayer, the Spirituality of the Christian East*. Kalamazoo: Cistercian Publications, 2005.
- Špidlík, Tomáš. *The Spirituality of the Christian East: A Systematic Handbook*. Cistercian Studies Series. Kalamazoo: Cistercian Publications, 1986.
- Spiegelberg, Herbert. "On the Motility of the Ego." In *Phenomenology: Critical Concepts in Philosophy*, vol. 2, edited by Lester Embree and Dermot Moran, 217–34. London and New York: Routledge, 2004.
- Sporns, Olaf. "Network Analysis, Complexity, and Brain Function." *Complexity* 8:1 (2002), 56–60. doi:10.1002/cplx.10047.
- Stanley, Matthew Lawrence, Dale Dagenbach, Robert G. Lyday, Jonathan H. Burdette, and Paul J. Laurienti. "Changes in Global and Regional Modularity Associated with Increasing Working Memory Load." *Frontiers in Human Neuroscience* 8 (2014). doi: 10.3389/fnhum.2014.00954.
- Steinbock, Anthony J. "Generativity and Generative Phenomenology." *Husserl Studies* 12:1 (1995), 55–79.
- Steinbock, Anthony J. *Home and Beyond: Generative Phenomenology after Husserl*. Northwestern University Studies in Phenomenology and Existential Philosophy. Evanston: Northwestern University Press, 1995.
- Steinbock, Anthony J. *Phenomenology and Mysticism: The Verticality of Religious Experience*. Indiana Series in the Philosophy of Religion. Bloomington: Indiana University Press, 2007.
- Stern-Gillet, Suzanne. "Consciousness and Introspection in Plotinus and Augustine." In *Proceedings of the Boston Area Colloquium on Ancient Philosophy*, vol. 22, edited by J. J. Cleary and G. M. Gurtler, 145–70. Leiden and Boston: Brill, 2006.
- Stewart, Terrence C., and Chris Eliasmith. "Realistic Neurons Can Compute the Operations Needed by Quantum Probability Theory and Other Vector Symbolic Architectures." *Behavioral and Brain Sciences*, 36:3 (2013), 307–8. doi:10.1017/S0140525x12003111.
- Stramara, Daniel F., Jr. "Gregory of Nyssa and Introspection." *The Patristic and Byzantine Review* 28:1–3 (2010), 37–53.
- Stramara, Daniel F., Jr. "Introspection in the Ancient Mediterranean World: Taking a Closer Look." *St. Vladimir's Theological Quarterly* 44:1 (2000), 35–60.
- Super, Charles M., and Sara Harkness. "The Metaphors of Development." *Human Development* 46 (2003), 3–23. doi:10.1159/000067782 Retrieved from https://www.researchgate.net/profile/Charles_Super/publication/247701734_The_Metaphors_of_Development/links/00b7d51e5819285726000000.pdf.
- Swatos, William H., and Daniel V. A. Olson. *The Secularization Debate*. Lanham, MD: Rowman and Littlefield, 2000. [Co-published with the Association for the Sociology of Religion.]
- Tabor, James D. *Things Unutterable: Paul's Ascent to Paradise in Its Greco-Roman, Judaic, and Early Christian Contexts*. Studies in Judaism. Lanham: University Press of America, 1986.
- Talmy, Leonard. *Toward a Cognitive Semantics*. Volume 1, *Concept Structuring System*, and volume 2, *Typology and Process in Concept Structuring*. Cambridge, Mass.: MIT Press, 2000.
- Taves, Ann. *Religious Experience Reconsidered*. Princeton and Oxford: Princeton University Press, 2009.
- Taylor, Keri S., David A. Seminowicz, and Karen D. Davis. "Two Systems of Resting State Connectivity between the Insula and Cingulate Cortex." *Human Brain Mapping*, 30:9 (2009), 2731–45. doi:10.1002/hbm.20705.

- Terasawa, Y., H. Fukushima, and S. Umeda. "How Does Interoceptive Awareness Interact with the Subjective Experience of Emotion? An fMRI Study." *Human Brain Mapping*, 34:3 (2013), 598–612. doi:10.1002/hbm.21458.
- Theophanis the Monk. "The Ladder of Divine Graces". 1984. In *The Philokalia*, vol. III, edited and translated by G. E. H. Palmer, P. Sherrard, and K. Ware, 66–69. Boston: Faber and Faber.
- Tito, Johanna Maria. *Logic in the Husserlian Context*. Northwestern University Studies in Phenomenology and Existential Philosophy. Evanston: Northwestern University Press, 1990.
- Toti, Marco. "Anthropological Significance of the Hesychastic Method of Prayer: Some Historico-Religious Aspects of a Morphology of the Ascetic Praktiké." *ARCHÆVS* 1:11–12 (2007–8), 117–32.
- Ulansey, David. 1989. *The Origins of the Mithraic Mysteries: Cosmology and Salvation in the Ancient World*. Cambridge: Oxford University Press.
- Ullmann, Carl, and George Valentine Cox. *Gregory of Nazianzum*. London: J. W. Parker, 1851.
- van Uchelen, N. A. "Ethical Terminology in Heykhalot-Texts." In *Tradition and Re-Interpretation in Jewish and Early Christian Literature: Essays in Honour of Jürgen C. H. Lebram*, edited by J. W. van Henten, H. J. de Jonge, P. T. van Rooden and J. W. Wesseliuss, 252–58. Leiden: Brill, 1986.
- Wang, Zheng, et al. [Wang, Zheng, Jerome R. Busemeyer, Harald Atmanspacher, and Emmanuel M. Pothos.] "The Potential of Using Quantum Theory to Build Models of Cognition." *Topics in Cognitive Science* 5:4 (2013), 672–88. doi:10.1111/tops.12043.
- Ware, Kalistos. *The Power of the Name: The Jesus Prayer in Orthodox Spirituality*. Oxford: SLG, 1986.
- Ware, Kalistos. "St. Nicodemus and the *Philokalia*." In *The Philokalia: A Classic Text of Orthodox Spirituality*, edited by B. Bingaman and B. Nassif, 9–37. Oxford and New York: Oxford University Press, 2012.
- Webb, Mark. "Religious Experience", *The Stanford Encyclopedia of Philosophy* (Winter 2011 Edition), Edward N. Zalta (ed.) <<http://plato.stanford.edu/archives/win2011/entries/religious-experience/>>.
- Welburn, A. J. "Reconstructing the Ophite Diagram." *Novum Testamentum* 23:3 (1981), 261–87. doi:10.2307/1560685.
- Whitehouse, Harvey. *Modes of Religiosity: A Cognitive Theory of Religious Transmission*. Cognitive Science of Religion Series. Walnut Creek: AltaMira Press, 2004.
- Whitehouse, Harvey, and James Laidlaw. *Religion, Anthropology, and Cognitive Science*. Ritual Studies Monograph Series. Durham: Carolina Academic Press, 2007.
- Whitehouse, Harvey, and Robert N. McCauley. *Mind and Religion: Psychological and Cognitive Foundations of Religiosity*. Cognitive Science of Religion Series. Walnut Creek: AltaMira Press, 2005.
- Wiebking, Christine, et al. [Wiebking, Christine, Moritz de Greck, Niall W. Duncan, Claus Tempelmann, Malek Bajbouj, and Georg Northoff.] "Interoception in Insula Subregions as a Possible State Marker for Depression: An Exploratory fMRI Study Investigating Healthy, Depressed and Remitted Participants." *Frontiers of Behavioral Neurosci* 9 (2015), 82. doi:10.3389/fnbeh.2015.00082.
- Wilber, Ken, Jack Engler, and Daniel P. Brown, eds. *Transformations of Consciousness*. Boston: Shambala, 1986.
- William, Rowan. "The Theological World of the *Philokalia*." In *The Philokalia: A Classic Text of Orthodox Spirituality*, edited by B. Bingaman and B. Nassif, 102–21. Oxford and New York: Oxford University Press, 2012.
- Xu, Jianfeng, and Yueheng Lan. "Hierarchical Feedback Modules and Reaction Hubs in Cell Signaling Networks." *PLoS One* 10:5 (2015), e0125886. doi:10.1371/journal.pone.0125886.
- Xygalatas, Dimitris. *The Burning Saints: Cognition and Culture in the Fire-Walking Rituals of the Anastenaria*. Religion, Cognition and Culture. Bristol: Equinox, 2012.
- Xygalatas, Dimitris. "On the Way towards a Cognitive Historiography: Are We There Yet?" *Journal of Cognitive Historiography* 1:2 (2014), 193–200.
- Zahavi, Dan. *Subjectivity and Selfhood: Investigating the First-Person Perspective*. Cambridge, Mass.: MIT Press, 2005.
- Zahavi, Dan. "Varieties of Reflection." *Journal of Consciousness Studies* 18:2 2011, 9–19.
- Zecher, J. L. Tradition and Creativity in the Construction and Reading of *Philokalia*. In *The Philokalia: A Classic Text of Orthodox Spirituality*, edited by B. Bingaman and B. Nassif, 121–36. Oxford and New York: Oxford University Press, 2012. doi:10.1093/acprof:oso/9780195390261.003.0008.
- Zecher, J. L. "The Angelic Life in Desert and Ladder: John Climacus's Reformulation of Ascetic Spirituality." *Journal of Early Christian Studies*, 21:1 (2013), 111–36.
- Zedelius, Claire M., James M. Broadway, and Jonathan W. Schooler. "Motivating Meta-Awareness of Mind Wandering: A Way to Catch the Mind in Flight?" *Consciousness and Cognition*, 36 (2015), 44–53. doi:10.1016/j.concog.2015.05.016.