

THE MAGICIAN IN THE WORLD: BECOMING, CREATIVITY, AND TRANSVERSAL COMMUNICATION

by *Inna Semetsky*

Abstract. This essay interprets the meaning of one of the cards in a Tarot deck, “The Magician,” in the context of process philosophy in the tradition of Alfred North Whitehead. It brings into the conversation the philosophical legacy of American semiotician Charles Sanders Peirce as well as French poststructuralist Gilles Deleuze. Some of their conceptualizations are explored herein for the purpose of explaining the symbolic function of the Magician in the world. From the perspective of the logic of explanation, the sign of the Magician is an index of nonmechanistic, mutualist or circular, causality that enables self-organization embedded in coordination dynamics. Its action is such as to establish an unorthodox connection crossing over the dualistic gap between mind and matter, science and magic, process and structure, the world without and the world within, subject and object, and human experience and the natural world, thereby overcoming what Whitehead called the paradox of the connectedness of things. The Magician represents a certain quality that acts as a catalytic agent capable of eliciting transmutations, that is, the emergence of novelty. I present a model for process-structure that uses mathematics on the complex plane and the rules of projective geometry. The corollary is such that the presence of the Magician in the world enables a particular organization of thought that makes precognition possible.

Keywords: action of signs; coordination dynamics; Gilles Deleuze; geometry on the complex plane; Hermetic philosophy; the included middle; Charles Sanders Peirce; process metaphysics; projection; relational ontology; self-cause and self-reference; Tarot; unconscious; Alfred North Whitehead.

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The first Arcanum in a Tarot deck is called The Magician (Figure 1).¹

The approach this essay takes is unusual. It uses the image of the Magician in the context of both process metaphysics, in the tradition of Alfred North Whitehead, and Charles Sanders Peirce's semiotics, or the science of signs. It brings into the conversation also the legacy of French poststructuralist philosopher Gilles Deleuze (1925–1995). Some of their conceptualizations are explored here for the purpose of asserting the symbolic function of the Magician in the natural world and explaining the meaning of this sign.

The essay is not so concerned with the actual process of interpreting Tarot cards (what in common parlance is called "reading") but rather intends to construct the ontology that makes such interpretation possible. In other words, the epistemic process, or an unorthodox access to knowledge involved in Tarot readings, is posited here as grounded in Whiteheadian process metaphysics and also supported by some recent conceptualizations in the area of theoretical physics (see Stapp 2007), the latter in turn inspired by Whitehead's ontology (Stapp 2007, 85–98; Shimony 1997, 144–60). The cutting-edge common framework behind those seemingly disparate ideas, disciplines, and names (especially when accompanied by beliefs that appear at first glance esoteric) is the so-called science of complementary pairs grounded in the new field of inquiry, namely, coordination dynamics (Kelso and Engstrom 2006; Kelso 1995). In fact, the figure of the Magician, in terms of the Peircean relation of Thirdness, is the very symbol of such coordinating action or mediation.² According to Peirce, "genuine mediation is a character of a sign" (1860–1911, 2.92).

Peirce's general modes of being as Firstness, Secondness, and Thirdness are classified in terms of the triadic scheme of the following psychological elements: "their qualities or feelings, their reaction against my will, and their generalizing or associating element" (1860–1911, 8.144). The action of the Magician is, however, implicit: As a hidden variable, also known as *Arcana*,³ it has long been waiting for a proper conceptualization. It is a symbol of creative and communicative action that has its place in the world as part of the action of signs called by Peirce *semiosis*. As the general, it is an "indispensable ingredient of reality" (5.431), but reality itself is irreducible to its description in terms of classical mechanics. It is because of the Magician's action that "the physical universe ceases to be merely physical . . . [but] becomes caught up in the semiotic web, and the universe becomes perfused with signs" (Deely 2001, 621).



Fig. 1. The Magician.

A sign, by definition (Deely 2001, 639), is something that stands for another than itself; that is, the relation of standing-for is always already presupposed. J. A. Scott Kelso and David A. Engstrom (2006), not incidentally, propose a symbol, \sim (tilde), that designates an unorthodox relation between pairs that, in the absence of this implicit relation signified by \sim , would have remained rigid polar opposites rather than associate as dynamic complementary pairs. It is almost ironic how in the course of the modern epoch one such pair, science and magic, has gradually become separated into polar opposites. While acknowledging what the pure reason of modernity considered to be a supernatural action, the attempt to explain this very action was made in terms of the method of natural sciences' customarily connecting cause and effect directly, without any symbolic mediation. The "prompt" conclusion was therefore in terms of some anomalous effect, as in magic, without attributing the possibility of existence to yet "another kind of causation" (Peirce 1860–1911, 6.60). But the natural world is not limited to its solely mechanical aspect, similar to human conscious experience not being reduced to blind action and reaction taking place at the level of Secondness. What is customarily called magic, then, may in fact be considered a *science* of hidden relations that are capable of producing real effects when their cause is not at all obvious. The world of nature indeed seems to be full of "magic": In the self-organizing (Jantsch 1980) or self-programming (Lloyd 2006) universe, the reality of Whiteheadian process is such that causal determinism coexists with self-determination. It is Thirdness that enters the process as reason, mediation, sense of learning, and the evolution of consciousness. Because every sign conveys the general nature of thought, and Thirdness ultimately is a mode of being of intelligence or reason, the generality does come about from the Peircean *quasi-mind* comprising a repository of ideas or significant forms at the ontological level, among which the Magician is number One, designated by the Roman numeral I (see Fig. 1).

System theorist Erich Jantsch (1980) defined *consciousness* as the degree of autonomy a system gains in dynamic relations with its environment; thereby even the simplest chemical dissipative structure can be said to possess "a primitive form of consciousness" (Jantsch 1980, 40). The image of the Magician represents such a trace of consciousness embedded in the material universe, in agreement with Whiteheadian protomentality attributed by him to all occasions. Indeed, the sign of the Magician is an indication of how mind is embodied in matter by virtue of the Thirdness of the self-organizing evolutionary process of semiosis. The dynamics of self-organization proceeds in an autopoietic (see Varela 1979) manner along environmental perturbations and compensations effectuated by means of transversal—that is, indirect or mediated—communications (Deleuze and Guattari 1987) across the different planes or levels of order. It is the very presence, that is, the included middle of the transversal link, that—akin to

the action of the Magician—aims “to bring into being that which does not yet [physically] exist” (Deleuze 1994, 147). The creative act of such an unorthodox communication is capable of overcoming what Whitehead in his *Adventures of Ideas* called “the paradox of the connectedness of things” (1961, 228). Among Whiteheadian ontological categories, *creativity*, *many*, and *one* are the ultimate, and it is creativity that constitutes the condition of possibility for all existence.

The Magician’s function in the world is first and foremost creative, communicative, and interactive, aiming toward connecting the One with the Many, discovering unity in diversity and creating diversity out of unity. The number corresponding to the Magician card in a deck is I as a symbol of the Whiteheadian one world without and within. Whitehead’s speculative metaphysics defines existence in self-structuring and self-ordering terms, and order and structure themselves are constantly evolving and developing. From the perspective of the logic of explanation, the Magician functions as the index of a self-cause (Rescher 2000) disregarded by the science of modernity, the latter having reduced the four ancient Aristotelian causes, including formal and final, to a single type of physical causation.⁴

Meanwhile, Aristotle’s prohibition against such an unusual causality continues to persist (Juarrero 1999, 48). The Magician’s communicative action may be considered a precursor to neo-, or morpho-, genesis, that is, the creation of novelty. The creation itself is not a point of origin but a continuing dialogue, an interaction or relation as an ongoing event represented by means of the two indices on the Magician’s picture. The Magician’s right hand holding the wand points upward, to the skies, and his left hand points to the earth, thereby enacting the Hermetic maxim *As above, so below*. The second verse of Hermes’s Emerald Table (*Tabula Smaragdina*) proclaims the ancient formula of analogy: *That which is above is like to that which is below and that which is below is like to that which is above, to accomplish the miracles of (the) one thing*. The Magician’s transversal communication crosses over the dualistic gap between mind and matter, science and magic, process and structure, the world without and the world within, subject and object, human experience and the natural world, therefore establishing the *likeness* equivalent to the Hermetic formula (expressed as ~ in Kelso’s new science of complementary pairs) between what Whitehead called the world within experience and the world beyond experience.

At the mythical level, Hermes Trismegistus as the Magician’s alter ego was associated with the Egyptian Thoth and the Greek Hermes, a deity of communication and swift action, a messenger between gods above and humans below. The four magical tools on the Magician’s table (see Fig. 1) are represented by cup, wand, pentacle, and sword. They correspond to the four suits in a Tarot deck or, respectively, the four Jungian functions constituting the Magician’s intelligence: thinking, feeling, sensing, and intuition. Indeed, they are signs not of instrumental rationality but of

phronesis, that is, practical wisdom, practical “magic.” Or, alternatively, these are four elements available to the Magician in his alchemical laboratory: fire, earth, water, and air—all the elements of nature brought together to serve the aim of freeing the human spirit from the constraints and limitations of the material world, that is, to effectuate a (mystical) conjunction of opposites by connecting the worlds of mind and matter. Those connections are enacted in “a continual rhythm of loss of integration with environment and recovery of union,” as John Dewey ([1934] 1980, 15) said, addressing shared relations between an organism and its environment. On the Magician icon, the sign of rhythm as a cycle of eternal respiration of life is expressed by the mathematical symbol of infinity (see Fig. 1) representing the unlimited *many* as *complementary* (see Kelso and Engstrom 2006) to its numbering of *one*.

The Magician’s creative action is part of the dynamics of autopoietic systems capable of self-organization such that “the integrity of their structure is maintained” (Jantsch 1980, 7). The task of maintaining integrity requires a specific “communication mechanism which is capable of acting much faster than metabolic communication” (1980, 156); this process may very well operate in “qubits” (Lloyd 2006), which are the swift bits of quantum information inaccessible to usual sense perception. This communicative mechanism is responsible for establishing different and new relations so that the system’s boundaries are crossed and traversed, and new boundary conditions of the system, or its external structure, are being established, meanwhile maintaining the integrity of its internal structure, or what Deleuze aptly called the *fold* as “the inside of the outside” (1988, 97). In any complex sign or communication system a signal is produced at the moment of structural coupling (an operational closure) between a heterogeneous series of events operating at different levels. This does not mean that something actually flows through the information channel, just that a relation, or interaction, is being established. A sign as a bit (or qubit) of information is Janus-faced: It provides a connective link as a coordination between events without actually passing from one to another (DeLanda 2002, 103), analogous to the relation \sim as posited by Kelso and Engstrom (2006). It is a genuine, as Peirce called it, triadic sign as irreducible to a simple dyad that makes possible the transversal communication, and only as transversal, communication can enable the conferment of shared meanings on experience. A sign has to be Janus-faced because of its own autoreferentiality. It closes “as if” on itself; however—and this is crucial—by its very closure it is capable of becoming another sign, contributing to the process of *becoming* along the levels of organization.

Says Deleuze, “I undo the folds of consciousness that pass through every one of my thresholds . . . ‘the twenty-two folds’ that surround me and separate me from the deep” (1993, 93). He quotes Henri Michaux: “Children are born with twenty-two folds. These have to be unfolded. Then a

man's life is complete" (Deleuze 1995, 112).⁵ The twenty-two folds correspond to the total number of Major cards (or Arcana) in a Tarot deck, each Arcanum being a symbolic representation of a meaningful enfolded pattern. Each consequent Arcanum stands in relation of difference to the preceding one, so the *likeness* between worlds within and without experience does not necessarily mean *identity*; the latter can never be completely preserved "in any advance to novelty" (Whitehead 1966, 107). Although "every actual entity in its relationship to other actual entities is . . . in the continuum, actual entities atomize the extensive continuum [which] is in itself . . . the potentiality for division; an actual entity effects this division" (Whitehead 1978, 67), symbolized by the discrete sequence of different Tarot cards. The Magician's "purpose" is to establish coordination (as Peirce's category of Thirdness, or the relation \sim) between the noumenal and phenomenal realms, despite—or, rather, because of—the original *difference* between the two. Deleuze ingeniously addresses difference as "not phenomenon but the noumenon closest to phenomenon. . . . Every phenomenon refers to an inequality by which it is conditioned. . . . Everything which happens and everything which appears is correlated with orders of differences: differences of level, temperature, pressure, tension, potential, difference of intensity" (Deleuze 1994, 222).

What Deleuze dubbed *differentiation* (with a *t*) is the difference in intensity that establishes a flow of information. These differentiations are connected, and the process of connection—or local integrations—represents *differenciation* (with a *c*) in terms of "being like the second part of difference" (1994, 209) that itself is capable of producing a difference of the second order. Such a double process of different/ciation, as the Magician's communicative action, appears to border on a magical and full-of-wonder act. Says Dewey, "Of all affairs, communication is the most wonderful" ([1925] 1958, 166). Indeed, it is when the Magician intervenes between the different levels, lifts up his wand, that "events turn into objects, things with meaning . . . [and] the gulf between existence and essence" ([1925] 1958, 167) can be bridged.

Such is the process of interlevel communication embedded in Peirce's semiosis or the action of signs in nature, and it is the dynamic act of intervention that makes the Magician an autocatalytic element building the mutualist feedback of circular causality and representing "kinetics effective in this moment at each spatial point" (Jantsch 1980, 34). This spontaneous, intervening action creates a link between the physical world of facts and the world of objective meanings, or values. For Whitehead, facts are creative, or valuative, and as such are due to the principle of creativity as a precondition for novelty. Henry Stapp (2007, 10) points out that John von Neumann in his mathematical formulation of quantum mechanics specifically coined *intervention* as a term describing the effects of free choices upon the physical world, yet these free choices are themselves reciprocal on

reasons, values, and unconscious motivations. For Deleuze, “the unconscious belongs to the realm of physics” (Deleuze and Guattari 1983, 283; see Semetsky 2001; 2002). Mediated by the intervention of the Magician, it is the relation of Thirdness as interpretation or revaluation that creates the meaning, that is, provides an experience with new value, which, albeit implicit in each and every triadic sign, is as yet absent among the brute facts of Peircean Seconds. Contemporary physics understands the natural world as causally open and not closed as in classical mechanics. Stapp (2007) compares and contrasts classical and quantum mechanics. Both have room for human action, but at the classical level human action appears as fully determined while at the quantum level there is a gap because of Werner Heisenberg’s uncertainty principle. The advantage of the gap, however, is such that it opens “at the level of human actions, a range of alternative possible behaviors” (Stapp 2007, 9).

Heisenberg conceptualized the “cut” as a sort of incommensurability between the classical and subatomic levels of description in physics. He acknowledged *Zwiespalt*, or a strange contradiction, between empirical questions at the level of classical physics and theoretical constructs, such as wave functions in the multidimensional mathematical spaces of the quantum world. The indeterminacy is where the cut is, despite the fact that on both sides of the cut the relations are deterministic and described by either the laws of classical physics or the differential calculus of quantum mechanics. Between the levels the relation breaks down, or becomes cut off. The presence of the Magician in nature and its very in-betweenness (see note 2) constitutes a virtual interface (Varela 1999, 61) defying the otherwise excluded middle. Being just an Idea, a virtual tendency musing⁶ *in potentia*, the Magician’s mode of communication as the Thirdness of the included middle deals quite a blow to the principles of the classical physics of the observable world (Nicolaidis 2001).⁷ Peircean triadic semiotics provides for the connections between the levels, or the different regimes of signs, by means of an interpretant (the Third) that creates a link over the cut: Signs grow, develop, and can always be translated into other signs. Figure 2 illustrates the process of how the interpretant of the sign in a triadic sign-object-interpretant relation becomes a sign in a subsequent triadic relation, and so forth:

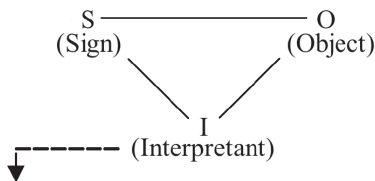


Fig. 2. A triadic relation (from Sheriff 1994, 35).

For Peirce, the object to which a sign refers may not have a solely physical existence but may be a thought, a dream, or a totally imaginary entity; ditto for the interpretant whose being *in futuro*, as a nonmanifest goal, “will suffice” (Peirce 1860–1911, 2.92). It is an interpretant that produces an effect, or meaning, as a result of the action of signs. Functioning as the included middle, the in-between of \sim , the Magician’s action only appears to be mystical but in fact represents the “informationally meaningful, self-organizing coordination dynamics, a web-weaver” (Kelso and Engstrom 2006, 253), the web in question woven by means of the Magician’s wand that also establishes the above-below relation.

The circular or mutualist causality operates reciprocally, both bottom-up and top-down (Kelso and Engstrom 2006, 115), symbolized by the two directions of the upward wand and the downward hand on The Magician (Fig. 1). The Magician represents quality that acts as a catalytic agent, addressed by Whitehead in his *Process and Reality* (1978) and *Modes of Thought* (1966), which is embedded in the system’s dynamics and capable of eliciting transmutations, that is, the emergence of novelty. *Becoming* and *creativity* are concepts central to Whitehead’s process philosophy, and it is the Magician’s autopoietic and creative action that represents an occasion of experience constituting the very process of becoming. Recursive communicative feedback loops make up the network of mutual interactions that establish a link between levels of order, that is, a connection created *as if* by wave of the Magician’s wand. Coordination dynamics as governed by self-organization, that is, “spontaneous formation of patterns in open systems” (Kelso and Engstrom 2006, 112), does not require the presence of a physical coordinator. Indeed, the Magician is immanent in matter in his capacity as “virtual governor” (Juarero 1999, 125), the function of which is distributed in the transactional field of action: As non-local, it is in agreement with Whitehead’s criticism of what he called the fallacy of simple location. The Magician’s action is akin to a creative artist’s imagination that “terminates in a modification of the objective order, in the institution of a new object. . . . It involves a dissolution of old objects and a forming of new ones in a medium . . . beyond the old object and not yet in a new one,” as Dewey says, addressing the role of imagination in his remarkable work *Experience and Nature* ([1925] 1958, 220). This “medium” is what Deleuze would have called a zone of indiscernibility and where the complementary relation \sim establishes itself.

What Deleuze called the *outside*—the world without—is ontologically an overcoded virtual space that “possesses a full reality by itself . . . it is on the basis of its reality that existence is produced” (Deleuze 1994, 211). Deleuze’s philosophical thinking has a subtle affinity with Scholastic ontology. In Scholastic terminology *virtual* does mean “the ideal” or “transcendental,” yet not in any way abstract or just possible; it is maximally real, *ens realissimum*. However, “in order for the virtual to become actual it

must create its own terms of actualization. The difference between the virtual and the actual is what requires that the process of actualization be a creation. . . . The actualization of the virtual . . . presents a dynamic . . . multiplicity of organization. . . . Without the blueprint of order, the creative process of organization is always an art” (Hardt 1993, 18), performed by the Magician in his experimental practice devoted to the actualization of the virtual. As an occasion of experience, the Magician contains the condition of its own *unity* (the number 1) within itself; its objective character ensures that the objects of the natural world pave the road for cognition, and not the other way around. Whitehead’s philosophy of the organism posits actual occasions as spatiotemporal events endowed with experience that, albeit dim and not fully conscious, nevertheless defies the sharp bifurcation of nature into mindless matter and conscious mind. In contemporary physics *event* is defined as an actualized possibility of this event’s objective tendency, its *potentia*, to occur. Process ontology, as nonphysicalistic, posits potentiality as a semiotic link that, in mentalistic terms, would have enabled the very “transition between consciousness and unconsciousness [that] need not be interpreted as a change of ontological status but as a change of state, and properties can pass from definiteness to indefiniteness and conversely” (Shimony 1997, 151). The Magician’s communicative action is akin to bringing the unconscious (as protomenta) to the level of consciousness by virtue of the actualization of potentialities. Creating a momentous “negentropy as semiotic information” (Spinks 1991, 71), the Magician is capable of transcoding the analog continuum of *one* into the digital organization of *many* particulars. This “magical” transformation constitutes in fact the main problem “for both Whiteheadian process and quantum process[:] the emergence of the discrete from the continuous” (Stapp 2007, 88).

Stapp posits the hypothetical mechanism of a spontaneous quantum reduction event associated with “a certain mathematical ‘projection’ operator” (2007, 94) the action of which is direct (via projection) but that also causes “indirect changes” producing “faster-than-light” effects—indeed, as the would-be Magician’s quasi-instantaneous and spooky action-at-a-distance. In this manner, the Magician crosses over the gap between the realms of sensible and intelligible, or visible and invisible, thereby acquiring an opportunity to really “see” the possible in the actual. The opportunity in question concerns the alternatives in human choices, but not only; equally important is the Magician’s capability of making the only right choice, that is, his action as an *ethical* action, in the absence of which he would not act as The Magician after all! It is the dynamic understanding of meanings that constitutes the Magician’s intelligence, enabling him to choose between alternatives in an ethical manner. At the level of human action in the physical world it means that the “magical” work has been done, consciousness expanded, intelligence gained.

Each subsequently numbered card in a Tarot deck represents an evolution of consciousness as a function of collective human experience in the phenomenal world. Each card is a symbolic representation of a moral lesson that a human being must learn in order to be fruitful and creative in experiential endeavors, as if indeed learning to become the Magician. In order to go ahead, each one of us has to leave behind some illusions and dependencies that are counterproductive to human growth and spiritual development. These situations are symbolically represented in Tarot cards. Nearly every one of the cards has an image of a living being situated in a different context, a human figure that is a symbol of not just a physical body but the mind, soul, and spirit as well.⁸ No card is taken as impending fate, and blind faith gives way to inner knowledge or gnosis.

Not incidentally, the Arcanum number II that follows “The Magician” in a deck is “The High Priestess” (Fig. 3). She is a symbol for Sophia, or Shekinah, or Ennoia—the mythical feminine principles of Wisdom that represent the return of the Goddess for the purpose of unfolding the scroll on the Priestess’s lap so as to reveal some of the secrets of Gnostic knowledge that appear to have been lost in the scientific pursuits of modernity. The Priestess’s mode of knowledge is thus complementary to the essentially masculine rationality. The High Priestess is a symbol of spirituality and female intuition as some special sensitivity and sensibility. Peirce commented on the “insight of females as well as certain ‘telepathic’ phenomena. . . . Such faint sensations ought to be fully studied by the psychologist and assiduously cultivated by every man” (Peirce and Jastrow 1884, quoted in Hacking 1990, 206).



Fig. 3. The High Priestess.

At the mythical level, the Priestess possesses the knowledge of the long-forgotten lost speech that relates to Genesis and describes the true nature of things in the symbolic language similar to that used by Adam before the Fall (Semetsky 2006a).

The High Priestess signifies the invisible and secret knowledge versus sensible and empirical, yet she can potentially express herself, thus making the invisible present. The lost speech may manifest itself in the unconscious, such as in a slip of the tongue, in Freudian psychoanalysis, in dreams, in Jungian word associations, and certainly in Tarot symbolism. The unconscious contents are enfolded in the scroll in accord with specific grammar or code that provides them with structure, thereby making them potentially available to consciousness.

Indeed, each card can be interpreted at both the ontological and psychological levels. The card that precedes “The Magician” in a deck is called

“The Fool” and portrays a youth standing at the edge of the abyss (Fig. 4). At the level of depth psychology the Fool signifies the symbolic child within many of us, the archetypal *puer aeternus*, as a symbol for new beginnings (Semetsky 2000). At the ontological level of description (which is the aim of this essay) it represents the very potentiality of existence because contemporary physics posits

the *physically described world* . . . built . . . out of objective *tendencies*—potentialities—for certain discrete, whole actual events to occur. Each such event has both a psychologically described aspect, which is essentially an increment in knowledge, and also a physically described aspect, which is an action that *abruptly changes* the mathematically described set of potentialities to one that is concordant with the increase in knowledge. (Stapp 2007, 9)

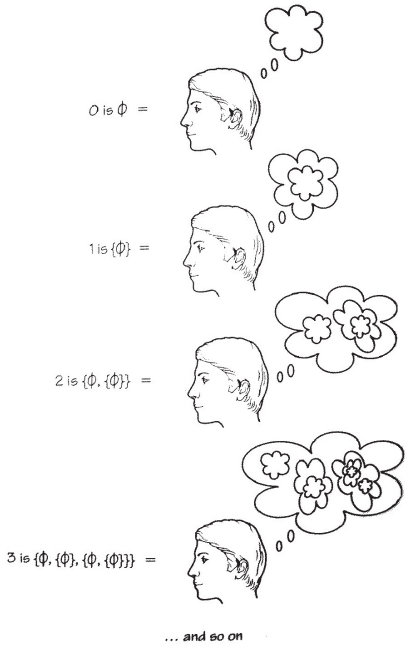
The zero numbering of “The Fool” appears to signify “nothing,” but not quite so. Its pure potentiality is akin to “what the world was to Adam on the day he opened his eyes to it, before he had drawn any distinctions, or had become conscious of his own experience” (Peirce 1860–1911, 1.302). Similar to the Deleuzian difference, imperceptible by itself, the Fool exemplifies the zero-point energy, a quantum fluctuation (Prigogine 1991) or pure information bordering on becoming active. Like an empty set \emptyset , an abstract entity of mathematical analysis that apparently signifies nothing (Rotman 1987), the Fool organizes meaning into what is intrinsically meaningless when it enters into relations following its symbolic leap into the abyss.

In fact, the presence of the Fool in each subsequently numbered card is a truism: $1+0=1$, $2+0=2$, and so forth. Whereas the Fool conveys the image of literally bordering at the edge of Chaos as an abyss with its unlimited potential, the image of the Magician brings an element of organization into the semiotic process because Chaos as a source of potentially significant meanings is always “seen as Creative” (Hoffmeyer and Emmeche 1991, 162). It is the Magician that is able to quantum-mechanically “create information out of nothing” (Lloyd 2006, 118), *ex nihilo*, the zero mark, the Fool. The Magician’s autopoietic function complements the spontaneously emerging, and relatively stable, structure—order out of chaos—within the totality of the process in the overall triadic sign system. The relative stability is a sign of semiosis: A new regime of signs is part of the overall dynamics reflected in the evolutionary process represented in the sequence of Tarot cards. The aforementioned increase in knowledge as the ordering of information results from the dynamic understanding as the creation of meanings, which indeed is what human experience is all about; in other words, the artistic, creative construction of logic “from the basic intuitive



Fig. 4. The Fool.

act of making a distinction and two fundamental arithmetical acts: (1) making a mark to signify the distinction and (2) repeating the mark” (Noddings and Shore 1984, 51; see Spencer-Brown 1979). The unnumbered, and apparently insignificant, Fool precedes the Magician, which signifies the distinction. Following the Fool’s leap into the abyss, it is the



Magician, numbered 1, that actively constructs the logic as represented by multiple bracketing {...{...}...}, that is, making a difference in the context of each consequent Arcanum, similar to the infinite series shown in Fig. 5.⁹

The number 21 in the sequence is the last major Arcanum, called “The World” (in some decks “The Universe”), which represents oneness with the world. Ontologically, the circular shape in the image is a symbol for the never-ending process. In contemporary cosmology, the so-called weak holographic principle (Smolin 2001) posits the world as consisting of processes, or events, that can be perceived only through representations. Theoretically, representations—or, in semiotic terms, signs that by definition conform to the medieval *aliquid pro aliquo* formula (something [stands] for something

Fig. 5. From Barrow 2000, 160, Fig. 5.6; see Rucker 1982, 40.

[else])—are all there is; they represent Whitehead’s one kind of entity. These dynamical entities acting in the world are signs or “representations by which one set of events in the history of the universe receives information about other parts of the world” (Smolin 2001, 177). Because they occur on a scale below ordinary human perception—in Hermetic terms, in the realm of the invisible—they can be seen only in their projected format. An analogy perhaps is a cinematic screen representing 3D reality in only two dimensions; a loss in dimensions is implied. We do not know, in general, the total number of hidden dimensions that may have been compacted (Lloyd 2006). The screen metaphor is potent: It accords with the Tarot layout being spread on a flat surface, making such a surface a locus of potential meanings (Deleuze 1990; Semetsky 2002) projected in the pattern of the pictures. Symbols that are inscribed in the images wait to be read and interpreted, contributing to the transformation of information from potential into actual. The fact is that

the area of a screen—indeed, the area of any surface in space—is really nothing but the capacity of that surface as a channel for information . . . according to the weak holographic principle space is nothing but a way of talking about all the different channels of communication that allow information to pass from observer to observer. . . . In short, the holographic principle is the ultimate realization of the notion that the world is a network of relationships. These relationships are revealed by this new principle to involve nothing but information. (Smolin 2001, 177–78)

The network of relationships consists of signs, which by virtue of their triadic nature are relational rather than substantial entities. A Tarot layout—functioning as a screen, or projection¹⁰—thus presents a spatiotemporal organization of informational “bits” and pieces (pun intended), or signs that are represented by individual pictures. The discrete representation of the psyche does not contradict the discreteness of space posited by Lee Smolin’s (2001) quantum account of the structure of space and time. It only makes us question whether we should continue positing psyche, in a Cartesian fashion, as adimensional and nonextended. Respectively, the quantum theory in its ontological (Bohmian) interpretation posits the indivisible unity of the world, which is capable of being fully realized not as a substantial but only as a relational or interactional system that continuously undergoes transformations between its various manifestations.

As regards the psychology of perception, “space-time ceases to be a pure given in order to become . . . the nexus of differential relations in the subject, and the object itself ceases to be an empirical given in order to become the product of these relations” (Deleuze 1993, 89) when brought to consciousness, that is, actualized. The created novelty is in fact a decision made, or a direction taken by means of the autocatalytic web built by the Magician’s double-pointed wand. The wand establishes multiple becomings in a mode of “a new threshold, a new direction of zigzagging line, a new course for the border” (Deleuze 1995, 45). In making a decision, the Magician in us employs the method of inference, which cannot be reduced to deductive reasoning from premises to conclusion because the premise in question would be at the unconscious level amid many potentialities. Importantly, it is actuality that “is the decision amid ‘potentiality’ The real internal constitution of an actual entity constitutes a decision conditioning the creativity which transcends the actuality” (Whitehead 1978, 93). The creative method of inference “used” by the Magician is akin to what Peirce called abduction and which “comes to us as a flash. It is an act of insight” (Peirce 1860–1911, 5.181), or intuition, or imagination whose function is analogous to a certain “automatism [as] the psychic mechanism of perception” (Deleuze 1993, 90; compare Semetsky 2005b).

Abduction functions quasi-instantaneously not because there is no temporal interval of inference but because mind remains unaware of when it begins or ends. Describing the structure of abduction, Peirce noted that

“the first premise is not actually thought, though it is in the mind habitually. This, of itself would not make the inference unconscious. But it is so because it is not recognized as an inference; the conclusion is accepted without our knowing how” (8.64–65).

Can we represent the Magician’s abductive leap mathematically, thereby moving closer to providing some sort of naturalistic explanation for the functioning of this sign? Perhaps it can be modeled on the complex plane by means of imaginary numbers¹¹ that were indeed dubbed *magical* by Roger Penrose and that “appear to play a fundamental role in the working of the universe” (Penrose 2004, 67) and, as implied by the Whiteheadian one world both without and within, in the working of the human mind as well. The spatial representation of the process-structure that enables the sign of the Magician to function in the world is a grid, although non-Cartesian: The two coordinate axes are located on a Gauss (or Argand) plane and marked with imaginary numbers on the vertical axis and real numbers on the horizontal axis.

The imaginary number i is the square root of -1 . René Descartes had a rather derogatory attitude toward imaginaries; it was he who coined the name. There was no place for them in Isaac Newton’s mechanistic philosophy, either—he considered them plainly impossible. Gottfried Wilhelm Leibniz recognized their intermediary character and positioned them at the ontological level between being and nonbeing. The true metaphysics of imaginary number was elusive even for Carl Friedrich Gauss, who however took their geometrical representation as establishing their meaning. Imaginary and real numbers together form the plane on which a point represents a complex number $a+bi$. The point stands for the complementary pair a of the real numbers and b of the imaginary numbers. An analytical representation of direction is also possible by means of a vector, or the directed magnitude describing *transmission*, that is, the act of taking and bringing home, used by Whitehead as an analogue for his “prehesion” in *Process and Reality*. It is the Magician’s creative wand that establishes directedness, that is, “a vector [that] already indicates in which direction the new structure may be expected” (Jantsch 1980, 46). A vector by definition has both magnitude and direction; it can be described in principle by both a mathematical quantity and a physical property. A vectorial diagram therefore represents the dynamics inherent in abstract structure. It is an organizational pattern reflecting Whitehead’s process ontology: a process-structure (with \sim).

Vectors model natural entities, lines of force. In Whiteheadian geometry the very idea of the point is the point as irreducibly complex. The higher level of complexity would have encompassed the physical level in itself like two nested circles, not unlike the Pythagorean tetractys encompassing natural numbers that are inside the integers that are inside the rationals that are inside the reals, and the reals themselves being just a line

among the complex numbers populating the whole plane, notwithstanding an increase in dimensions, and hence order. In fact, the phenomenal realm along the reals on the horizontal axis is just a projection, a pale Platonic shadow of the complex entities constituting the world of Ideas, among which “The Magician” is number 1. The Magician’s action creates the magnitude along the vertical axis leading to the *depth* in the understanding—that is, the signs’ ultimate intelligibility by virtue of “contact with some sort of Platonic world” (Penrose, in Penrose et al. 1997, 125). The core of Penrose’s ontological argument is that the physical world may be considered a projection of the Platonic world, and the world of mind arises from part of the physical world, thus enabling one in this process to insightfully grasp and, respectively, understand some part of the Platonic world.

The bottom-up leap toward an open future is the Magician’s quasi-instantaneous action along the vertical axis of imaginary numbers that establishes the above-below relation so as to insightfully grasp some of the true, the good, and the beautiful that inhabit the Platonic world. Yet, this action itself is (in)formed via the top-down character of some *relationis transcendentalis* (transcendental relations) that Abner Shimony, addressing the hypothetical status of mentality in nature, dubbed a super-selection rule in nature (in Penrose et al. 1997, 144–60). This information (as magnitude b) would inadvertently affect the very direction the diagonal resultant vector would have taken. The complex number $a+bi$, pointed to by the arrow of the vector, indeed represents diagonal, or transversal, communication, in accord with the rules of projective geometry when two coplanar lines intersect (Fig. 6; see note 10):

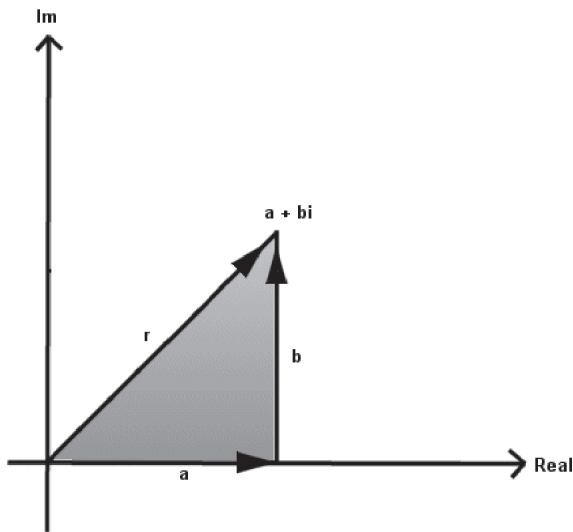


Fig. 6. The complex plane.

The Magician's creative action agrees with Whitehead's process that constructs itself in two modes: internally, or microscopically, by virtue of self-determination toward some future goal in terms of "satisfaction" (Whitehead 1978, 283), and externally, or macroscopically, within the objective field that comprises a series of actual occasions. As Whitehead was saying, "the world within experience is identical with the world beyond experience, the occasion of experience is within the world and the world is in the occasion" (1961, 228).

In terms of human perception, the unfolding proceeds precisely in two modes, and the plane is "the unfolded surface [that] is never the opposite of the fold . . . I project the world 'on the surface of a folding'" (Deleuze 1993, 93, quoting Jean Cocteau [1983, 79–80]). The Magician's double-indexed wand as a symbol for grasping moral meanings as *primum cognitum* ([being-as-]first-known) makes the aforementioned *relationis transcendentalis* in fact immanent in perception. The rule of the parallelogram of forces as the geometrical addition of vectors amounts to the resultant vector r that encompasses two dimensions simultaneously, external and internal, representing dynamics inscribed in the indiscernible succession of mental states. The Magician functions so as to "pursue the different series, to travel along the different levels, and cross all thresholds; instead of simply displaying phenomena or statements in their vertical or horizontal dimensions, one must form a transversal or mobile diagonal line" (Deleuze 1988, 22), the latter corresponding to the resultant vector (in Fig. 6) without which no dynamic understanding as the creation of new meanings would have been possible.

The shaded area in Fig. 6 is equivalent to *logical depth*, a term elaborated by Jesper Hoffmeyer (1993). Information theory defines a message's logical depth as the expression of its meaning, its worth or value. Hoffmeyer labels such logical depth "a semiotic freedom" (1993, 66). In Peircean terms, freedom at the level of action, that is, as a category of ethics, is Firstness that manifests in the logical form of creative abduction. Peirce understands logic not just as an invention of logicians but as a *ratio* that always already exists in experience. It is the logic of the included middle that by its very definition creates a proportion, a ratio. Ethics and logic together constitute a complementary pair because it is specifically triadic semiotics, based on the logic of the included middle, which is defined as ethics of thinking, that for Peirce is inseparable from human conduct, that is, ethics of doing. Human conduct is not reduced to observable behavior but "is a complex of inner thought and outer social interactions" (Deely 2001, 622). What we called destiny, then, should be defined as a harmony or analogy between "ethical reason [and] experimental logic" (Peirce 1860–1911, 5.430)—a complementary relation that, sure enough, is exercised by the Magician.

The law of analogies as applied to space—*as above, so below*—has its Hermetic correlate also in temporal terms: *That which was is as that which*

will be, and that which will be is as that which was. In a Tarot layout, the philosophical time of coexistence splits into its three dimensions, which are spatially distributed within one and the same spread. The future, as well as the past, is the present of philosophical time. It is a sequence of many events that constitutes one enduring object, which is represented in the spatial configuration of a layout. It is when “frozen in their locations in space and time” (Kennedy 2003, 53) that all past, present, and future events appear to coexist quite in accord with the block-universe view of relativity theory. That is, the Tarot diachronic dimension becomes compressed into a single synchronic slice of a layout when the dynamical process of semiosis becomes spread out, or projected—that is, momentarily frozen in its location in space-time—in the here-and-now of each reading because of the relatedness, which functions in accord with the rules of projective geometry. The present state of the human mind, accordingly, comprises both past and possible future events projected in the cards’ positions (Semetsky 2006a, b). Positions signifying the future aspect of time correspond to the specific synthesis of time, the *memory of the future*. This expression is not an oxymoron; the block-universe ontology, for example, implies the tenseless coexistence of the past, present, and future. The static layout does not contradict such ontology. Time becomes paradoxically atemporal, tenseless, and, as pertaining to its functioning in a Tarot layout, is essentially expressed in its fine-structured format that unites positions combining past, present, and future, similar to a hypothetical temporal map displaying in the here-and-now the dynamics of what was before and what will have been after. The subject of the reading in the present moment appears to coexist with itself later: *me-now* is simultaneous with *me-tomorrow* in agreement with the so-called triangle argument (Fig. 7) of the block-universe, which concedes that some events in the past and future coexist. The dotted lines indicate simultaneity, simultaneity implies coexistence, and the coexistence *relation* is indicated by the two-headed arrow—analogously to the

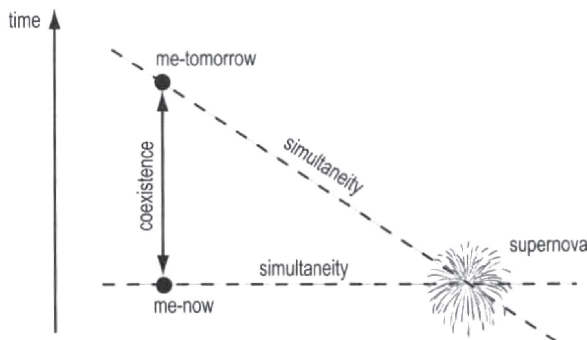


Fig. 7. The Triangle Argument (from Kennedy 2003, 63, Fig. 5.3).

double-directedness of the Magician's wand that establishes an "extreme contiguity" (Deleuze and Guattari 1994, 173) between *above* and *below* as well as between *before* and *after*. According to Whitehead, future is implicit in each event as *becoming* because everything is everywhere and at all times.

The presence of the Magician in the world, illustrated by Figs. 6 and 7, enables a particular organization of thought that makes precognition possible. The "magical" double-pointed wand is a symbol of the dual resonating action not unlike events in general relativity that exert a causal influence on the very structure of events. Structures are thereby evolving; they are indeed process-structures defying the strictly linear causality of classical mechanics. The circular causality operates two-directionally: "from the bottom up (projection) and . . . from the top down (reinjection). . . . So-called precognition would really involve only the resonance of an event that is explicate now with an event that is *later*" (Griffin 1986, 129).

Although *reading* is the conventional term for interpreting a Tarot spread, the meaning of it, in practical terms, comes close to what in contemporary cognitive science (Von Eckardt 1996) has been called a *theory of content determination* for the human mental representations system, especially with regard to habits as their psychological grounding. If "certain sorts of ink spots . . . have certain effects on the conduct, mental and bodily, of the interpreter" (Peirce 1860–1911, 4.431, quoted in Von Eckardt 1996, 151), the interpretation effectuates a habit change according to a lawful relationship (even if we do not yet know the formalism of the law as such). "Ink spots" belong to a specific type of projective technique used as an assessment test in psychology, namely, the Rorschach method viewed as a structured interview or a dialogue for evaluating interpersonal and intrapsychic transactions. During readings, the static structure of the layout is itself a projection, in the sense of projective geometry, or a snapshot of a dynamic process as the very action of signs: a complementary process-structure pair. As a paradigmatic relation, Tarot displays the triadic quality of representation, relationality, and mediation, thus constituting what Peirce called "a portraiture of Thought" (4.11) in its projected form of a layout. Barbara Von Eckardt insists that "we do not *use* our propositional attitudes. Rather, they themselves involve a 'use' of, or an attitude toward, a content" (1996, 165). Contrary to the Cartesian ego-centered subject, this inversion implies the as-yet subjectless—that is, bordering on possessive and forceful—nature of mental states when they function unconsciously as blind habits. Because of the mediating function of interpretation, the latent, unconscious, contents of the mind are rendered conscious, and the signs that are brought to the level of awareness—that is, intensified and amplified up to the point of their possible integration into consciousness—are capable of creating a momentous feedback in the psychodynamic processes of the subject of a reading. This self-organizing dynamics produces "a change in the subject's mental life which, in turn, changes his or her disposition to

act . . . in ways dependent *on the content of representation*" (Von Eckardt 1996, 283–84). Signs are relational, and they form a process-structure as a network of complex causal relations between events. The Tarot layout is a sign, itself the included middle, that mediates between the world without and the world within and represents both of them in relation, notwithstanding that we ourselves as participants, and not detached observers, are continuously enacting and reenacting the world in question.

Not limited to the knowledge of facts, it is the Magician's *phronesis*, or deep understanding of the connectedness of things, that leads to the revaluation of experience, enriching the latter with value and meaning.¹² That is why each "actual entity is seen as a process; [and] there is a growth from phase to phase" (Whitehead 1978, 283), from pattern to pattern along the Tarot road. The Magician in us combines sensitive perception with the practical ethics of know-how (Varela 1999) and strikes this resonating chord¹³ that makes us act wisely, cooperatively, and in harmony with the environing world. Nature, which is causally open, exceeds the realm of Seconds and includes its own virtual dimension, which is however never beyond experience because experience itself is a relational category, a *fold*: As structured by sign-relations, human experience is an unfolding expression of a deeper semiotic process, into which it becomes enfolded. This means that experience always already has a religious dimension understood as "*re-ligio*, the linking backward to the origin" (Jantsch 1980, 218), even as the origin is virtual. The deep meaning of the evolutionary process of experience is expressed in the language of signs (Semetsky 2006a) that can be read and understood via its own mediation by symbols and images. Indeed,

Truth didn't come into the world naked
but in [arche]types and images. Truth is received only
that way. There is rebirth and its image.
They must be reborn through image.¹⁴

It is precisely the value of understanding that Whitehead's promise of knowledge holds. "To treat the thing as a unity" (Whitehead 1966, 451) is one mode of understanding enacted by the Magician, who is capable of connecting the dots in the evolving experience, thus making it meaningful. When the Magician appears in a reading, it brings reassurance and the feeling of Whiteheadian satisfaction as a specific instance of freedom.

NOTES

A brief version of this essay, under the title “The Magician’s Adventures in the World: Becoming, Creativity, and Transversal Communication,” was presented at the 6th International Whitehead Conference, “The Importance of Process—System and Adventure,” Salzburg University, Austria, 3–6 July 2006. An earlier and different version, titled “The Magician—Marketplace Teacher, or Eros Contained and Uncontained,” was presented at the 25th Annual Semiotic Society of America Meeting, Purdue University, U.S.A., 28 September–1 October 2000, and subsequently published under the title “The Magician’s Autopoietic Action, or Eros Contained and Uncontained” in the journal *Trickster’s Way* 2/3 (Trinity University, U.S.A., 2003), followed by “The transversal communication, or: reconciling science and magic,” in the journal *Cybernetics and Human Knowing* 15/2 (2008): 22–48.

1. Illustrations on Figures 1, 3, and 4 are from Rider-Waite Tarot Deck, known also as the Rider Tarot and the Waite Tarot. Reproduced by permission of US Games Systems Inc., Stamford, CT 06902, USA. Copyright ©1971 by US Games Systems, Inc. Further reproduction is prohibited.

2. In the Preface to *The Complementary Nature*, J. A. Scott Kelso and David A. Engstrom refer to Kelso’s principle of “the In-Between” first addressed at the symposium on developmental science in Stockholm in 1998 (2006, xiii). As explained further below, that is where the Magician “resides”: in-between—indeed, like a genuine sign.

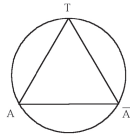
3. The meaning of *Arcana* is “secrets or mysteries. Emanuel Swedenborg titled one of his works *Arcana Coelestia*” (Ferguson 1976, 17).

4. Nicholas Rescher refers to the medieval *causa* as a concept that abolishes a dualism between causes and reasons “which the moderns since the time of Descartes have . . . insisted on separating sharply” (2000, 40).

5. Michaux’s book, published by Gallimard in Paris in 1948 under the title *L’Espace du Dedans*, appeared in English as *Selected Writings: The Space Within* (trans. with introduction by Richard Ellmann) in The New Directions Series, printed in France by Henri Marchand and Company.

6. In “The Neglected Argument for the Reality of God,” written in 1908, Peirce presents *musement* as an element of the abductivelike—that is, intuitive or insightful—process.

7. In “The Metaphysics of Reason” (2001) Argyris Nicolaidis presents quantum dynamics embedded in triadic relations that would have defied binary either-or logic, as shown:



The third term T necessarily provides a bridge between the dyad of A and not-A. Therefore a single quantum entity will have comprised three terms, quite in agreement with the Peircean triadic sign (Fig. 2). For Peirce, the whole universe is composed of signs.

8. See Semetsky 2006c, 443–44. When a spread of Tarot cards is interpreted, or “read,” people are provided an opportunity to learn from experience, both actual and potential, by means of self-reflection and critical reasoning. See also Semetsky 2005a.

9. An anonymous reviewer has pointed out that the logical process as shown in Fig. 5 is confined to natural numbers while Deleuze’s *transversal* sounds as if it is borrowed from George Cantor’s diagonalization theorem, that is, the road to real numbers and beyond. I reserve judgment on the compatibility between Deleuze and Cantor’s conceptualizations. Deleuze, however, employed the differential geometry of Georg Friedrich Bernhard Riemann as well as Rüdiger Lautmann’s notion of transcendence-immanence of ideas in mathematics. For Deleuze’s import and application of mathematical concepts see DeLanda 2002 or Salanskis 1996. As for Fig. 5 and the counting numbers, my point was precisely this: to emphasize the constructivist “presence” in the process of understanding and the fact that each Arcanum is signified by its accompanying whole number as a discrete event. Citing Stapp, “physically described world [is] . . . built . . . out of objective tendencies—potentialities—for certain discrete, whole actual events to occur. Each such event has both a psychologically described aspect, which is essen-

tially an increment in knowledge" (2007, 9). Fig. 5 refers to such increments in knowledge. But see also Fig. 6, which indeed represents Deleuze's transversal line expressed in complex (exceeding real) numbers.

10. The term *projection* is used in this essay in both its mathematical and psychological sense. Figs. 6 and 7 are conceptualized on the basis of descriptive geometry that employs perspectival composition, which uses the image-creating technique of parallel projectors emanating from an imaginary object and intersecting a plane of projection at right angles (coplanar). The complex point in Fig. 6, for example, symbolizes the closure of the triangle on itself, making a genuine triadic sign self-referential indeed; strictly speaking, however, this point is akin to a "vanishing point." Martin Joughin, one of Deleuze's translators, says in his Translator's Notes to Deleuze's *Negotiations*, "the principal sense of *ligne d'horizon* is the 'vanishing line' on which all parallel horizontal lines in a perspectival composition would, if indefinitely extended, intersect. . . . The 'projective geometry' associated with such compositions is . . . echoed in Deleuze's . . . invocations of *lignes de fuite* and *points de fuite*, usually translated 'lines of flight' and 'points of flight': the flight or escape from some constricting frame of action or experience is also, within this frame, a sort of 'immaterial' vanishing through or beyond its limits, its event horizon" (Joughin 1995, 200). As a case of mathematical transformations in general, projection carries some psychological connotations. Shadow, for example, is a type of transformation but also one of the Jungian archetypes of the collective unconscious according to his depth psychology. Incidentally, among the Tarot pictures, the meaning of the archetypal Shadow, which is usually buried very deep in the unconscious or sometimes "projected" onto significant others, is conveyed by "The Devil" (see Semetsky 2006b). In the context of Peirce's semiotics, Rene Thom (1985) presents a case of projected shadow as an example of (structural) isomorphism produced by interaction or coupling. Light itself, illuminating the original and casting the shadow (copy), performs the function of interaction. Thom believes that the formation of copies (images) is a manifestation of the universal dynamics that "allows the appearance of forms . . . charged with meaning" (1985, 280). In Fig. 6 the length a (in our 3D classical world) is just a shadow or projection of the transversal line on the horizontal axis akin to a Platonic copy as an image or shadow on the walls of the Cave.

11. For detailed analysis in semiotic terms see Semetsky 2005b.

12. Basarab Nicolescu (2002a, b) takes a transdisciplinary approach to nature and knowledge. Transdisciplinary knowledge, as based on the logic of the included middle, necessarily leads to the inclusion of values and harmonious understanding versus simple analytic reasoning.

13. As beautifully put in words by Leonard Cohen in his *Hallelujah*, "Now I heard there was a secret chord that David played and it pleased the Lord, but you don't really care for music, do you? Well it goes like this, the fourth the fifth, the minor fall and the major lift, the baffled king composing hallelujah."

14. See Sean Martin's reference to The Gospel of Philip in *The Gnostic Bible*. Martin says that according to the Gospel of Philip "the truths of gnosis have to be transformed into poetic and mythic language" (Martin 2006, 37) so that we become able to understand them.

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