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Transdisciplinarity of Edusemiotics

Revealing mutual reciprocities between design and semiotics

Abstract: Edusemiotics emerges as a fresh field of inquiry that benefits from the mutual reciprocities between design thinking and semiotic interpretation. By revealing these mutual reciprocities, edusemiotics emerges as one of the most important developments in educational philosophy, bridging the gap between the humanities and sciences that was fashioned by modernity and postmodernity. In a transmodern world, we are free and able to cross over diaphanous boundaries among diverse disciplines and transcend our assumptions about the ephemeral phenomena of reality. The transdisciplinarity of edusemiotics encourages us to integrate theoretical investigations and practical applications in both humanities and sciences, and turns our attention to the development of our capacity to integrate factual information and imaginative interpretation. Therefore, we truly become educators of adult learners.

Keywords: design; evolutionary love; intentionality; reality; semiotics; transdisciplinarity; transmodernity

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1 Parents of the undisciplined newborn

Edusemiotics is certainly the newborn child of the recent efforts of semiotics to highlight the importance of transdisciplinary knowledge in education. As both the teaching of semiotics and the semiotics of teaching (Nöth 2010), edusemiotics is a new educational philosophy that crosses over the mind–body dualism and challenges the absoluteness of disciplines. The notion of *edusemiotics* was initially coined by Marcel Danesi (2010) to signify a new interdisciplinary (or rather transdisciplinary) field of inquiry that has emerged from the intersection of semiotics and educational philosophy advanced by Inna Semetsky (2010, 2013). It was the Swiss philosopher Jean Piaget (1896–1980) who developed the concept of "transdisciplinarity" to transcend the

humanities–sciences schism (Nicolescu 2008, 2010). As I shall explain shortly, the parents of this newborn child, edusemiotics, are *Design* and *Semiotics*; certainly, both of them capture the very essence of transdisciplinarity (Seif 2015).

Although the link between edusemiotics and its maternal parent (semiotics) is undisputable, the connection to its paternal side (design) is unfamiliar. Put in different words, of course, edusemiotics developed from semiotics, but it is unknown how design contributes to the conceptualization of edusemiotics. While edusemiotics extracts its inspiration from the transdisciplinary knowledge of both design and semiotics, the transdisciplinarity of edusemiotics faces the challenge of conventional perception and limited understanding of learning theory and education. This is not surprising: the overarching semiotics, in general, remains not widely accepted as the perfect tool for understanding teaching and learning (Nöth 2010). What is surprising, however, is that transdisciplinary knowledge with its guises goes back to the time of antiquity, and is at the core of John Dewey's theory of inquiry, Charles W. Morris's signification, and Charles S. Peirce's semiotics, among many others (cf. Deely 2001; Petrilli 2010; Semetsky 2013).

Moreover, despite the fact that Thomas A. Sebeok (2001) rejected the cleavage between arts and sciences, the challenge still has to do with the predicament of whether semiotics resides within the realm of humanities or the realm of sciences. Semiotics repositioned globally is not a discipline, or to use Ponzio's expression, it is "undisciplined" (Petrilli and Ponzio 2014: 315). Nor is semiotics just an "interdisciplinary enterprise" (Morris 1964: 1); rather, it is a *transdisciplinary* perspective, a framework of understanding. Even as an ancient vocation of symptomatology (focusing on symptoms), semiotics is, as Susan Petrilli and Augusto Ponzio (2014: 293) put it, "diagnostic without patients," having a threefold orientation toward the past, the present, and the future, where semiosis and life come together (Sebeok 2001) as an indispensable condition for learning and teaching.

Achievement in education requires an integration of logical understanding and imaginative interpretation augmented by purposeful desire. Purposeful desire is essentially imaginative, which is found neither in "charts and statistics" nor in "rule and percept" (Dewey 1934: 349). "Semiotics is ultimately a form of inquiry into how humans shape raw sensory information into knowledge-based categories through sign-interpretation and sign-creation" (Danesi 2010: ix). Granted, one can categorize raw sensory information into knowledge through sign-interpretation; however, it is highly unlikely for one to engage in sign-creation without engaging in the act of design.

Not only has the mainstream educational system and professional practice hardly been "shaped by semiotic theories or insights" (Danesi 2010: x), but

conservative sciences and traditional arts are also hardly ever influenced by the design approach. The absence or the narrow understanding of the role of design and semiotics in the study of traditional disciplines has obscured the ever-present interconnection between sciences and humanities and, more critically, has limited their impact on the development of teaching and learning in these disciplines. The role of "undisciplined" edusemiotics is to free us from the trap of absolute disciplines. Like any semiotic enterprise, education is an interpretive account. Interpretation itself is based on an open-ended semiotic process, and any attempt to capture this fluid and transparent reality in its dynamic flux is to trap the flow and arrest it in a moment of mere introspection.

The essence of design and semiotics is a transdisciplinary (not just an interdisciplinary) form of inquiry. Similar to the "semioethical strategy," which interweaves "fluidly and freely across disciplines and fields" (Petrilli and Ponzio 2014: 324), edusemiotics is an excellent example of how design thinking benefits semiotics. I am keenly aware of the intertwined, yet unfamiliar, relationship between design and semiotics; and equally, I am astonished by their shared challenges. Sharing the predicament, whether residing in sciences or humanities, semiotics seems to encounter the same challenge design has confronted for a long time.

2 The lonesome two and the dominant others

It is no surprise to anyone that the humanities and sciences have been the two dominant cultures for more than 500 years. During the Renaissance, separation between the sciences and humanities, the natural sciences and human sciences, was unthinkable. After the Renaissance era, arts and sciences separated from each other, becoming two autonomous cultures. Since then, the disciplines of science and the humanities have traditionally been focused on the development of knowledge concerning factual information and historical records of human conduct and cultural practices. Within the confining boundaries of automatous disciplines, it is highly unlikely the integration of factual information and imaginative interpretation can take place. It is certainly limiting and unjustifiable to consider education as relying only on fact and scientific observation.

Whereas the humanities and sciences are familiar cultures, design is the unfamiliar "third culture" (Margolin and Buchanan 1995) as much as semiotics is the "new branch" of human knowledge (Locke 1690). Design and semiotics are not just disciplines that fit into the humanities or sciences; design and

semiotics have not become institutionalized. Design and semiotics have become the lonesome two.

Neither conventional sciences nor traditional arts have paid sufficient attention to design as a third culture and semiotics as a new branch of knowledge; consequently, the development of education has been painfully slow and limited. Like many other specialized fields of education, learning in these fields has been limited to a specific trade oriented toward maintaining the prevailing socioeconomic habits, leading ultimately to specialized vocabulary that has furthered the compartmentalization of knowledge. The gap between science-based knowledge and knowledge more focused on the humanities has become wider than ever (Seif 2015). But genuine education is really about "the practice of freedom," says Paulo Freire (1970: 39); it is the means by which adult learners "deal critically and creatively with reality and discover how to participate in the transformation of their world" (Freire 1970: 34), taking full semioethical responsibility for leading meaningful sociocultural change.

While sciences supply factual information, humanities provide the context for imaginative interpretation;[1] but only through design and semiotics can human beings engage in meaning-making activities (Seif 2016b). Semiotics has the potential to overcome the gap between science and the humanities (Nöth 2010). However, the challenge still has to do with the predicament of whether design and semiotics reside within the realm of humanities or the realm of science. Because of its unique transdisciplinary perspective, semiotics overcomes the Kantian limits of human knowledge (Deely 2007) and the limited perception and understanding of reality ("real" versus "imaginary"). Understanding reality presupposes the doctrine of signs; it is through signs that objects exist regardless of whether they are known to exist or not. "To speak of reality and unreality alike is to use signs, and to know anything of reality or unreality is to rely on signs," says John Deely (2004: 57). Equally important, in order to create new reality, design is indispensable.

1 Sciences are usually concerned with how things are and deal primarily with what is true or factual. Humanities deal generally with the expression of human experiences. An experience is real, but scientific observation is true. Cultural experiences are real, but material things are true. Where the true depends on factual information, the real relies on multiple interpretations (see Seif 2015). Susan Petrilli shares a similar thought about the semioethical theme when she says, "one achieves a meaning of a sign that is truly significant instead of banally true," therefore making a case for the use of designing, "because we are, after all, *reshaping* or *modifying* the sign so that it now points to the meaning that we think matters" (Petrilli and Ponzio 2014: 324).

Unfortunately, the prevailing narrow definition of design is an example of restricting design to the domain of products and artifacts, and is evidence of how specialized disciplines create relics within intellectual silos. This creation of relics is really evident not only in many nondesign disciplines but also in traditional design fields and disciplines. For instance, the idea of design was assumed to be the "sacred cow" of architectural design education, shrouded by esoteric and cultic movements within a veil of mystery (Seif 1999). To recognize the broader concept of design, we need to develop ways of understanding design where we can explore its inclusive dimensions and the way they contribute to edusemiotics.

Like design, semiotics is inclusive of the humanities and sciences – neither semiotics nor design rejects either realm. Semiotics as a new, third branch of human knowledge seems to embody similar characteristics to those of design as a third culture. Design is basically a multidimensional human activity of inquiry; by definition, design is intentional and synthetic, and covers a wide range of disciplines that are essential for engaging in social lives and responding to environmental challenges (Banathy 1996; Cross 1995). Humanities and sciences rely mostly on systematic investigation of search and research, which follows defined processes that are repeatable and result in products that are mostly predictable. Design and semiotics utilize systemic thinking of inquiry, which is holistic, integrative, and interdependent, and leads to unexpected outcomes (Seif 2015, 2016b).

Where design has somehow been accepted as both science and art, semiotics seems to face a more challenging situation. Even though there is no need to debate whether semiotics resides in the sphere of science or the sphere of humanities, the notion of semiotics as the "science of signs" is misleading. This is why the notion of the "doctrine of signs" – which is the expression Thomas Sebeok prefers and adopted from John Locke – makes more sense than the commonly used slogan of "science of signs."[2] As mentioned above, semiotics is essentially a means for human beings to shape sensory information into knowledge-based categories through not only sign-interpretation but also sign-creation (Danesi 2010); semiotics is undoubtedly a transdisciplinary framework.

2 Historically, the notion of "science of signs" seems to come from medical symptoms, a discipline of sciences. John Deely (2004: 32–33) makes a similar argument by tracing the original Latin notion *doctrina signorum*, "doctrine of signs": "What is needed is a tracing of the original uses of the lexical form 'semiotics' with a sense that clearly relates to the doctrine of signs in its general sense, as distinct from specifically medical usage or any other distinctly specific (i.e., subgeneric) usage."

As a transdisciplinary framework, design and semiotics have the potential to bridge the cleavage between science and the humanities, and even the capacity to contribute to the achievements in any discipline and field. Because both design and semiotics are inclusive of the realms of both science and the humanities, they are more mutually reciprocal than many guard-keepers of traditional disciplines dare to admit.

3 Mutual reciprocities between design and semiotics

To underscore the transdisciplinarity of edusemiotics, it is imperative first to reveal the mutual reciprocities[3] between design and semiotics, and how this mutuality has contributed to edusemiotics. Although semiotics has been utilized in architecture and other physical design, as well as in graphic design, the relationship between the idea of *Design* (with a capital "D") and semiotic discourse is largely unfamiliar. Design ability is not possessed by only a chosen few professionals (Cross 1995); nor is semiotic interpretation practiced only by semioticians. In order to reveal the hidden and shared meaning in design and semiotics, we need to do our best to avoid the trap of relying on one-language limitations.

Not surprisingly, the two words "design" and "sign" are intimately connected. Design, from the Latin *designare* means to "mark out, to devise, to choose, to make a sign" (*signum*). The English word "design" with the prefix "de" (de-sign) implies that design is connected to the notion of "sign." In addition to the generally accepted meaning of "opposite" or "undo," the prefix "de" as inherited from Latin and French means "down from," "concerning," or "down to the bottom" – but not "do the opposite of" or "undo," as is the primary function of the English prefix. The "de" prefix is also used in French, Spanish, and Portuguese personal names, originally to indicate place of origin (Online Etymology Dictionary). Moreover, the Italian word *segno* means "sign," *disegno* means "design," and *disegnatore* means "designer." Hence is the evidence of etymological connection between design and semiotics. These

3 The concept of reciprocity, from mid 18th century, originally from French *réciprocité*, from *reciproque*, from Latin *reciprocus* (Online Etymology Dictionary), means "moving backward and forward." Such a concept implies the freedom of edusemiotics to move back and forward between design and semiotics; this freedom also makes clear the intimate relationship between the characteristics (qualities) innate to both design and semiotics.

etymological roots hint at the shared characteristics between design and semiotics.

For the context of this essay, I focus on three interdependent characteristics that are intrinsically and mutually reciprocal to both design and semiotics. These characteristics are intentionality, desire for love, and longing for wholeness. I do not intend to elaborate on the connections among intentionality, love, and wholeness, for these connections have been explored by many scholars. While I make brief references to connections among these characteristics, I want to uncover how these shared characteristics are in the very core of design and semiotics.

3.1 Intentionality in design and semiotics

Design and semiotics are linked through the concept of intentionality. John Deely (2007) has already established the connection between semiotics and intentionality. As the drive for meaning-making, intentionality allows humans to perceive and understand reality not only as past and present, but also as future. Therefore, reality "is not only a question of what *is*, but also of what *could* be and of what *should* be and what *will in* [the] *future be*" (Deely 2002: 110). Since meaning is one of the most significant aspects of "semiotic animals," who are not merely capable of knowing that there are signs, but also make use of signs, human beings emerge as realization of their capacity for perceiving relations of signification and understanding of intentionality (Deely 2007, 2010). And because intentionality contains the inseparability of both our knowing and our forming reality, it implies the interrelation between semiotic knowing and design action.

Arabic philosophers initially introduced the specific concept of intentionality in early medieval times, conceiving it as a significant principal in the thought of the Middle Ages; their thinking may have influenced the work of Thomas Aquinas (1225–1274) on the action of signs. At that time, intentionality meant the epistemological means of how we know reality. Intentionality was twofold: knowing particular existing things or objects, and knowing the relations of these objects and things to general concepts – that is, knowing by conceptualization. Thus, intentionality evolves through conceptualization, which is at the core of contemplative reflection (cf. Schön 1983) through the design process and semiotic interpretation. Intentionality in design and semiotics makes it possible for us not only to perceive the world, but also to make meaning of it.

Intentionality is also associated with vitality, aliveness, and the intensity of experience of making, creating, or designing. Since intentionality conveys a tendency to move toward something, it is a journey, not a destination (Seif 2005). In the Heideggerian sense, intentionality is defined as "care" (*Sorge* in German), a condition where human beings identify their ontological significance of "being-in-the-world" (Heidegger 1962). Intentionality is "care for life" (Sebeok 2001) by which semiosis and life converge, which is what the project of semioethics is all about (Petrilli and Ponzio 2014). In addition to having something to do with design or purpose, intentionality means "to signify," which further reveals the mutual reciprocity between design and semiotics. To signify is to seek meaning and significance, which are only reachable by desire and love.

3.2 Design and semiotics: A dyad on the path of evolutionary love

As I said, intentionality gives a sense of direction, not a predetermined end, and therefore it does not restrict the spontaneity of creative love. Paradoxically, in creative love, we are not impelled by our own desire to fulfill ourselves; rather, we offer ourselves by allowing the creation to grow on its own terms (Hausman 1974). The dynamic and creative principle of love must also be *agapastic*. With respect to the ultimate purpose of love, Peirce uses *agapasm* to talk about the law of love as a cosmic evolution. As a creative act, design is a "philomorphic" (form-loving) activity, to borrow a term from Robert Grudin (1990). The interconnection between the act of love and design activity is significant; as Hegel (1807: 255) reminds us, "for love that does not act has no existence." Design as an act of love ties to both the act of imaginative interpretations and the action of signs. The ultimate purpose of design and semiotics is love.

Following the thought about the paradoxical relation between *agape* and *eros* in understanding creative evolution, it seems obvious that Peirce's understanding of *agape* is inseparable from that of *eros*. Peirce tells us that there are three modes of evolution: "evolution by fortuitous variation, evolution by mechanical necessity, and evolution by creative love" (CP 6.302). The third mode, agapasm, incorporates the other two. In other words, genuine agapasm (agapastic evolution) is the synthesis of chance (anancastic evolution) and necessity (tychastic evolution). "In the very nature of things, the line of demarcation between the three modes of evolution is not perfectly sharp" (CP 6.306). Agapasm impels us toward an expanding continuity. It seems that

agapastic integration is the ultimate teleological aspect of evolution, in which *eros* moves us by design and through semiotics toward the experience of love. Love transcends chance and necessity; it is by desire. Similar to semiotics, the very act of design is an indefatigable desire for love.

Love is the emotion that constitutes social life, where we exist as semiotic animals and where our relations are systemically recreated and evolved. Our identities are not genetically determined or conserved, but they are determined and conserved systemically in loving relations with each other. And these relations are regulated neither by chance nor by blind necessity; rather, they are regulated by desire and creative attraction, the fiery spark of love. This creative attraction is triggered by the love for knowing. The link between knowing and love is implicit in the Hebrew Bible, where the word "know" indicates both the knowledge of God and the conjugal relation, which signifies the desire for learning at the deepest reaches of education.[4] Plato demonstrated in *Phaedrus* how love could motivate *philomath* (the love of learning). Taking this further, love certainly triggers the desire for both *philomathic* and *philomorphic* processes, learning and creating.

As both the teaching of semiotics and the semiotics of teaching (Nöth 2010), edusemiotics does not limit itself to the analysis of formal education and the constraining walls of traditional classrooms (Semetsky 2015). And as an educational philosophy (*philo-sophy*), edusemiotics has the capacity to address informal pedagogy that is augmented by the love of wisdom. Since the word "love" stands for various kinds of love as a "polyvalent noun" (Tullia d'Aragona 1547: 89), love has no limit and transcends fragmented knowledge. When the Greek philosopher and comic playwright Aristophanes declared that the desire and pursuit of wholeness is called love, he hinted at the infinite process of experiencing evolutionary love.

Since the universe is composed of signs, as Peirce tells us, love, we might say, is an infinite semiosis. Like any semiotic phenomenon, love is a sign that includes triadic elements, where the lover, the beloved, and love are only at one semiotic moment; each element in the triad shifts its role and never remains the same. This means that love is in a constant expansion of an infinite process of semiosis, where we become both lovers and beloved beings in an unrelenting desire for wholeness.

4 In the Christian Bible, the word "know" is used to convey lovemaking, and therefore reflects the essence of teaching and learning as an intimate pursuit.

3.3 Design and semiotics: The unrelenting desire for wholeness

In the words of Marcel Proust, drawing from Aristophanes in the *Symposium*: "Love, in the pain of anxiety as in the bliss of desire, is a demand for a whole" (in Lo 2008: 118). It seems that the ultimate purpose of life is to seek wholeness within which to be nested in a larger whole; that is what design and semiotics seek. As the human process for creating a desirable future, design is grounded in the active love and strong desire for experiencing wholeness and is materialized through the act of making. And in a Peircean sense, evolutionary love and synechism (continuity) are at the heart of semiotics. This nesting phenomenon of life, which can best be called *wholophilia* (love of wholeness), is the relentless desire to engage in a co-evolutionary process seeking a larger whole through creative love. For nothing exists in life autonomously for its own sake, it exists for the sake of the whole (Gebser 1949); again, it exists to relentlessly seek the experience of wholeness and to be nested in a larger whole.

Yet the whole is never complete. It is the nature of the phenomenal world. Although the whole is coherent within itself and in terms of its immediate surrounding context, it displays fitness for the greater hierarchies it inhabits (Grudin 1990). A whole must achieve a degree of coherence and consistency in order to endure at all as the same entity across space and time. But as a part of some other whole, it must embrace its incompleteness, or otherwise it will not fit in, and will drift off into its own isolated whole. As Hegel (1807: 11) asserts, "the whole is nothing other than the essence consummating itself through its development."

I view *wholophilia* as a triadic phenomenon that – building on the work of Drew Hyland (2008) – includes our present ontological incompleteness, our recognition of our incompleteness, and our desire to overcome our experience of incompleteness to achieve our longed-for wholeness. Based on Heideggerian notions of temporality and potentiality for "Being-a-whole" (Heidegger 1962), as semiotic animals we carry with us the incompleteness of our past and present, projecting our desires onto the future in the hope for connecting with the infinite source and experiencing the ever-evolving yet continuous wholeness. This love of wholeness governs the affinity for both creating a microcosmic whole and seeking its expansion into an evolving macrocosmic whole.

Since the interpretation of one set of signs becomes, in turn, the expression for an additional set of signs in an infinite semiosis, the manifestation of a particular design activity opens the opportunity for a prerequisite condition for other design activities. Certainly, this is at the heart of Peirce's synechism.

Peirce says, "I have proposed to make synechism mean the tendency to regard everything as continuous" (CP 7.566), and "I carry the doctrine so far as to maintain that continuity governs the whole domain of experience in every element of it" (CP 7.567). Although this idea of synechism means continuity, it is not something thought of as infinitely divisible or proposing sameness. In this sense, while continuity does not mean sameness, it implies transparency between boundaries. Indeed, this transparency is precisely the quality of design and semiotics as a transdisciplinary way of knowing and doing in a transmodern world.

4 Transdisciplinarity and transmodernity: The future of edusemiotics

Our global world is experiencing an unparalleled social movement that is characterized by cognitive revolution, cultural metamorphosis, spiritual awakening, and mutual inter-connectivity. This global experience explicitly conveys a transformational process that is characterized by transdisciplinary knowledge and transparent perception, calling out for meaning-making and holistic understanding. Peirce's understanding of reality corresponds to the key concept of transdisciplinarity (Nicolescu 2010), which rejects absolute reality (Seif 2015). This transparent reality is indeed transmodern. We certainly live in a transmodern world, where the idea of absolute boundaries no longer holds (Seif 2009, 2015, 2016a). Transparency – "diaphaneity" in the Gebserian sense – is the hallmark of transmodernity,[5] which is more inclusive than the older and exclusive perspectives of modernity and postmodernity, and resonates with Gebser's "aperspectival world."

Transdisciplinarity and transparency are characteristics of the analog experience of reality, which is undifferentiated and seamless. That is why education can make sense when connected and interrelated in an analog experience (Seif 2007). Certainly, this analog experience validates the transdisciplinarity of edusemiotics. Borrowing the idea of "bisociation" from Arthur Koestler (1964), it is reasonable to say that although mutual reciprocities

5 What catches our attention in the term transmodernity is the prefix "trans," which comes from the Latin 'across,' denoting beyond, between, and through. That is to say, while transmodernity goes beyond modernity and postmodernity, it does not dismiss either one (Seif 2009).

between design and semiotics may seem to be a free association (bisociation), the existence of edusemiotics becomes unimaginable without both design and semiotics. This leads us to emphasize the important connection between transmodernity and transdisciplinarity.

Although some researchers would make little distinction between interdisciplinary and transdisciplinary inquiry, there is a significant difference between the two approaches. An interdisciplinary approach involves the space between disciplines, using the epistemologies of one discipline within another – e.g. astrophysics, biochemistry. Deeply rooted in imaginative interpretation – and rejecting *a priori* answers and factual information – a transdisciplinary approach brings into focus an issue such as globalization both within and beyond discipline boundaries (cf. Nicolescu 2008) with the possibility of a new aperspectival view on education.

Not only does edusemiotics bridge the gap between sciences and humanities, but it also can be conceived as an excellent framework for integrating factual information and imaginative interpretation. What is deficient, according to Marcel Danesi, however, "is a practical framework for synthesizing the many, yet still scattered, insights into how human representational systems are learned and how these can be used to construct appropriate pedagogical curricula and methods" (Danesi 2010: vii). This practical framework is materialized by the effort of edusemiotics. And this framework needs to transcend ordinary pedagogical methods of conveying factual information into andragogical[6] ways of engaging adult learners in imaginative interpretations. By accepting the transdisciplinary characteristic of edusemiotics, we are able to utilize the whole spectrum of research, search, and inquiry in education (Seif 2016b).

Gaining from mutual reciprocities between a design approach and semiotic discourse, edusemiotics goes beyond descriptive narratives into prescriptive elucidation, where adult learners move beyond being inquisitive apprentices to becoming contemplative learners. In the philosophy of Plato and Plotinus, contemplation is the most critical component for one to connect with the primordial mystical oneness and experience a sense of wholeness. By

6 Andragogy – originally used by the German educator Alexander Kapp in 1833 – is the theory and practice of education of adults. The word arose from the practice of pedagogy to address the specific needs in the education of adults as opposed to the education of children. The approach is encouraged in adult education for its characteristics of experiential and self-directed learning based on critical thinking, reflection, and contemplation. Andragogy is the most appropriate approach to the transdisciplinarity of edusemiotics.

introducing the practice of mysticism and contemplation, semioticians can move beyond pedagogical strategies to an andragogical approach. For example, the idea of introducing the archetypal imagery of Tarot into semiotic education not only leads to a change in the learner's habitual ways of thinking and feeling (Semetsky 2013), but, by adopting freedom of thinking, it also has the potential to trigger the learner's imagination.

There is no reality entirely independent of thought (CP 7.346). The permeability between mind-independent being and mind-dependent being is a two-way relation (Deely 2002). Where all thoughts are signs, and since signs shift easily with context and over time, it is certainly reasonable to take into account the relations between design and semiotics to be transparent. To reiterate, diaphanous perception (Gebser 1949), which is the quintessential feature of transmodernity, is inclusive of modernity and postmodernity, and it does not reject the characteristics of either (Seif 2016a). In this transmodern world, human beings are able to traverse the diaphanous boundaries among disciplines and fields by bridging the gap between the humanities and sciences, thereby transforming what has been in existence into that which is yet-to-come. The transdisciplinary role of edusemiotics in advancing the philosophy of education within this transmodern world can never be overestimated.

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Bionote

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