God and the World of Signs: Semiotics and Theology

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SEMIOTICS AS A METAPHYSICAL FRAMEWORK FOR CHRISTIAN THEOLOGY

by Andrew Robinson and Christopher Southgate

Abstract. We provide an overview of a proposal for a new metaphysical framework within which theology and science might both find a home. Our proposal draws on the triadic semiotics and threefold system of metaphysical categories of C. S. Peirce. We summarize the key features of a semiotic model of the Trinity, based on observed parallels between Peirce's categories of Firstness, Secondness, and Thirdness and Christian thinking about, respectively, the Father, Son, and Holy Spirit. We test and extend the semiotic model by exploring how Peirce's taxonomy of signs offers a new approach to theological reflection on the Incarnation. This leads to a novel way of framing scientific questions about human evolution in semiotic terms and to a new approach to theological anthropology. Finally, we use the semiotic model of the Trinity as the basis of a trinitarian approach to the theology of creation according to which the semiotic processes that are fundamental to life and to human behavior and cognition may be understood as "vestiges of the Trinity in creation."

Keywords: anthropology; evolution; incarnation; C. S. Peirce; semiotics; Trinity; vestiges of the Trinity

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1. THE STRUCTURE OF A RESEARCH PROGRAM IN SEMIOTICS AND THEOLOGY

In our introduction to this series of articles (Robinson and Southgate 2010a) we explained that the original motivation for our explorations in the field of semiotics lay in questions about whether Christian theology remains coherent in the light of evolutionary biology. In the field of biosemiotics we saw a potential resource for a theological response to the apparent implications of evolutionary theory, including the continuity of biological descent and the contingency of the evolutionary process. If the tape of evolution were to be rerun, the particular species *Homo sapiens sapiens* probably would not emerge. Nevertheless, it is plausible that evolution was likely to produce creatures with richly developed capacities for sign making and sign interpretation. Furthermore, such capacities may be understood as a natural development from earlier and simpler forms of semiosis. In this biosemiotic perspective humans may be regarded as genuinely distinctive and yet our distinctiveness affirmed to be in continuity with, and deeply rooted in, the rest of the living world.

If this response to the implications of evolutionary biology were at all attractive, one could choose to leave the matter there. One could adopt biosemiotics as a general philosophy of nature, from the perspective of which the continuity and discontinuity of humans with the rest of the living world could be explored theologically. However, semiotic thinking offers a further theological opportunity. The field of biosemiotics draws extensively on the philosophy and semiotic theory of the American philosopher and scientist Charles S. Peirce (1839–1914). In our engagement with Peirce we cannot help but be struck by the fact that Peirce's triadic semiotics, and his underlying threefold metaphysics, both appear to have nontrivial resonances with traditional formulations of the Christian doctrine of the Trinity (Robinson 2004). Peirce was not particularly interested in trinitarian thinking (Raposa 1989, 167), so are these parallels coincidental or do they point to something more fundamental about God and the God-world relation? Rather than leave the theological appropriation of biosemiotics as a general view of nature, we are tempted to entertain the speculative hypothesis that Peirce's theory of signs offers insight into certain conceptual problems associated with Christian talk about God.

The resulting theological work, summarized in this article, amounts to a proposal for a new metaphysical framework within which explorations in both theology and science may find a home. Our overall idea, one with profound theological undertones, is that the fundamental structure of the world is exactly the structure that is required for the emergence of meaning and of truth-bearing representation. We understand the emergence of entities capable of interpreting their environments to mark the emergence of life, or at least of protolife, and we see the subsequent history of biologi-

cal evolution as a story of increasing capacities for meaning-making and -seeking. Theologically, we understand God to be the fundamental ground of the possibility of all such meaning-making and truth-seeking and the ultimate goal of the universe's emerging capacity for interpreting signs. The overall structure of our proposal is illustrated in Figure 1.

In section 2 we summarize the key features of a semiotic model of the Trinity, drawing on Peirce's triadic semiotics and his threefold system of underlying metaphysical categories. The question arises, however, whether this semiotic model is merely a piece of rather abstruse metaphysical speculation or whether it can address questions central to Christian faith such as the significance of the historical human person, Jesus of Nazareth. As a way of exploring this question, we consider in section 3 what a semiotic approach can contribute to the Christian doctrine of the Incarnation. This approach to the Incarnation turns out to suggest a novel way of framing scientific questions about human evolution in semiotic terms.

We discuss this theoretical framework in section 4, including the possibility that such an approach could give rise to testable hypotheses in paleoanthropology. Thus, just as our theological thinking about biosemiotics as a possible philosophy of nature has given rise to the possibility of a new approach to origin-of-life research (see the June 2010 issue of *Zygon*), so our theological thinking about the Incarnation opens up a potential new empirical approach to understanding human evolution. These purely scientific "spin-offs" are shown as circles in Figure 1.
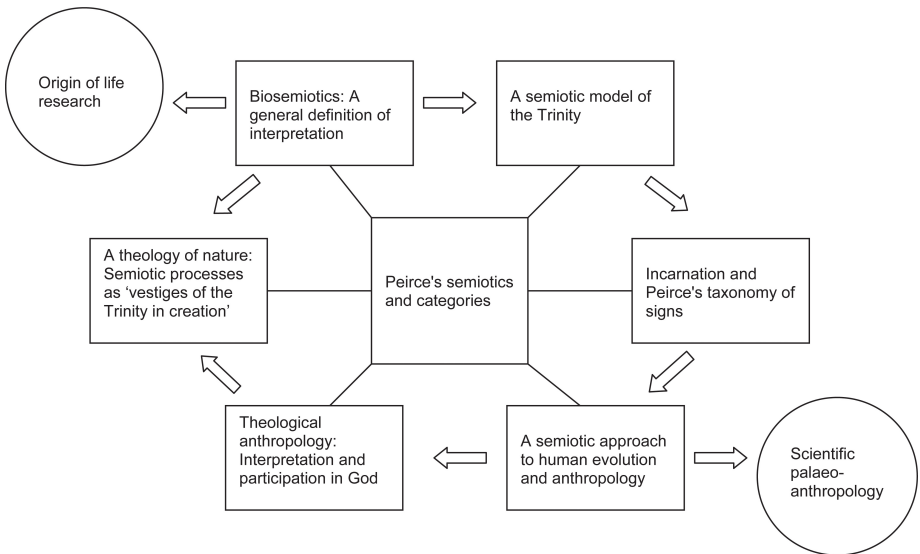

Fig. 1. The overall structure of our proposal: Semiotics as a metaphysical framework for Christian theology.

In section 5 we build on the preceding christological and anthropological work to suggest a theological anthropology that draws on a further dimension of Peirce's semiotic theory to frame an understanding of Christian discipleship. In section 6 we turn to the task of using the semiotic model of the Trinity as the basis of a trinitarian approach to the theology of creation. In the theology of nature that emerges from this account, the semiotic processes that are fundamental to life and to human ways of living in the world may be understood as *vestiges of the Trinity in creation.* This semiotic theology of nature invites a move from metaphysics to mysticism, hinting at the basis for a creation-centered spirituality in which the basic forms of phenomenological experience may taken as encounters with the Triune God, the ground, origin, and goal of all semiosis.

This essay gives an overview and summary of our theological project as a whole. The semiotic model of the Trinity was originally proposed by Andrew Robinson (2003) and summarized in this journal (Robinson 2004), though some of the details of the scheme outlined there have been refined in our subsequent thinking. Our proposal for a general definition of interpretation and its relevance to origin-of-life research are set out in Robinson and Southgate 2010b and Southgate and Robinson 2010. Our thinking on the Incarnation is developed in more detail in Robinson and Southgate in press a and our work on theological anthropology and paleoanthropology in Robinson and Southgate in press b. The whole proposal is the subject of a forthcoming monograph (Robinson in press).

2. SEMIOTICS AND THE TRINITY

According to Peirce, all representations consist of a triadic relation between a sign (sometimes known as the sign-vehicle or *representamen*), object, and interpretant. The interpretant is not necessarily a conscious interpreter (it may or may not be a part of a conscious interpretation). The starting point for our theological explorations is the way in which Peirce's idea of the semiotic triad is related to his underlying threefold system of categories. Peirce derived the categories primarily by a phenomenological method of progressively stripping away ("prescinding") the layers of everyday experience. Although they follow the same pattern as the logic of relations on which he was working, and although they give rise to a whole metaphysical and cosmological scheme, the justification of the categories lies ultimately in their consistency with experience and their philosophical fruitfulness rather than in any a priori guarantee of their truth (Short 2007, 65).[1]

Peirce named the three categories Firstness, Secondness, and Thirdness. Firstness is the category of sheer being or quality in itself. Firstness is elusive because any description, comparison, or generalization will immediately introduce the other two categories. Examples of Firstness are the sheer

quality of a color, taste, or smell, when "prescinded" from any wider context of the origin or meaning of the sensation in question. Firstness is the category of spontaneity, as when certain quantum events occur non-deterministically. It is the category of potentiality, abstracted from any concrete actualization. Peirce's conviction was that Firstness, though elusive, is a real and irreducible feature of the world. It is not easy to locate precisely within the triad of sign-object-interpretant, but its role in sign processes will become more apparent when we consider Peirce's taxonomy of signs.

Once a sign (sign-vehicle) is set over and against the object, we have the category of Secondness. This is the category of otherness and distinction. The sign is other than the object. Firstness is the category of potentiality; Secondness is the category of brute actuality. We come up against it every time the world resists us, as when we stub a toe or are proved to have been wrong about something. Peirce remarked, "The idea of Second must be reckoned an easy one to comprehend. That of first is so tender that you cannot touch it without spoiling it; but that of second is eminently hard and tangible. It is very familiar too; it is forced upon us daily: it is the main lesson of life" (Peirce 1992, 248–49).

Thirdness is the category of mediation. A line on a piece of paper involves Thirdness because between any two points on the line there will be a third that joins the two and hence mediates between them. Without Thirdness a line would not be mathematically continuous. Thirdness is also therefore the category of generality. A general law is what connects particular instances that share something in common. The experience of finding oneself subject to a law, such as the law of gravity, is an experience of Secondness insofar as we find ourselves constrained by it (we cannot fly unaided), but of Thirdness insofar as it connects particular instances (objects fall to the ground in accordance with the law of gravity). In terms of the semiotic triad, the interpretant mediates between the sign and the object, bringing Thirdness to the relation.[2]

Peirce's categories of Firstness, Secondness, and Thirdness appear to have some intriguing parallels with the conceptual structure of trinitarian thought. Christian theology has had to wrestle with the apparent tension between a commitment to the oneness of God and an affirmation of the divinity of Jesus. From very early in the Christian tradition a way of resolving this tension was to conceive of the Second Person of the Trinity as the Word of God. An uttered word is in some sense both distinct from yet one with the speaker (O'Collins 1999, 79). As the prologue to John's Gospel puts it, "In the beginning was the Word, and the Word was with God, and the Word was God" (John 1:1–3 NRSV; all biblical quotations in this article are from the NRSV). The Hebrew tradition had already conceived of God's Word (*dabhar*) as one of the personifications (alongside Wisdom and Spirit) of God's creative and redemptive activity. In Christian thought the distinction between the eternal Word and the Word made flesh could

readily be understood in terms of the distinction made by the Stoics between internal rational thought (the *logos endiathetos*) and the outward expression of thought (the *logos prophorikos*). The eternal distinction of the Son from the Father postulated in trinitarian thought has its parallel in the irreducible reality of otherness in Peirce's category of Secondness. The metaphysical reality of otherness (Secondness) is the ground of, among other things, the possibility of a sign ("word") standing over against an object.

The parallels between Firstness and the person of the Father are perhaps more subtle. A key point is the concept of the unbegotten nature of the Father, in contrast to the begottenness of the Son. The Arian controversy revolved around the question of whether that which is begotten, the Son, is necessarily created and therefore not fully God. Athanasius contributed to resolving the dispute by arguing for a distinction between two concepts that previously had been used interchangeably: unbegotten (*agennetos*) and uncreated (*agenetos*). This made it possible to say that the Son was begotten but not created (Prestige 1933). This distinction is illustrated and clarified by the concept of Firstness. Just as Firstness is "prescindable" from Secondness, being unbegotten (unoriginate or ingenerate) is abstractable from dependence on, or relation to, anything "other." Importantly, the distinction between Firstness and Secondness, or between unbegottenness and begottenness, picks out a logical ordering, not an ontological subordination, of the latter in relation to the former.

The church, arguably, has never quite been sure what to say metaphysically about the Holy Spirit. This may account for its relative neglect in some of the tradition. Augustine understood the Spirit as the communion, fellowship, or love between the Father and Son (Augustine 1991, V.12), which correlates with the category of Thirdness as the ground of mediation. In John's Gospel Jesus promises that the Father will send the Spirit to the disciples as what usually is translated as an "advocate" or "helper," though the word *paraclete* also can be translated as "mediator." The Spirit is the source of interpretation (1 Corinthians 12:10; Acts 2). According to the traditional Christian reading of Genesis 1:2 the Spirit (*ruach*) sweeps over the formless void with the promise of bringing order (generality, Thirdness) to the formless void (chaos, Firstness). Just as biosemiotics associates the origin of interpretation with the origin of life (Southgate and Robinson 2010), the Niceno-Constantinopolitan Creed confesses the Spirit as "the Lord, the giver of life." Moreover, the Spirit's gift of life is in continuity with the distinctive manifestations of semiosis in humans; the same creed continues, "who has spoken through the prophets."

Peirce's semiotics and its underlying metaphysical categories thus have intriguing parallels with key aspects of trinitarian thought. Further, these parallels suggest opportunities for clarifying some perennial problems in the trinitarian tradition. One such problem has been how to affirm the

distinctions between the three persons of the Trinity without implying that there are three Gods (tri-theism) or that one of the persons is superior to the others (subordinationism). If Peirce's metaphysics is taken as a model for trinitarian thought, these positions, generally regarded as heretical, can be avoided. Peirce held the categories of Firstness, Secondness, and Thirdness to be irreducible to one another; each has its own permanent reality. Moreover, although distinct from one another, none of the categories is ever found in complete isolation. The exercise of mentally "prescinding" the categories can help us to appreciate their individual reality, but each immediately implicates the others. On this model, therefore, tri-theism is avoided because the persons, though distinct, ultimately are not separable. Furthermore, although there is a certain kind of order of the categories from Firstness to Secondness to Thirdness, this is a logical ordering, not an ontological hierarchy. Therefore a semiotic model of the Trinity avoids subordinationism.

Another perennial temptation for trinitarian concepts of God is that of modalism, the idea that behind the three persons of the Trinity there is an underlying substance that they all have in common. In that case the three persons would be merely three different manifestations of a single divine essence. In contemporary thought there has been a strong reaction against metaphysical schemes based on unchanging substances or essences. The alternative often advocated is a metaphysic of relations. But where do "relations" come from? There is a danger that relationality becomes, in effect, the underlying substance behind the trinitarian persons, amounting in effect to a new version of modalism (Harris 1998, 224–25). Peirce's metaphysics points toward a resolution of this dilemma by suggesting that there is not just one kind of relation but three. Thirdness is the relation of mediation, Secondness is the relation of distinction, and Firstness is a kind of zero-order relation—self-relation, or the condition of being abstractable from relation to anything else. In order to avoid a relation-centered form of modalism we must be able to give an account of how the very possibility of relationship arises from within the Trinity rather than being prior to or behind it. That is exactly what the semiotic model offers. The three persons are distinct, and the possibility of their distinctness is derived from the distinction (Secondness) of the Son from the Father. The three persons also are "related" to each other by the relation of mediation, and the ground of all relations of mediation (Thirdness) is the Spirit.

Our suggestion, then, is that the irreducibly triadic interplay of Firstness, Secondness, and Thirdness that lies behind the processes of semiosis may be a fruitful model on which to understand the dynamic mutual indwelling (perichoresis) of the three persons of the Trinity.

What is the status of our "semiotic model" of the Trinity? Arguably, taken in isolation, the work done by the semiotic model at best amounts to a clarification of issues internal to trinitarian thought. That is, the model may

offer some insights into the conceptual issues involved in understanding how God can be held to be eternally and irreducibly threefold in nature without undermining God's unity. However, intriguing as such parallels may be, we must ask whether they amount to anything more than a speculative reworking of a piece of abstruse theological metaphysics. Does the semiotic model have anything to offer in terms of understanding the economy of salvation and the significance of the historical human person, Jesus of Nazareth? Does it contribute to understanding what it means to recognize Jesus as the Son (or Word) of God, or help us to understand what is involved in the life of Christian discipleship? If the answer to these questions is no, the semiotic model must be judged to be (perhaps) interesting but ultimately very limited in terms of theological scope and religious significance.

We turn, then, to ask: What does Peirce's metaphysical semiotics have to offer in terms of connecting the conceptual issues involved in considering the inner being of God as Trinity with a broader view of the economy of salvation? We address this challenge by attempting to formulate a semiotic approach to the Christian concept of the Incarnation.

3. SEMIOTICS AND INCARNATION

Our semiotic approach to the Incarnation draws on Peirce's taxonomy of signs.[3] Peirce proposed that signification consists of a relationship between three elements: sign, object, and interpretant. Peirce's taxonomy of signs arises from the fact that (a) there are three possible ways in which something can be a sign-vehicle; (b) there are three possible kinds of relation between the sign and the object; (c) there are three possible ways in which the sign can relate to the interpretant (Table 1). (For our purposes we shall set aside the third of these dimensions, although we will return to discuss another aspect of Peirce's understanding of interpretants in Section 5).

It is important to note—as will become apparent in the discussion to follow—that the columns of Table 1, left to right, are reflections respectively of Firstness (the sign in itself), Secondness (the sign-object relation), and Thirdness (the mediation of the interpretant). The rows, bottom to top, reflect respectively Firstness (quality, likeness, presence), Secondness (actuality, causality, forcefulness), and Thirdness (lawfulness, reason). All of the discussion of sign types and their relations in this article therefore necessarily implies various combinations of the categories in kaleidoscopic variety. It will be impractical to continually spell out the underpinning of the taxonomy by the categories (Firstness, Secondness, and Thirdness). However, the relation between the two should be held in mind, especially when we turn later to consider how the semiotic model invites us to understand the structure of the world to bear the imprint of the trinitarian mediation of creation.

The best-known aspect of Peirce's taxonomy is the distinction between icons, indexes, and symbols, shown in the middle column of Table 1. This trichotomy concerns the relationship between the sign and object. An icon is a sign that signifies its object by virtue of a relation of resemblance between the sign and object. For example, a portrait represents a particular person by virtue of a resemblance between the image and its object. Certain distinctions between different kinds of icon, to be discussed below, will prove crucial to the understanding of the Incarnation that we propose. An index represents its object by virtue of some direct relationship between the two such that the character that makes the index a sign would be lost if the object were removed. For example, a symptom may be a sign of the disease that caused it; a creaking floorboard may give away my presence outside your door.[4] A symbol is a sign that is assigned to an object by virtue of a rule of interpretation, as is normally the case in the relation between a noun and the object it signifies (onomatopoeia being an exception).

A less well known aspect of Peirce's taxonomy, in the left column of Table 1, concerns the nature of the sign-vehicle itself. These distinctions are illustrated in Figure 2, where we plot the icon-index-symbol distinction vertically and the qualisign-sinsign-legisign distinction horizontally. A legisign is a sign that signifies by virtue of being a replica (or token) of a type, that replica having been *produced according to a rule* for the purpose of signifying. All symbols are legisigns, but the converse is not true; not all legisigns are symbols.[5] Thus, where the sign-vehicle is a legisign its relation to its object can be symbolic, indexical, or iconic. The word *dog* is a symbolic legisign. It refers to its "object" by a convention, and it is produced (by forming the letters *d-o-g*) according to a rule. A knock at the door (in contrast to the creaking floorboard) is also produced according to a rule for the purpose of signifying and is therefore a legisign. It is an indexical

TABLE 1

Peirce's Taxonomy of Signs

Sign-vehicle	Relation of sign to object	Relation to interpretant
Legisign *Replicas produced according to a rule*	Symbol *Related by convention*	Argument *Appealing to reason*
Sinsign *Singularly occurring*	Index *Related directly (e.g. causally)*	Dicent *Asserting something*
Qualisign *A quality*	Icon *Related by resemblance*	Rheme *Presenting something*

legisign because there is a direct (causal) connection between the sign (the knock) and the object (the person knocking). The contour lines on a British Ordnance Survey map are iconic legisigns. They are produced according to a rule (brown lines of a certain shade and thickness; other kinds of line would do, but all Ordnance Survey maps follow this convention). However, the lines represent their object (contours of the landscape) not by arbitrary convention but iconically—they have the same shape as those actual contours.

A celebration of the Christian Eucharist is another, more complex, form of iconic legisign. Each eucharistic celebration follows a (broad) pattern, the rules for which were instituted by Jesus for the purpose of remembering him; specifically (and minimally), of remembering the meal that he shared with his disciples in the Upper Room (Luke 22:14–20 and parallels). The Eucharist is therefore a legisign: a "type" (the Eucharist in general) replicated in the form of individual "tokens" (each individual eucharistic celebration) for the purpose of signifying something (minimally the event of the Last Supper; more fully, the table fellowship to which Jesus' disciples are called). However, the relationship between the sign-vehicle (Eucharist) and object (whether particular meal or fellowship in general) is one of resemblance; it is an icon. So a eucharistic celebration is an iconic legisign.

Jesus' action in the Temple (Mark 11:15–17 and parallels) gives us an example of an iconic sinsign. A sinsign is a singular occurrence that signifies. Unlike a legisign, it is not produced according to a rule. Jesus' overturning of the traders' tables was a singular event. He did not repeat it himself, and he did not suggest to his followers that they should do so in order to signify something. According to some commentators, the sign, turning over the tables, stood for the destruction of (and thereby judgment on) the Temple (Wright 1996, 413–28). The relationship between sign and object here is again that of a kind of resemblance. The turning over of tables was a minor disruption to the Temple-system that signified a

		The word *dog*	Symbol
	Noise outside door	Knocking on door	Index
Incarnation	Temple action	Last Supper / Eucharist	Icon
Qualisign	**Sinsign**	**Legisign**	

Fig. 2. Two dimensions of Peirce's taxonomy: Incarnation as qualisign.

major future catastrophe. Jesus' action in the Temple was therefore an iconic sinsign.

The third kind of way in which something can be a sign-vehicle (other than as legisign or sinsign) is as a qualisign. A qualisign is a sign-vehicle that is a sign by virtue of a quality that it instantiates. All qualisigns are icons, but the examples given above show that not all icons are qualisigns (icons can also be sinsigns or legisigns). A qualisign cannot signify without being somehow embodied, and in that sense there is some similarity with the category of sinsign (because a qualisign signifies only when embodied in actual instances). But its embodiment is not part of its character as a sign. An example is a particular color in a piece of cloth, perhaps specifically made as a color-sample. The color itself is a qualisign—a sign, that is, merely of that color as a color.

The concept of an iconic qualisign is the basis of our proposed approach to the Incarnation. *We suggest that to say that Jesus is the "image of the invisible God" (Colossians 1:15), the incarnate Word of the Father (John 1:14), the "exact imprint of God's very being" (Hebrews 1:3), is to say that Jesus' whole life was an iconic qualisign of the saving, transforming presence of Israel's God. Just as the color embodied in a piece of cloth may be an iconic qualisign of that very color, our hypothesis is that the person and life of Jesus of Nazareth embodied the very quality of the being of God.* As an iconic qualisign, the life of Jesus acts as a sign by virtue of being nothing other than the quality that it embodied, namely, the quality of God's transforming presence.

It is important to emphasize that our hypothesis is that Jesus' whole life, as lived in his particular social and historical context, is what embodied the quality of God's being. The Incarnation was not a qualisign of the being of God by virtue only of some biological aspect of Jesus' existence, or some psychological trait or spiritual capacity, but as a bio-social-historical whole. Furthermore, we fully acknowledge that Jesus' life—like our own lives—included numerous signs of different kinds, including his words (symbols), his teaching in parables (forms of icon), and his death on the cross (an index of his obedience to the Father). Our distinctive hypothesis, however, is that the sum total of all of these and the other signs that constituted the total fabric of Jesus' life amounted to a qualisign of the being of God (the Father).

We do not explore here the ramifications of this semiotic approach to the Incarnation in comparison with other approaches to Christology, a task that we have undertaken elsewhere (Robinson and Southgate in press a). To illustrate broadly how this approach is potentially fruitful, however, consider a heuristic distinction that may be made between three dimensions of Christology. The "horizontal" dimension concerns the question of how two "natures," divine and human, can fit into one person. In this dimension the main danger is of forgetting that divine and human "natures" are not two examples of the same kind of thing. If that were the case,

they would somehow be competing for space within the person of Jesus. The qualisign understanding of the Incarnation avoids this danger by stressing that it is the total quality of Jesus' life that is the embodiment of God's presence. As the biblical hymn puts it, "He is the image of the invisible God . . . in him all the fullness of God was pleased to dwell" (Colossians 1:15, 19).

The "vertical" dimension of Christology concerns the distinction between "top-down" and "bottom-up" approaches to the Incarnation. These are sometimes seen as competing starting points, though there appears to be a growing consensus that they must be regarded as complementary (Greene 2003, 18–19; Tilley 2008, 35–36). The top-down aspect of the semiotic approach involves affirming and reformulating traditional Logos approaches to Christology within the framework of our semiotic model of the Trinity. As the prologue to John's Gospel puts it, "In the beginning was the Word, and the Word was with God, and the Word was God. . . . And the Word became flesh and lived among us" (John 1:1, 14). The bottom-up aspect of the semiotic approach emphasizes the character of the world in general, and humans in particular, as the potential fabric of the embodiment of an iconic qualisign of God. Developing the analogy with a colored piece of cloth, it is helpful to think here in terms of a fabric the intrinsic structure of which has a particular color, rather than the color being imparted extrinsically by dyeing. In the fully human person of Jesus, product of the same kinds of evolutionary and social-historical processes as ourselves, the very quality of God has come into being in the world—the flesh became Word (compare John 1:14).

The third dimension of Christology has at its two poles the Incarnation as "puzzle" or as "paradigm." Christology may appear to be a puzzle: How can two natures, human and divine, be fitted into one person, Jesus of Nazareth? The puzzle approach assumes that the pieces of the jigsaw are known to us, and the question is how to fit them together. It is assumed that we know essentially what divine nature and human nature are like and the problem is how these two natures can be joined. We call the alternative approach to Christology the paradigm approach because it understands the Incarnation as an invitation to view both God and the world differently (see Baillie 1948, ch. 3). One way in which the semiotic approach invites us to see the world differently is by presenting the question, What must the world (and humanity) be like in order for creatures to have the potential to recognize and interpret the iconic qualisign of God's being? As Karl Rahner put it, "God can reveal only what man is able to hear" ([1941] 1969, 115).

This brings us to some considerations concerning theological and scientific anthropology as they appear in the light of Peirce's semiotics.

4. SEMIOTICS AND ANTHROPOLOGY

It is often said that human distinctiveness lies in our capacity for using language. Putting this in more sophisticated semiotic terms, Terrence Deacon (1997) has suggested that what sets humans apart from other animals is our competence in using Peircean symbols (signs whose relation to their object is given by a convention). William Noble and Iain Davidson (1996) have suggested a hypothetical, if fanciful, scenario to explain how humans acquired this capacity for symbol use. They suggest that hominids, while making gestures as icons of the shape of an animal (object), somehow accidentally did so in some mud, thereby leaving a visible trace of the relevant shape. They then realized that a sign (the mud trace) could stand for an object, and from there discovered how to use signs with conventional rather than iconic relation to their objects.

It is interesting that these seminal attempts to apply Peircean semiotics to evolutionary anthropology tend to restrict the account to the icon-index-symbol aspect of Peirce's taxonomy. The result is what we call the assumption of a semiotic hierarchy. According to this view human evolution may be regarded as the story of an ascending capacity for using different types of sign, with symbolic competence at the top of the ladder. All subsequent developments in human cognition and behavior are then understood in terms of extending the ways in which we use symbols. One of the mysteries of human evolution is the apparent gap between the appearance of fully modern human anatomy 100,000 or more years ago and the flourishing of sophisticated tool making, art, and ritual in the Upper Paleolithic revolution (about 35,000 years ago in Europe, probably with earlier precursors in Africa). On the semiotic-hierarchy model this revolution consists of an extension of existing forms of semiotic (symbolic) competence. We suggest an alternative model according to which the Upper Paleolithic revolu-
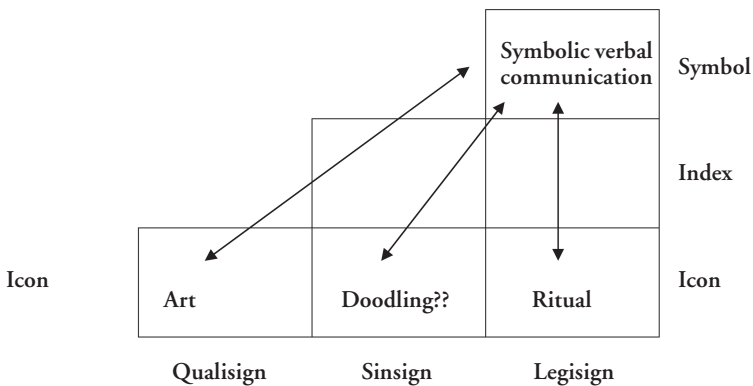

Fig. 3. The semiotic matrix.

tion came about by crossing a further semiotic threshold that we refer to as entering a semiotic matrix (Figure 3).

To understand this threshold the other dimensions of Peirce's taxonomy of signs must be considered, particularly the qualisign-sinsign-legisign distinction. Drawing on the authors referred to earlier, but developing our narrative in relation to the two-dimensional matrix we used when discussing the Incarnation, we offer, rather than a one-dimensional semiotic hierarchy (a full account would require the addition of at least the third dimension, concerning the relation of the sign to the interpretant), the following speculative but testable hypothesis.[6] We imagine that our earliest hominid ancestors (Australopithecines, 5 million to 3 million years ago) learned to communicate by pointing (indexical legisign) and gesturing (such as the size or shape of a prey animal—iconic legisigns). The earliest species of the human family (*Homo habilis*, *Homo ergaster*, 2.5 to 1.5 million years ago) may have learned to change some of these iconic gestures into symbolic gestures, facilitating the speed with which information could be communicated. Gesturing may well have been accompanied by reinforcing vocalizations. Perhaps with *Homo erectus* (2 million to 0.5 million years ago) these vocalizations themselves became symbolic, with a gradual reduction in reliance on gestures. We are persuaded by Deacon's hypothesis that the emergence of fully articulate symbolic speech then corresponds with the appearance of anatomically modern humans (100,000 to 200,000 years ago; Deacon 1997, 364).

On our hypothesis, however, a further semiotic threshold remains to be crossed. This threshold was the discovery of how to creatively juxtapose signs of different types, particularly how to combine symbols with different kinds of icon. The type of cognitive process we are referring to is that familiar to us in the use of diagrams and metaphors, both of which are kinds of icon that depend on symbolic representations and are in turn capable of generating new conceptual knowledge. Crossing this semiotic threshold—entering the semiotic matrix—opened up the possibility of art (iconic qualisigns made in the context of symbolic understanding) and ritual (iconic legisigns giving access to new conceptualizations). The important point is that these juxtapositions of signs would have consisted not merely of sequential combinations of signs but of a creative dialectic between different types of sign.[7] One may speculate further that perhaps the Neanderthals were able to imitate the products of this dialectic, such as burial of the dead (Mithen 1996, 135–36), without ever "getting" the cognitive trick.

What drew us into the semiotic matrix? We playfully hypothesize that doodling may have played a part. Once their hands were freed from the necessity to gesticulate while communicating, humans were able to absentmindedly make marks in any available medium while simultaneously speaking or listening. Creating doodled shapes while simultaneously con-

versing in symbols may have opened the door to the kind of cognitive advance—the creative dialectic of sign types—that we are proposing.[8] Whatever opened the door to the semiotic matrix, entering it is the pre-condition for any creature to be capable of making conceptually mediated interpretations of iconic qualisigns, including (ultimately, from the theological point of view) the iconic qualisign of God's transforming presence. The semiotic approach to the Incarnation thus suggests a new hypothesis in paleoanthropology, the concept of the semiotic dialectical matrix, which in turn invites a scientifically informed theological anthropology.

5. SEMIOTICS AND DISCIPLESHIP

This sketch of a semiotic approach to evolutionary anthropology may be extended by considering how human interpretative responses may be regarded as the basis of religious transformation. All interpretations involve a response—minimally, a change in state of the interpreting entity. At one end of the biological scale the emergence of the simplest interpretative responses marks, according to the biosemiotic perspective, the origin of life (Southgate and Robinson 2010). At the level of human interpretations, we hypothesize, such responses are the basis of religious orientation toward and participation in the life of God.

In his early semiotics Peirce assumed that all interpretants are thoughts. Later he extended the possible kinds of interpretant to include feelings and actions (Short 2004, 222). We suggest that interpretative feelings, actions, and thoughts are the modes in which creatures, humans in particular, can become oriented toward God in response to relevant signs. This includes the interpretative responses made to the sign constituted by the life, death, and resurrection of Jesus—the embodied qualisign of God's being in the world.

Consider first the case of actions that are interpretants of signs. A command or instruction may prompt various thoughts, but it will be judged to have been correctly interpreted depending on the action with which the interpreter responds (Short 2007, 201). We propose that the biblical paradigm of this kind of interpretant is *metanoia*, the change of mind, heart, and direction to which the Israelites are (re-)called by the prophets and that Jesus commands in his first reported words in the Gospel of Mark: "The time is fulfilled, and the kingdom of God has come near; *repent*, and believe in the good news" (Mark 1:15; emphasis added). The first persons to respond to this call may have deliberated, though this is not reported. What is clear from the story is that Jesus' command was interpreted by an action. Simon and Andrew "immediately left their nets and followed him" (Mark 1:18). We do not have to suppose that this action was undertaken entirely blindly or without some background against which it made sense to the first disciples (though in general interpretative actions may be auto-

matic responses); the point is that the mode of their interpretation of Jesus'
command was not primarily a thought or a feeling but an action. Actions,
then, can be interpretants, and the interpretative action of responding to a
sign for the purpose of the orientation of self or community toward God is
part of that aspect of religious transformation referred to in the Christian
tradition as repentance.

   If the idea that actions can be interpretants of signs is unfamiliar, it may
seem at first sight even stranger to hold that *feelings* can interpret signs.
However, there has been much recent interest in the cognitive role of emo-
tions, an idea explored from the perspective of the philosophy of religion
in our colleague Mark Wynn's *Emotional Experience and Religious Under-
standing* (2005). In general terms, emotional interpretants may be said to
engage the whole being of the interpreter and have the potential to place
the interpreter in some sense in the immediate presence of the object. This
may be particularly so when the sign-type interpreted by the emotion is a
qualisign. (Depending on context, emotions also can be interpretants of
any other sign-type in the scheme set out in Figure 1.) The paradigmatic
New Testament example of an emotionally interpreted qualisign occurs at
the Transfiguration, when Jesus "was transfigured before them, and his
face shone like the sun" (Matthew 17:2). The disciple Peter's initial re-
sponse is simply to delight in his *presence* before the face of the Lord: "Lord,
it is good for us to be here." The theme of transformation by face-to-face
encounter with God is taken up by Paul in 2 Corinthians 3:18: "And all of
us, with unveiled faces, seeing the glory of the Lord as though reflected in
a mirror, are being transformed into the same image from one degree of
glory to another."

   The image of facing God, and of facing the "other," has been explored
in depth by David Ford (1999) and worked into a theology of forgiveness
by Steven Sandage and F. LeRon Shults (2003). The key point is that, as
interpretants, emotions seem to have a particular role in engaging our whole
self and making the totality of a situation present to us. In Peirce's philo-
sophical scheme, in which mediation is central to his whole metaphysic, it
is very interesting that this sense of the immediate presence of some qual-
ity is an example of an apparently *unmediated* experience. The feeling of
being in God's immediate presence is a necessary, but not sufficient, aspect
of religious transformation, a reflection of the fact that God engages us in
the entirety of our being and invites us to transformation by the entirety of
our interpretative responses—thoughts, actions, *and* feelings.

   And so, finally, to *thoughts* as interpretants, specifically thoughts as
interpretants of the qualisign constituted by the person of Jesus. It often is
noted that theology follows from reflection on religious practice rather
than the practice following from the reflection. But that is surely not the
whole story. If theology is an interpretation of praxis, what is the ultimate
interpretant of the theology? The question is a semiotic one, equivalent to

one of the problems arising from Peirce's early formulations of his theory of signs. As already noted, according to Peirce's early semiotic theory all interpretants are thoughts. However, because thoughts are signs it follows that interpretation may proceed infinitely: The meaning of a thought can be understood only by reference to its interpretation by another thought-sign, and so on ad infinitum. A further problem with Peirce's original view that all interpretants are thoughts is that it fails to explain signification. This is because such an account attempts to explain interpretation with reference to the operation of an interpretant that (being a thought) is necessarily another sign, thereby infinitely postponing the question of what constitutes a sign (Short 2007, 43). The beginning of Peirce's solution to this problem was his recognition that not all interpretants are thoughts; as explained above, they also can be actions or feelings. And, although actions and feelings can themselves be interpreted as signs, they need not be so. Thus there is a potential terminus to interpretation. With respect to the progression of thought-signs, Peirce proposed that the "ultimate" interpretants of a thought or concept are those habits of action to which the thought or concept gives rise. For example, the concept (thought) that the stove is hot is ultimately interpreted by my habits of avoiding contact with the stove if I don't want to get burned and of putting the kettle on the stove if I want a cup of tea. Late in his life Peirce thus connected his semiotics with his pragmatism (Short 2004, 228).

Terrence Tilley (2008) argues that Christology is constituted by the *practices* of discipleship. In Peircean terms we may say that the meaning of christological formulae ultimately is given by the practices to which they give rise. Discipleship is the formation of habits. These habits may become ingrained—one might say instinctive. They are not habits acquired entirely unconsciously, however, as in the natural selection of animal instincts, but are acquired by practice. A paradigmatic scriptural example of habits as the ultimate interpretants of concepts and thoughts is found in the story of the two disciples on the road to Emmaus (Luke 24:13–35). The two are "talking and discussing" (v. 15) the events that had occurred in Jerusalem when they are joined by Jesus, whom they do not recognize. In response to their puzzlement about these events, Jesus "interpreted to them the things about himself in all the scriptures" (v. 27). The disciples were exchanging thoughts and concepts with each other, and Jesus helped to clarify their thoughts by means of interpretations consisting of further thoughts and concepts. Their ultimate understanding of Jesus' interpretations, however, does not occur until the three of them participate in the table fellowship that has been the habitual center of Jesus' ministry and teaching: "When he was at the table with them, he took bread, blessed and broke it, and gave it to them. Then their eyes were opened, and they recognized him; and he vanished from their sight" (vv. 30–31). The interpretative chain does not end with further thoughts; Jesus vanishes from their sight when

the ultimate interpretant of their discussions occurs in the habit of taking, blessing, breaking, and sharing the bread.

These reflections on the semiotic basis of religious transformation may suggest an approach to the idea, central to Eastern Orthodox theology, of theosis or participation in the divine life (Louth 2008). In addition to the insight that interpretants may take the form of emotions, actions, and thoughts, Peirce also made a distinction between the "immediate," "dynamic," and "final" interpretants of a sign (Short 2007, 187–90). Consider an intersection of footpaths at which there is a signpost that has become ambiguous by virtue of having been slightly dislodged from its original orientation. The immediate interpretants of a sign are the (often numerous) possible interpretative responses that might be made to a sign, prior to any actual interpretation. The immediate interpretants of the dislodged signpost include, for example, the inference that it may have been windy recently, or the thought that the ranger should be more diligent. A dynamic interpretant is an interpretation actually made. After examining the evidence I may conclude that the signpost originally pointed to the path on the left; by taking that route I actualize a dynamic (and possibly mistaken) interpretant of the sign. A final interpretant is the interpretant that would be ideally adequate to the purpose for which the sign is being interpreted. Had I been more careful in evaluating the evidence I might have seen that the signpost must originally have pointed to the path on the right; the most adequate interpretative response for my purpose of reaching a particular destination would have been to take the right-hand path. If, as suggested in this section, the various dimensions of discipleship may be understood in terms of the range of possible types of creaturely interpretative response, the purpose of such responses may be said to be that of furthering God's kingdom. In that case, the creaturely activity of seeking the final interpretants of the myriad signs within the created order (whether instances of beauty or love, suffering or injustice) may be understood as the basis of creaturely participation in the life of God. The final interpretants of such signs are those that would be made by a fully Word-informed and Spirit-filled interpreter. A life increasingly directed toward and constituted by making those interpretive responses that are the most adequate to the purpose of bringing in the kingdom of God would be a life progressively drawn into the life of God. In that sense semiosis may be understood as the basis of theosis.

6. From Metaphysics to Mysticism

The starting point for the project we have been outlining here was a theological problem posed by evolutionary biology (see Robinson and Southgate 2010a). In the June issue of *Zygon* we introduced the field of biosemiotics as a possible resource for a theological response to that prob-

lem (Southgate and Robinson 2010). Biosemiotics led us to a deeper exploration of Peirce's semiotic theory and the observation of intriguing and unanticipated parallels between Peirce's metaphysics and the Christian tradition of trinitarian thought (sections 1–2 above). This gave rise to speculation that creaturely semiotic processes may be analogous in some sense to the inner being of God and that reflection on such semiotic processes may offer a "model" by means of which certain conceptual problems in trinitarian thought might be clarified.

However, the apparent usefulness of the semiotic model in clarifying the "internal" logic of trinitarian thought does not in itself make it especially theologically significant. Only if the semiotic approach can be brought into fruitful contact with reflection on the significance of the person and life of Jesus of Nazareth, and can contribute to the life of Christian discipleship, will the observed parallels between Peircean philosophy and trinitarian theology be of any enduring interest. Responding to this challenge, we have attempted to test and extend the semiotic model of the Trinity by developing a semiotic approach to the Incarnation. The result, sketched in this article, has been not only a possible new way of thinking about the sense in which Jesus may be understood to be "the image of the invisible God" (Colossians 1:15) but also a new way of looking at the processes of human religious transformation and creaturely participation in the divine life. Unexpectedly, exploring this semiotic approach to the Incarnation has given rise to a new, scientifically testable hypothesis concerning the nature and origin of human distinctiveness.

We suggest that this apparent fruitfulness of the semiotic approach to the Incarnation justifies regarding the semiotic model of the Trinity as part of a broader theological research program (see Murphy 1990; Lakatos 1970). The original speculative hypothesis (that there may be some kind of real analogy or likeness between the processes of semiosis and the being of God) begins to look like part of a broader metaphysical framework. Moreover, this is a framework within which it seems that both Christian theology and evolutionary biology (from the origin of life to the nature of human distinctiveness) may find themselves at home.

Having set out the case for the structural integrity and potential fruitfulness of this metaphysical framework, we now feel justified in completing the picture with a further speculative step that introduces an element of what we regard as an overarching and somewhat mystical vision. The vision involves understanding the whole finite order as manifesting "vestiges of the Trinity in creation." Our appropriation of this concept goes farther than simply suggesting an analogy or likeness between God and the world. Our claim is stronger: that any such analogies or likenesses have their basis in the role that each of the trinitarian persons plays in the continuous act of creation. Drawing on the idea that the continuing creative work of God depends on the mediation of what Irenaeus referred to as the

two "hands" of God, the Son and the Spirit (Irenaeus 1867, Adversus Haereses, 4.20.1), we speculate that God's hands leave their "imprint" in the basic ontological structure of the world.

The theological case for the idea that creation is mediated directly by the Word / Son is argued at length by Colin Gunton in *The Triune Creator* (1998), against a background of significant New Testament witness (John 1:1–3; 1 Corinthians 8:6; Colossians 1:15–17; Hebrews 1:1–3). The concept of the mediation of creation by the Word / Son serves the theological purpose of affirming the goodness of the created order. The alternatives to this view, such as Gnostic or neo-Platonic views of creation as mediated by intermediaries inferior to God, tend to be associated with an understanding of the material world as being made from some kind of inferior stuff that belongs at the bottom of an ontological hierarchy of being. The idea of the mediation of creation by the Word / Son rather than by some other intermediary goes hand in hand with the concept of creation *ex nihilo* (out of nothing) (Gunton 1998, 65ff.); the absolute otherness of the world from God is grounded in the otherness of the Word / Son from the Father. If the otherness of the world from God is grounded in the intratrinitarian distinction between the Father and the Word / Son, it seems plausible further to hypothesize that all instances of otherness / distinction *within* the created order have as the ground of their possibility this same intratrinitarian otherness. The idea of intraworldly otherness being grounded in the intratrinitarian distinctions can be found in some contemporary theological thought (such as Pannenberg 1994, 28, 60–61). Scriptural precedent for the idea is found in Genesis 1, where God speaks in order to effect a succession of distinctions: the separation of light from dark, of waters from sky and from land, of day from night. Of course, our own experience of otherness moves in the other direction. We know first the kinds of otherness that exist in the world, and we come to hypothesize the reality of an absolute otherness (and later, in trinitarian thought, an eternal otherness within the being of God).

If all instances of intraworldly otherness are grounded in the intratrinitarian otherness of the Word / Son from the Father, our experience of any otherness in the world is an experience of the creative work of the Word. This is not to suggest that the intratrinitarian relations could be deduced simply from phenomenological reflection on experience. The worldly phenomenon of otherness will be understood and experienced as grounded in the Word only when our general experience of the world is reflected upon in the light of the wider network of hypotheses constituting the Christian tradition. In the light of that tradition, however, it is legitimate to hypothesize that our experience of the world reflects the way that the created order is structured by God's intimate patterning and shaping by the Word (and Spirit—see below). The New Testament references to the mediation of creation by the Word are set out not in terms of stark

rational theological argument but in poetry that surely invites an experiential interpretation of the conceptual content of the statements: ". . . for us there is one God, the Father, from whom are all things and for whom we exist, and one Lord, Jesus Christ, *through whom are all things and through whom we exist*" (1 Corinthians 8:6); "He is the image of the invisible God . . . and *in him all things hold together*" (Colossians 1:15–17) (emphases added).

Extending the same pattern of thinking to the role of the Spirit in creation, we speculate that the role of the Spirit is that of mediating between God and the world, bridging the absolute otherness of the world from God (Robinson 2004, 127). The Spirit may then be understood as the ground of all instances of mediation within the created order. If all instances of intraworldly mediation are grounded in the intratrinitarian mediation of the Spirit between the Word / Son and the Father, our experience of any manifestation of mediation in the world is an experience of the creative work of the Spirit.

We move, then, from the theologically motivated idea of the trinitarian mediation of creation to a creation-centered trinitarian spirituality verging on a form of Christian mysticism. The metaphysical framework sketched here thus supports a spirituality that places the basic forms of phenomenological experience within the context of more specific Christian hypotheses concerning the economy of salvation. These theological and experiential aspects of our appropriation of the vestiges hypothesis could be pursued independently, but we suggest that each potentially supports the other.

CONCLUDING REMARKS: RELIGION IN SEARCH OF
A METAPHYSIC

Our theological project, summarized in this article, seeks to develop an overarching vision of the relations between God, humanity, and the world and between philosophy, science, and religion. At a time when the whole enterprise of metaphysical system-building often is considered suspect, some concluding remarks about metaphysical schemes are in order.

Two aspects of Peirce's view of the nature of inquiry are relevant. First, Peirce held that all genuine inquiry begins from "the irritation of doubt." That is, the process of seeking the truth cannot start from some arbitrarily chosen point but must begin from genuine doubt about the adequacy of a belief or set of beliefs. The doubts from which our inquiry began were concerns about the coherence of Christian theology in the face of the findings of evolutionary biology. Our metaphysical scheme is, in the first instance, an attempt to settle the irritation of doubt caused by this question. The construction of the scheme is therefore not the end in itself; ultimately it will be assessed on its coherence and fruitfulness in addressing this and other genuine sources of doubt. In fact, the framework does ap-

pear to be capable of addressing other possible sources of doubt—concerning, for example, trinitarian theology, Christology, human evolution, and theological anthropology. A number of different kinds of doubt could have led one to explore Peirce's semiotics and categories and to develop the kind of framework set out here. Furthermore, the framework itself, though metaphysical, is also hypothetical in the sense that it must be judged in terms of its coherence and fruitfulness in offering possibilities for resolution of these doubts. In short, our metaphysical scheme-building is not a foundationalist exercise pursued for its own sake but an exercise in non-foundationalist inquiry as a way of seeking resolution of specific philosophical and theological problems.

The second Peircean principle that justifies such an exercise is that it is impossible to proceed with any kind of inquiry without subscribing to some kind of overall metaphysical view of the world. As Peirce put it:

Find a scientific man who proposes to get along without any metaphysics . . . and you have found one whose doctrines are thoroughly vitiated by the crude and uncriticized metaphysics with which they are packed. . . . Every man of us has a metaphysics, and has to have one; and it will influence his life greatly. Far better, then, that that metaphysics should be criticized and not be allowed to run loose. (Peirce 1931–1935, Vol. I, paragraph 129)

Alfred North Whitehead once called Christianity "a religion seeking a metaphysic" (Whitehead [1926] 1960, 50). The framework we outline here amounts to a proposal for the kind of metaphysic that Christianity may be in search of, one that scientifically aware women and men may be able to get along with, one that therefore could influence lives as well as the columns of learned journals.

Notes

1. Peirce took the categories to be hypothetical and open to modification in the light of experience. The lack of a formal proof of the completeness of the categories is therefore not necessarily a deficiency. As T. L. Short puts it, the categories "illuminate every issue. The burden of proof therefore lies on those who think the categories incomplete" (Short 2007, 74) .

2. One might equally say that the sign mediates between the interpreting entity and the object. Mediation is not so much a pure function of the interpretant as the category that is introduced into the sign relation once the interpretant is operative. The Thirdness involved in interpretation is also found in the purpose toward which the interpretative response is directed because purposes are always general types of outcome (Southgate and Robinson 2010).

3. See Short 2007, ch. 8. Short's book is an authoritative study of Peirce's semiotics.

4. Not all indexes are causal, though. The paradigmatic example is a pointing finger.

5. It is easy to confuse the concept of a legisign with that of a symbol because both involve a rule of interpretation. The confusion can be avoided if it is remembered that symbols, like icons and indexes, are defined in terms of a particular sort of relationship between sign(-vehicle) and object, whereas legisigns are one of the types of sign-vehicle. In the case of a legisign the sign-vehicle is produced according to a rule, whereas in the case of a symbol a rule (additionally) governs the connection between the sign and the object. As the examples that follow illustrate, a sign may be produced according to a rule (that is, be a legisign) without its relation to its object being determined by a rule (that is, without being a symbol).

6. The hypothesis outlined here could be tested in terms of the predictions it would give rise to in studies of child development, human cognitive psychology, primate communication

studies, and future findings in the archaeological record. It also would give rise to predictions about the possible kinds of "intelligence" to be expected if we ever encountered extraterrestrial intelligent life.

7.   In that respect our approach may be regarded as combining features of Stephen Mithen's concept of "cognitive fluidity" (Mithen 1996) with Deacon's evolutionary appropriation of Peircean semiotics (Deacon 1997).

8.   When Christopher Henshilwood published evidence of 77,000-year-old ochre engravings in Blombos Cave in South Africa, French cave-art expert Jean Clottes dismissed the South African finds as possibly being "doodles" rather than instances of symbolic behavior (Balter 2002). Henshilwood subsequently rejected this suggestion, probably rightly. The fascinating point is that both apparently assumed that the discovery of doodles would be less interesting than the discovery of symbolic art.

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