

UC Irvine

Journal for Learning through the Arts

Title

Ecosystem: A Visualization of Wholeness Amidst Environmental Uncertainty and Fragmentation

Permalink

<https://escholarship.org/uc/item/0r43d2vs>

Journal

Journal for Learning through the Arts, 13(1)

Author

Nokes, Christopher

Publication Date

2017-01-01

DOI

10.21977/D913124073

A Visualisation of Wholeness Amidst Environmental Uncertainty and Fragmentation

**By Christopher Nokes
Vaughan Road Academy**

Abstract

Students are embedded in a stochastic world. Postmodern practitioners of fragmentation accept this, however they dispute Jungian and Eriksonian wholeness. The existential representation ego as a two-dimensional thing, the Kantian-, Jungian- I-formation is questioned. Similarly, Gardnerian frames of mind and MI are questioned as functional pedagogical models within the context of a stochastic reality. Thus, the term literacy must be expanded to address this enduring reality of both the classroom, and the shape-shifting, kaleidoscopic, urban landscapes through which students move daily. Egosystem (Author, 2005) is a perfect model for this environmental kaleidoscope. This requires a new literacy, a true 'reading the world' (Freire, 1995). We understand that the classical ego is an extension of a system of influential forces of the embedding world that inform, shape and re-shape it. Egosystem is the new complex ego struggling for survival. Uncertainty is the undercurrent beneath volatile educational environments wherein visual arts achieves some measure of control by offering challenging design problems. Archaic and modern confrontation with challenges presented by this stochastic world is an impetus for intellectual development through increasing visualization, heightened awareness, self-healing and self-renewal. The search for wholeness extends the Jungian archetype of teleiosis to an enlightened version of the whole Self within an entropic field that tends towards fragmentation. It is the same ego-consciousness and environmental awareness the genus Homo used to negotiate survival within the original stochastic classroom of the African Rift Valley. We witness the same successive growth of modern students learning to solve challenging design problems, to adapt and to change within an uncertain world. As ego evolves into egosystem — with its palpable links to a stochastic environmental milieu — so students evolve through a consequential series of 'successive emancipations of the human will and intellect' (Malraux, 1956).

Introduction

I first developed the neologism *egcosystem* as a pedagogical counterpart to Howard Gardner's frames of mind — his multiple intelligences — which has received criticism over the last two decades (notably, White; 1995) since it offers only subjective rather than scientific evidence. Rather, an evolution of the Kantian ego seemed to be a better starting point with its real connections to the world by invisible tendons, specifically microscopic systems: namely, spiritual, psychological, physiological, intellectual, neurological and experiential; and macroscopic systems, namely, ecological, exosystems (other egosystems), meteorological, cultural, chthonic and cosmic.

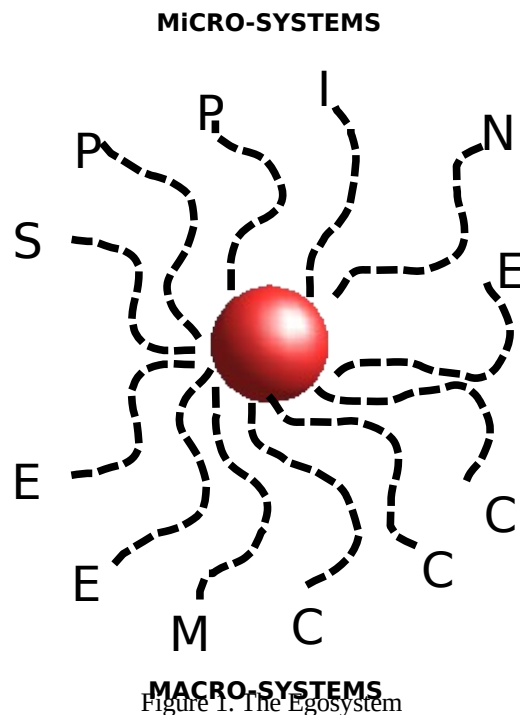


Figure 1. The Ecosystem

More than just *frames of mind*, an ego-system incorporates frames of reference and experience that initiate an individual's unique response to environmental kinds and signs elicited by objects, feelings and events, and subsequent significations that cognitive scientists attribute to subjective reality. Education, especially through the arts, fine-tunes an individual's subjective filters through positive incentive — and strengthens that individual's self-repair, self-healing and self-renewal mechanism — an essential goal of art educators. This is achieved not only by classroom exploration of the world of historical, literary and philosophical ideas, but also by a visual exploration and experimentation in contemporary art, and the healing properties of art-making processes.

Fifteen years of experience as a teacher of International Baccalaureate visual arts, and currently as a

photography, film and visual arts teacher in the world renowned Etobicoke School of the Arts (ESA, Toronto), provides action research and evidence of the self-healing, self-repair and self-renewal aspects of art making in an open studio environment. Reinforced by an intimate knowledge of students coming to terms with personal histories of bullying, depression, mental fragility, abuse, separated families and loneliness, evidence indicates our students find refuge, sanctuary, oases and safety in a contemporary art program that emphasize self-exploration, experimentation and personal passions and positive incentive, in favour of straight-jacketed, imposed techniques of applied art, and an imposed classical canon, none of which reflect either a student's current position in their world, or socio-cultural issues relevant to them as they pursue personal wholeness.

Postmodernists may view human experience of wholeness as fantasy, mere smoke and mirrors, but they cannot deny that their romance with fragmentation springs from the new scientific reality of chaos theory, and (for the last eighty years) a socio-physical world defined by stochastic systems and subject to uncertainty. However, the idea of fragmentation is not necessarily at odds with the concept of wholeness. Indeed, I argue that wholeness and fragmentation are integral aspects of both the human condition and the human psyche. The very motivation for the Global Oneness Project (its primary author being Hilary Hart, 2005-2014) — setting aside for the moment scientific validation for this study — was belief in a universal concept of emotional, intellectual, spiritual and philosophical wholeness in a fragmented world with its fragmented nations, and its fragmented cultures populated by fragmented people and wounded, fragmented souls. Hillary Hart found that, one commonality unites all nations and all people: maintenance of the whole Self, and survival. It speaks (therefore) to the Jungian archetype of teleiosis (completion) — that is, *wholeness*.

In his wonderful little book, *The Undiscovered Self*, Jung ends with an insight that is a restatement of his archetype of wholeness, both in terms of a modern, post-World War II era, and in terms of the modern art movement:

. . . the prophetic spirit of art has turned away from the old object relationship and towards . . . dark chaos of subjectivisms. Certainly art, so far as we can judge of it, has not yet discovered in this darkness what it is that holds all men together and gives expression to their psychic wholeness. . . . The development of modern art with its seemingly nihilistic trend towards disintegration must be understood as the symptom and symbol of a mood of world destruction and world renewal that has set its mark on the age. (122)

In this article I address the notion of self-healing through art-making, and the relevance of providing creative sanctuaries and oases in a sign-filled world of objects, feelings and events that subject egosystems to fragmentation against the individual need to re-assemble those fragmented *organs of the senses* (to use Erik Erikson's phrase from *Childhood and Society*, 1963) into a healthy whole. Education is about reassembling fragmented organs of the senses and intellect by recognizing that students need freedom to create, that positive incentive and encouragement increases self-esteem and that art-making is a worthwhile life pursuit.

Egosystem: A Unity of Parts within the Archetype of Wholeness

It has been the assumption of educators (after Gardner) that students operate out of preferred frames of mind, or assumed intelligences. The only meaning offered by such observations is that (typically) students don a specific personality or frame of mind to meet the situational ethics of a particular classroom. However, I have postulated elsewhere (Nokes, 2005), and will provide some evidence here, that children may in fact operate out of multiple frames of reference while employing a repertory of emotion-historical frames of experience. As well, psychology proceeds on the basis of reintegration of various aspects of the conventional ego into the conscious domain of the Self, putting back together pieces of the fragmented Self, fragmented "organs of the senses" into a meaningful whole, something that the frames of mind model (or MI) cannot deliver. This must change. Recognising that healthy parts make a healthy whole, the question must be asked: is there an argument for the existence of a healthy set of frames of reference and frames of experience, and a correspondingly healthy and robust group of associated systems within the Gestalt I define as *egosystem*? Egosystem represents a psychological-physical model of the Self much more easily accessible and assessable to cognitive scientists, psychologists and educators.

Jung argues that psychology is about moral judgements, and relationships and wholeness of the Self (*Memories, Dreams, Reflections*, 1963; 329-330). Education, whether as archaic human beings learned or modern students learn, is about enlargement and enrichment of the Self as an egosystem, embedded in its own stochastic environmental milieu with those invisible tendons attaching it to all the psychological, physiological, familial, social, chthonic, political, spiritual and cosmic state of affairs (Figure 1). We are not existential beings. We are embedded beings, like it or not. We are not just *I*, but he, she, they. We are the *other*. We are the world which enfolds us.

There is growing evidence that evolution towards intelligence, rational thought and language involves fine tuning of internal dynamic systems, namely, “auditory, articulatory and conceptual,” corresponding to “the integration of emergent [internal] dynamic systems.” (MacWhinney, 1998; parentheses my own) Synthesis of these internal-external systems is the key component of individual wholeness within the domain we may understand now as *egosystem*. Contemporary emergent models, such as those discussed by MacWhinney, do not emphasise enough just how much internal dynamic systems are embedded in external dynamic systems, or how interdependent they are, or how much the conventional existential ego of Kant, Freud and Jung is better characterized as *egosystem*. We are not alone. We are not islands. We are connected undersea.

Notwithstanding Rosen's ambiguous attempt at modelling wholeness in a fragmented world (1996) — symbolized by the paradoxical form of the Klien bottle — the ongoing conflict between postmodern purveyors of *fragmentation* and Jungian adherents to *wholeness* has been given a new perspective by Professor Michael Bryson, Associate professor of English, California State University. He argues that the post-modern view of the impossibility or irrelevancy of centrality and wholeness in a complex and infinite world derives from the, “notion of humans as incomplete, as fragmented, frustrated, ... determined by, and at the mercy of, forces beyond their control.” Indeed, he suggests that this philosophical stand is “not modern — much less postmodern— in the least.” (2014) I agree. Furthermore, the notion of human beings living in a complex world ruled by uncertainty, is an observational experience recorded in literature, history, and philosophy at least since classical times. Unfortunately, so-called postmodernists cannot make any special claim to fragmentation of the human spiritual, moral, psychological milieu. Sorry. Nor can they make any claim against wholeness amidst fragmentation. These things are historically self-evident. The only thing that is new is the proposed *egosystem* as a model of the interconnectedness of component parts forming a whole Self, and evidence of the *interconnectedness of all things* as physicist David Bohm proposed. (1980)

Now, there is a long and enduring history of thought in the literature regarding the inseparable connection between *fragmentation* and *wholeness*. Let me begin with Heraclitus: “Things taken together are whole and not whole, something which is being brought together and brought apart, which is in tune and out of tune;...[*incentivus*]... out of all things there comes a unity, and out of unity all things” (Fragment 10; *Thales to Aristotle*, square parentheses my own); and from Fragment 112, “unitary whole, concordant, discordant, from many particulars . . . oneness; from oneness . . . many particulars.” The very idea of

wholeness or oneness is connected by specific realities to the metaphor of a musical instrument in tune (or out of tune) thus setting the tune — *incentive*. It may be in harmony and concordant, or discordant just like an individual with respect to their environmental milieu. Heraclitus understood that harmony between the parts and the whole necessarily leads to an enduring healthy whole. And this brings me to the idea of being in tune with our art students' needs and giving them incentive for success. The very word *incentive*, comes from Middle English and Latin *incentivus*, meaning *setting the tune*. Yes we do. As visual arts teachers we set the tune for artistic and intellectual freedom, success and (even more) self-esteem.

Again, Heraclitus writes, “People do not understand how that which is at variance with itself agrees with itself. There is harmony in the bending back, as in the case of the bow and the lyre” (Fragment 117; 102). He understood that a whole and its parts are not mutually exclusive. A lyre that is well strung and in tune allows the lyricist to play music. Unhealthy strings ruin the health of the whole lyre and make discordant music. Continuing with the metaphor of a musical instrument, if a lyre represents wholeness of human body, mind and spirit, then all the various component parts of the lyre — turning keys, the sound chamber, sound holes, the heel — must function concordantly and well. Healthy, functioning parts make up a healthy functioning whole. This is nothing new.

The simple beauty of *egosystem* is that it offers a model of the ego none can deny. Egosystem, prophetically represented in Marc Chagall's *I and My Village* (1911, Figure 2) is the student ego embedded within a milieu of spiritual, psychological, physiological, cultural, social experiences with other egos, and with ecological, meteorological and chthonic systems, as well as with the institutional and technological realities of a political system. Now, contemporary egosystems have been given almost unbridled access to these *other realities* via the world wide web. In the same way, students have access to each other's realities. This is especially true at ESA, where our students have unique access to teachers and where sharing personal stories is not only encouraged, but also a crucial part of the art curriculum in a shared teaching environment. Even though we can identify egosystems immersed in positive influences (Figure 2), there are egosystems immersed in negative influences as well, (Figure 3). Chagall's experience and memories growing up as a Russian Jew carried with them an idyllic pastoral setting. In contrast, August Natterer, featured in the Prinzhorn Collection as an influential “outsider” artist, paints a bleak portrait of a dominating figure, fiercely glaring across a peopleless townscape. Thus, Hobbes concludes the introduction to his famous political treatise *Leviathan* by intimating that if this connection between

man and the social-political sea in which he swims is not made, then it is, “to decypher without a key.” Likewise, to *decypher* the ego of conventional psychology and philosophy without examining it clearly within the milieu of its own reality, the local world in which it is embedded, is to *decypher* the ego *without a key*. There exists (then) a balance between the egosystem and its component parts and the health of each part. Wholeness and possible fragmentation of that wholeness are thus interconnected in a profound way. Schopenhauer recognized this in his great work *The World as Will and Representation*:

Divisibility implies merely the possibility of splitting the whole into parts; it by no means implies that the whole was compounded out of parts, and thus came into existence. Divisibility merely asserts that . . . [parts and whole] . . . condition each other reciprocally, and to this extent they are always simultaneous. (1844; 496-497)

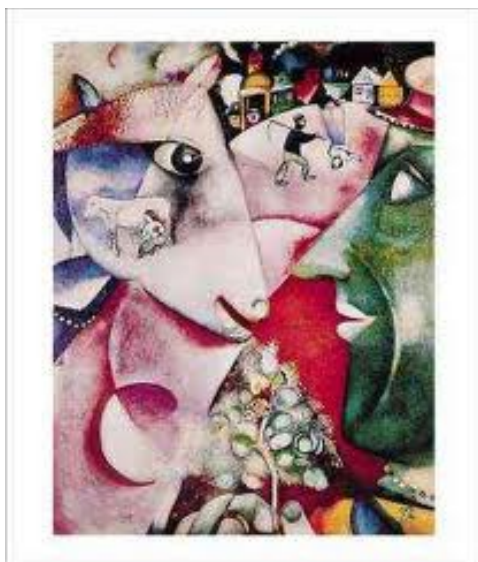


Figure 2. Chagall, I and My Village (1911)



Figure 3. August Natterer, Witch's Head (1915)

At ESA there are no tables or chairs in our art studios. Students and teachers sit on the floor together and discuss and share ideas and personal projects. It is a four-year program starting in Grade Nine (freshman), when students begin to develop their own ideas and style based on their personal passions. In an open

studio format — the brain-child of Matt Varey (also a practicing artist) — there are no formal lessons. Students learn by research and art-making. As Francis Bacon advised, *it is in the doing that ideas come*. Nevertheless, I did give my Grade 9 students a seminar on Dada after they finished their “common object” project which they exhibited at the Gladstone Hotel, a local gallery in Toronto. All visitors assumed that the work they saw looked much older than Grade 9. And yes it did. Students are encouraged to experiment and research contemporary art, (yes) and art also from the classical canon, if it advances their work in terms of precedent, style and a leaping-off point.

ESA is a non-semestered school. However, our majors (Drama, Music Theatre, Music, Visual Arts and Film) have contact hours *every day* for a total of 220 hours over the course of a school year, twice as many contact hours as in a regular program, which must be 110 hours as mandated by the Ontario Ministry of Education. Our students (under teacher supervision) typically stay after school until 7:00 or 8:00 pm just to work on their art. Given the emotional fragility of our students (especially in the freshman year) art studios offer a sanctuary and oases where like-minded and highly creative children can find solace and community.

On our Eighth Portfolio Day — early in November every year — we entertained seventy representatives from art schools around the world, including Parsons of New York and Paris, SVA (New York), Cooper Union (NY), UCLA School of the Arts and Architecture, Camberwell College of Art, Central Saint Martins, Chelsea College of Art, London College of Communication, London College of Fashion, Wimbledon College of Art, also the School of the Art Institute Chicago (SAIC), San Francisco Art School, London, School of the Arts Institute Singapore (SOTA), NASCAD, OCADU, and many others across the UK, Europe, Canada and the US. They come to meet our graduating visual arts students and offer scholarships. Prior to arriving in Toronto, the representatives received images of student work and a video discussing their work. So they come to ESA seeking to interview specific students. This does not testify to our teaching practice, so much as it is a testament to providing highly creative students with space, materials, encouragement and *incentive* to explore and to delve deeply into their souls and to use art-making as a self-repair, self-healing and self-renewal process. Self-healing that art-making brings encourages positive learning experiences, just as it may expose negative historical experiences.

Invisible psychological, physiological, familial, social, cultural and political tendons connect egosystems to an uncertain and hypersensitive world. Interestingly, early modern art, especially Klee and the cubist

tradition of Picasso, and the childlike romanticism of Joan Miro, or the dreamlike images of Chagall (Figures 2, 21 to 23) seemed to define an individual (and his or her world) as fragmented parts of a whole, and not in a negative way, but in a fleeting, dreamlike way. Oddly, Jung was right in his analysis of motivation behind much of the modern art movement, yet he seemed to have misinterpreted the narrative literary, philosophical and historical value in modern art and the cult of wholeness. There has always been a progressive campaign towards *psychic wholeness*. I would argue that modern art is not a symptom of political, moral, intellectual *disintegration*, so much as it is a clarion call for a renewed consciousness of this complex and hypersensitive world in which we are embedded; it is a clarion call against the military-industrial complex; it is a clarion call against modern science and technology that creates weapons of mass destruction; a clarion call against the madness of a nation's economic dialectic that directs most of its budget towards the very things that have killed, are killing, and will kill its people — the machinations of war. We have succumbed, East and West, to what anthropologists call habituation: a toxic environment to which species become accustomed little by little, leading ultimately to their demise. The greatest source of fragmentation within the State and within the individual is the external threat of *hostile brethren* (yet another Jungian archetype). We see this hostility playing out in the genocide of Rwanda and Kosovo, most recently in the Crimean Peninsula and the Ukraine, yet again, where East (Russia) faces West (America) on an ideological battlefield. Modern man's romance with science and technology of weaponry is a form of madness, pure and simple. It has been an ongoing narrative especially in Twentieth Century art. Look no further than *If not, not* by Kitaj (Figure 4), with the gates of Auschwitz looming in the background, and *In the Land of the German's* by Franz Radziwill (Figure 5). To that end, Foucault closes *Madness and Civilization* with this thought:

This does not mean that madness is the only language common to the work of art and the modern world . . . ; but it means that, through madness, a work that seems to drown in the world, ... and to transfigure itself with the features of pathology alone, actually engages within itself the world's time, masters it, and leads it; by the madness which interrupts it, a work of art opens a void, a moment of silence, a question without answer, provokes a breach without reconciliation where the world is forced to face the question itself. . . . The madness in which the work is engulfed is the space of our enterprise, it is the endless path to fulfilment, . . . (1988; 288)



Figure 4. *If not, not* by Kitaj (1975)



Figure 5. *In the land of the Germans* by Franz Radziwill (1947)

Both the Kitaj and Radziwill paintings represent the madness in which an egosystem may be engulfed, and it is this madness that represents, in Foucault's words, the *space of our enterprise*, and is thus defined by it and succumbs to it, and is shaped by it during waking hours, just as it is reshaped by it during sleep and dream. From an historical point of view, the German experience in the first half of the Twentieth Century is an essay on 20/20 hindsight and misdirected foresight. Shamefully (in a parallel reality), it symbolizes an art-education environment wherein teacher-directed, straight-jacketed design assignments chase good, highly creative students away, at the expense of a new pedagogy that is directed away from status quo, and towards than positive innovation.

Sapian's greatest attribute is hindsight — and his greatest failing is foresight. It is a seminal contradiction that is with us, and whether we know it or not, it remains a focus of education. In the past, we have trained students to have unmitigated foresight. However, *unmitigated* means, without the benefit of literary, historical and philosophical perspective — no contact with the world of ideas. Nevertheless, the role of the educator, for instance, especially in art and design is to minimize the surrounding gulf between what is perceived and what is real; between what is conceived and what is designed; between what is proposed and what is done; between what is designed and what is built; between foresight and hindsight. It is sapian's nature to set as a goal wholeness, and it is sapian's nature (in the end) to accept a partially achieved wholeness. However, this in no way diminishes the target goal of *wholeness* in and of itself. Take for example visual arts teachers who set as a goal becoming world class artists, yet settle for teaching art and design, instead. Arguably, in this scenario there is a certain completion within incompleteness. The end result is not a life choice that is necessarily either bad or diminished. Rather, the choice rests upon a series of circumstances that select one or a few attainable aspects of the egosystem —

over the unattainable whole — with the remaining unattainable aspects of the egosystem left to fend for themselves in the interest of self-repair, self-healing and self-renewal. This is another key contradiction in life: healthy parts of a fragmented egosystem, or an unresolved healthy whole. I guess it is pretty much the same thing.

In *Essay on Man* Cassirer writes, “Contradiction is the very element of human existence. Man has no *nature* — no simple or homogeneous being” (11). In this Cassirer echoes Ortega y Gasset's notion that “man has not nature, what he has is . . . history” (1961). Sapien’s very essence and being are wrapped in the symbolic universe through which he or she moves, wrapped in his or her personal historical-intellectual-spiritual experience, wrapped in political, social, psychological environmental contradictions, at the base of which there remains *choice*. People certainly cannot be encapsulated within a simple homogeneous being to be sure. (Once again, I offer the neologism *sapien* as a philosophical euphemism to replace *man* with a word that includes man *and* woman.) People are as complex as the world in which they are embedded. Nevertheless, the very idea of a complex, multi-functional and multidimensional being — with *choice* — suggests that in the worst of times this complex being is fragmented — leading to some measure of psychological, emotional and intellectual disorder — and in the best of times the components of this complex being are integrated into a healthy whole (*by degrees*, as Darwin would say).

Egosystem: Indeterminacy, Uncertainty and the Creative Spirit

Dadas like Hartfeld, Picasso, Duchamp and André Breton, and (originally) Magritte, Dali and Man Ray, created artforms celebrating the fragmentation of man and society. Arguably modern art began with the Dada movement of the post-World War I era — if we agree to set aside William Turner’s *Lighthouse* (1844) for another time, As well, the discovery of the atomic world and quantum mechanics and uncertainty that subatomic physics brought forth by Bohr, Einstein and Heisenberg, led to a stochastic understanding of the universe. In turn, Einstein’s new physics led to a new road map of the universe, and at the same time pulled the rug out from the feet of humanity. Causality and determinism were discarded in favour of probability and uncertainty. Complex systems replaced machinery of a deterministic world. Lindley recounts these volatile times in his book *Uncertainty*:

It's striking that...quantum mechanics arose in Germany during so strange...a phase of that country's history...Germany's collapse in the First World War led to profound disillusion with the past, ... not just Bismarckian statescraft, ... but the whole ethos, rooted in science,

of determinism and order. There arose in opposition to the old ways a sort of romantic revivalism, embracing nature over the machine, passion over reason, chaos over logic. If history, like science, was deterministic, and if that determinism had resulted in Germany's downfall, then evidently some other kind of history was urgently required.... scientists, too, to avoid being associated with the discredited past and to curry favor in the new intellectual climate,..abandoned determinism and marched under the banner of chance, probability and uncertainty. (2007; 177-179)

Sadly, the chaotic and uncertain world of post-WWI Germany — which gave birth to the modern cult of genius, the Dadas and Surrealists — is the same kind of environment (although with familial, societal and cultural overtones) that has given birth to creative genius here at ESA. Indeterminacy and uncertainty feed the creative spirit of students that feel they have been deprived of something they had to leave behind them: art-making and play. “Art,” reminds Robert Frost, “is the one thing we bring forward from childhood.” I also would add *play*, since in kindergarten and Grade One (especially) *art-making* is presented as *play*. Play as make-believe or art-making figures strongly into Kieran Egan’s model of *the educated mind*. “Pointless, purposeless activity is after all how play used to be defined until its fundamental psychological and social importance became clear.” (154) Egan goes on to say that, “Play has sometimes been described as a rehearsal, preparing for real and serious learning later on, but it might better be seen as the most serious learning in which we engage, on whose success all later learning depends.” (242) Even Piaget supported this educational platform when he celebrated benefits and necessity of *ritual play*. (1962) Indeed, I argue that wholeness and fragmentation are integral aspects of both the human condition and the human psyche.

What postmodernists call fragmentation (then) is the reality of the human condition. It does not countermand wholeness. Rather, fragmentation is a precursor to wholeness, just as wholeness begs for fragmentation in a process physicists call entropy. Education essentially guides and nurtures fragmented intellectual, emotional and spiritual conditions of students towards a state of wholeness — *by degrees*. Now, I cannot speak to education (in general) as a guide and nurturer of the delicate human spirit of our children. Nevertheless, I can easily speak to how, gentle, highly creative but fragile souls here at ESA find art-making a unique experience that tends to heal their wounded souls through a positive, encouraging and open studio environment, wherein support and care from both teacher and fellow students is second nature. Everything our students produce is looked upon as a positive step in the right direction;

everything they do is met with accolades, kind suggestion and friendly persuasion. Still, they remain arbiters of their own growth and success. Through a four year process, we indirectly teach students self-awareness, self-confidence, self-relevancy and a pathway to self-repair, self-healing and self-renewal. Cognitive science does not need to be an Oedipal process, ignoring historical and philosophical perspective, whereby we cast away old family portraits when we clean house — you know, and Oedipal over-reaction and over-rejections of history. We do not throw out Garderian MI. We just transform it into a more applicable cognitive and learning model. Everything is relevant. Everything applies. “We live in a symbolic universe,” writes Ernst Cassirer in *Essay on Man*. “Everything has meaning. Every feature of human experience has a claim to reality.”

The experience of an individual ego (in fact) uniquely connected to its total environment. Fragmentation is a consequence of moral, spiritual, psychological, intellectual, physiological and physical *entropy* in as much as it is a process towards moral, spiritual, psychological, intellectual, physiological and physical *wholeness*, and it is a consequence (also) of familial, educational, social and cultural happenstance. Transcending the reality of fragmentation to achieve a state of wholeness (no matter how temporary this state of wholeness) is not outdated, nor is it an essential principle. This duality has always been under the preview of psychology and learning as each practitioner attempts to reassemble fragmented aspects of the ego. Egosystem is proposed merely to provide a tangible, visual model of a familiar, complex environment in which the ego is embedded. Egosystem — without equivocation — points to various relevant micro- and macro-systems that are likely sources of individual fragmentation. Egosystem is a multi-variable function. Egosystem is a model for the beauty of fragmentation, self-repair, self-healing, self-renewal and self-awareness, as much as it is a model for wholeness (again, by degrees).

Egosystem: *The “I” as a Symbolical Ark*

Egosystem is immersed in stochastic environments, and is subjected continuously to biosocioecological stresses and pressures that attempt to fragment aspects of the Self and (at the same time) to encourage intelligent behaviour for survival in shape-shifting landscapes, and to encourage the inevitable pursuit of wholeness our genus has striven for since it first descended out of marginal African forests, and stepped foot onto expansive savannahs along the Great Rift Valley. Arguably, then, early significant advances in hominin intelligence were a direct consequence of pressures initiated by survival strategies gained (by degrees) in negotiating volatile, shape-shifting landscapes. The modern classroom is a kind of shape-shifting, kaleidoscopic landscape, too. We must accept the premise that these biosocioecological

pressures may have both negative and positive consequences, the descent of intelligence being the foremost positive consequence. Other early challenging environmental design problems include: killing at a distance, fording rapids, specialised tool-making, and various social pressures involved with survival and continuance of the tribe, as well as creative thinking needed to counteract those social pressures, and to ensure continuance and competitive advantage by developing new technologies that address efficiently (and quickly) immediate survival needs. In the same way, challenging environmental design problems represented in the modern classroom include social negotiation and diplomacy — like design strategies to survive a hostile or problematic teacher, survival strategies to deal with (say) a class bully to survive in a volatile classroom — time management strategies, workload management design strategies, and creating both process work and product under stress. Although problem-solving has a different focus now than it did for our Palaeolithic ancestors, still the essential goal is the same: safety, survival and continuance.

Critical awareness of our environment is what makes us human, and it is what makes human beings — ancient or modern — able to perceive the *I* as an existential animate object, a subjective reality, and (at the same time) able to perceive that this same *I* is connected to everything surrounding it in a most profound way. Physicist David Bohm recognized “the interconnectedness of all things.” (1980) The egosystem (then) becomes a viable pedagogical substitute for Gardner’s frames of mind and multiple intelligences. In fact, Gardner has received critical scrutiny over the past twenty-five years for a theory that does not hold up in the classroom (as White points out) as anything that can offer a good assessment or measurement instrument, much less identify students’ needs or student success, or (indeed) provides a true colouration of students’ physiological, psychological, familial, social or cultural reality. Egosystem provides real-time portraits of students’ physical-emotional dependencies that specifically inform and shape their individual frames of reference. Any *weakness* observed in our students by traditional standards, we celebrate at ESA, and guide students into understanding those perceived unique weaknesses, are unique strengths and a springboard into making works of art. Ernst Cassirer writes in *Essay on Man*, that consciousness is the true definition of our uniqueness, and we are defined by the extent of our human industry and work and our ability to communicate ideas. Our students are I-centred, no question. This is true certainly throughout high school and into college and university, as well. In part, that is why Kant in *Critique of Pure Reason* recognised that understanding this I-formation is the fundamental component of psychology. (1781; 113, 248*, 251, 259, 375) The Kantian *I* is populated with so many aspects of the Self, it is like a symbolical ark of related species all vying for control: I, me, myself, numero uno, man, woman, ego, super-ego, libido, id, persona, animus, anima, temenos (the

sanctuary of the child within), the soul, and the shadow (our dark side, so uniquely fundamental that it must be included among the Jungian archetypes). These represent a very real connection with our mythical past, especially as they form psychic linkages with biosocioecological pressures and stresses that attempt to fragment the individual, while they (simultaneously) embrace the individual with a feeling of belonging to the greater whole

Pre-existent, *a priori* psychic conditions not acquired by experience, but rather *archaic types* that we may identify as core aspects of our existence, Jung talks about as “universal dispositions of the mind” that transcend culture, race and family. “They are analogous,” continues Jung, “to Plato's forms . . . [whereof] . . . we are not dealing with categories of reason, but categories of the imagination.” (*Psyche & Symbol*, 1958; 292) Because they originate in the imagination, Jung characterises these forms as *visual typical images*, *primordial images*, or *archaic types*. (1964; 57-58) And so, Jung coined the word *archetypes* to represent “autonomous spirits” of the unconscious associated with individual imagination and individual-community belief and mythology originating out of our primordial African experience. Jungian archetypes are a helpful reminder, not only of our origins, but also of Freire’s sense of what a true “reading of the world” means in human development (1995). Pre-logical, pre-verbal man (like infants and young toddlers) learn about the world in which they are embedded by reading the world initially with their five senses that ultimately form and shape their physical-intellectual frames of reference in a complex and uncertain modern (or archaic) environment.

We can accept Jung’s “categories of imagination” with this proviso: that imagination be regarded, not solely as a gift of genetics, but (even more) as acquired expertise in solving challenging environmental design problems. Archaic human forms saw these challenging environmental design problems as their first encounters with this complex and uncertain world, whether it is *H. habilis* attempting to cross a fast-flowing river using a fallen tree, or finding protection from volcanic eruptions in a mountain cave, or making fire by spinning a stick on a wooden base. Likewise, exposing children to challenging design problems in the classroom is an essential exercise in exploration and experimentation. This is what I attempt to bring to my pre-IB (Grade 9) visual arts students. Whether it is creating a thematic 6 x 6 game board, game pieces and rules of play, or a new species based on combining body parts of the five classes of vertebrate animals, or creating a found object sculpture, or — as we do at ESA — transforming a common object (like a pill bottle or a broom or a bicycle wheel) into something non-trivial, controversial and meaningful, the solution to the problem becomes a vehicle for experimentation and exploration of a

student's personal passions and relevant emotional concerns. I used to tell my IB students that I cannot teach them to be great artists, but what I can, and will do, is teach them how to be experts at the *process* of design and critical analysis. The situation is different at ESA since all students enter as fine natural artists. Yet, they still need instruction in the value of design processes. While immersed in the design process, students reflect on their personal repertory of knowledge, an extension of their personal frames of reference, even if these experiences and reference points are embedded in an uncertain and stochastic world.

This brings me back again to Gardner's frames of mind and multiple intelligences. Yes they are interesting propositions. However, they seem to misdirect understanding of how people learn and how they move through shape-shifting, kaleidoscopic, biosocioecological landscapes. As a counter proposition, it seems to me that we are not really dealing with "frames of mind" so much as frames of reference and egosystems. Student egosystems are linked to their frames of reference and frames of experience, and not to any one or several *intelligences*. Herein resides the fundamental connection with students within the framework of multi-cultural modern classrooms. The connection is as deep as it is authentic. In fact, the Jungian archetypes provide a poignant measure of common human linkages: the good mother Earth; the male and female devouring monsters (animus and anima, respectively); the dream of a golden age or Paradise; the dream of flying; the great spirit; the God-image; the sacred precinct, *temenos*, or sanctuary of the primordial child, the eternal child within; the wise old man; the union of opposites (heaven-hell, good-evil, male-female, infinite-finite; day-night); hostile brethren (Gilgamesh-Enkidu, Lancelot-Arthur, Jekyll-Hyde, God-Lucifer; Cain-Abel); the hero myth; the dream of self-sacrifice; the archetype of wholeness (or *teleiosis*); the shadow, the darkside of the Self; the Prince of Darkness; and (of course) the Kantian *I*. All of these visual typical images unite people, unite students, around the world. Archetypes are simply categories of myth and imagination that, along with Schopenhauer's *inner constitution of the world* — the world of *all possible perceived things* — are understood by us subjectively through the intellect. Thus, we cannot think in terms of existential independence of ourselves from everything and everybody else in the world, but rather the interdependence of ourselves and things, as well as the interdependence of the symbolical ark moving through shape-shifting landscapes that also shape and re-shape and inform who we are as individuals. The neologism *egosystem* (then) is proposed to accommodate the ego embedded in an uncertain, shape-shifting and complex world.

Our symbolical ark drifts through this world (in the language of semiology) of objects, events and feelings, all referent signs that make up our environmental milieu: *signals, symptoms, symbols, icons, indexes* and

names. (Saussure, 1916; Lacan, 1966; Sebeok, 2001) These signs constitute an ancestral, individual repertory of mythical-, emotional-, historical-based experience. In a sign-filled world, egosystem is uniquely bound the pursuit of wholeness, as well as safety, physical and mental health, and continuance. Identifying the Jungian archetype of completion and authenticity in our students is difficult using Gardner's frames of mind model, because it assumes a kind of completeness without resolution. Authenticity in human behaviour is discovered through understanding and recognition of the existence of the egosystem in all its complexity. At the same time, it requires cognitive scientists, psychologists and educators to accept that identifying the uncertainty and stochastic nature of environments in which an egosystem is embedded is fundamental to learning. Why? Examining student learning behaviour must be cast against the background of physiological, psychological, familial, social, societal boundaries in their world subjected to ecological, meteorological, cultural, chthonic and ideological uncertainties. This complexity is uniquely tangible, and not just a sentimental nod to suspected intelligences that simply characterizes our children as stereotypes.

In assessing the manifestation of these archetypes in sapian behaviour, Jung looks to another psychic phenomenon — the unified culture of the human condition and human affairs — that he interprets as a quest for anthropomorphic meaning “in the arrangement of events.” He argues that “meaning” may be elusive and unknowable and indefinable, precisely because it is an *irrational* construct in place of authentic values and truth. However, authenticity does not fall under the rationalistic method of the West Jung refers to as *Weltanschauung* in *Psyche and Symbol* (51-52), and again in *The Undiscovered Self* (1958, 157). The idea of authenticity generates a true integration and mirror of cultural types in the classroom. Nevertheless, the mirror is cloudy, and people, cultures and belief systems are many and varied. We cannot pretend to ourselves, or to our students, that the universe is understandable, accessible or assessable at all socio-cultural levels. Of course, our mathematics and science colleagues will say that the universe is indeed understandable, accessible and assessable. However, philosophers and visual arts teachers will say that the universe is understandable, accessible or assessable (yes), but only as we know it to be true, *now*. Schopenhauer alludes to the unknowable universe when he writes that, “nature is at once *appearance* and *thing* in itself.” The universe seems to be both something we understand through science and observation, nevertheless the truth is yet to be discovered — the *thing* itself. Heidegger (in *On Time and Being*) also describes this duality of things as, first *being* (the thing and the category it denotes), and second as *Being*, its *Presence* (the connotation of the thing). Thus, we tell our students that there are two

truths: what we *see*, and what we *feel*: what

In deference to Howard Gardner, it seems we may safely move from his frames of mind, to frames of reference and experience. Frames of reference and frames of experience really define egosystem in the simplest and most tangible of terms. How individuals reference their environment, and how they truly experience it, lays the groundwork for an historical perspective that is uniquely connected to that individual as a repertory of positive-negative associations. This repertory of references and experiences are possible key factors in defining both encumbered human intelligence, and *un*-encumbered human intelligence — and therein lies the problematic MI. In truth, *encumbered* and *unencumbered* intelligences are connected to environmental uncertainties. However, it all comes down to the limitation of *reading* and knowing the world through which we move. This limitation to knowing things phenomenologically is also limited (or enhanced) by technological extensions to our senses that can penetrate to increasingly smaller or larger scales; and so through technology our senses are increasingly refined even though they remain imperfect. Therefore, Paulo Freire's notion of “reading the world” is initiated by and, founded upon, an individual's ability see and by seeing, to understand, yet truly limited by current technology (telescopes, radio telescopes, electron micrography).

A common thought experiment defines precisely Schopenhauer's reference to the world — the irrational world — being at once appearance and the thing itself, that is the irrationality of reality. Just look at Magritte's, *The Human Condition* (Figure 6). Is the observer looking at a natural landscape through a transparent canvas, or is the observer looking at a painting that exactly matches the landscape beyond? Does Georgia O'Keeffe's *Jack-in-the-Pulpit* (Figure 7) represent petals of the vagina, or is it just filling a canvas in a beautiful way with flower petals? O'Keeffe always denied the former, in spite of her critics. So it seems both subjective *and* objective reality are fuzzy and, like subatomic particles in quantum physics, demand a law of human perception similar to Heisenberg's uncertainty principle: measure a student's emotional-creative status, and you make undefined (or *fuzzy*) that student's intellectual-historical experience. Therefore, in terms of egosystem, referential and experiential *fuzziness* do not negate existential meaning in that person's life. Meaning may appear on the surface as an irrational aspect of civilised reality: art and the art-making process. Or it may appear as a simple rationality that applies to primitive hunting societies, such as the world of the King Bushman of Botswana (Figure 8).



Figure 6. Magritte, *The Human Condition* (1933)



Figure 7. Georgia O'Keeffe, *Jack-in-the-Pulpit No. IV* (1927)

At the same time, Twentieth Century photography of a live human birth represents a kind of irrationality, a mystery that begs the question, *where do we come from?* (Figure 9). Still, the irrationality of birth, leads to a rational being (hopefully). Nonetheless, each image is tied to its own

Figure 8. Nigel Pavitt, *Bushman in Botswana Wilderness*.

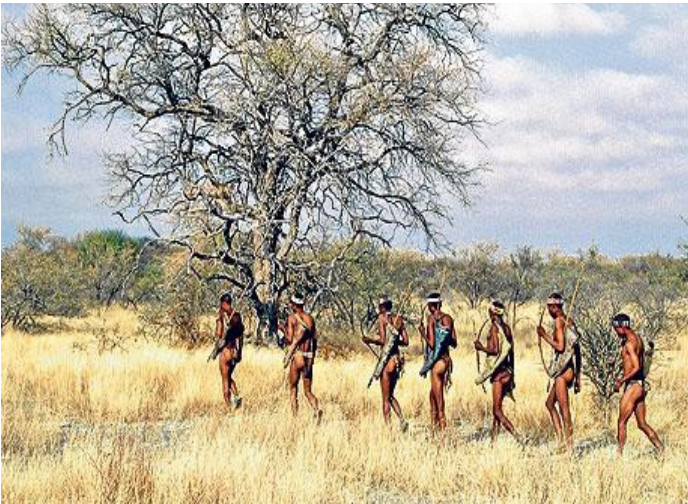


Figure 9. Wayne Miller (1955), from



The Family of Man.

relevant technology — for the Bushman, the bow and arrow; for Miller, the camera, and the enduring mystical nature of birth and modern medicine. Here is a narrative of the irrationality of the human condition: one, a Stone Age culture surviving into the Twenty-First Century; the other, the agony, ecstasy, mystery and miracle of human birth.

It is the same kind of irrational and rational dichotomy we see in the classroom. Rationality in our high school system (for instance) takes the form of a student's acceptance of a teaching moment or a seminar in

the classroom. One of my students at ESA got hung up on a unit theme titled *Heaven and Hell* in my sophomore photography class. She understandably went immediately to the biblical reference. She comes from a religious family. Fine. In contrast, irrationality in the classroom takes the form of a discussion of the many forms of *heaven* and *hell* that are euphemistically used, often as a description of events and feelings in everyday life, to which interpretation her classmates ultimately guided her. To clarify meaning, by *rational* I suggest a non-derogatory reference to behaviour that is untempered and untouched by worldliness, cynicism, or social non-conformity. By *irrational* I mean students that have come into contact with the world of ideas (mostly through reading, good parenting and good teaching practice) and approach life with healthy cynicism, skepticism and a penchant for non-conformity. Thus, students often strike teachers — and their parents and friends — as to falling into one of two categories: *rational* or *irrational*. At ESA we embrace *irrational*.

Teachers tend to choose one (rational) over the other as an ingrained social preference. Yet, an argument can be made that the *irrational* student — still young, of course, and developing — is floating between many realities, or *frames of reference*. In contrast, Gardner characterises frames of mind as learning regimes, namely: linguistic, logical-mathematical, musical, spatial, kinaesthetic, interpersonal and intrapersonal (Gardner, 1983) and naturalist / environmental (Gardner, 1998); and we may also add cybernetic intelligence to his list (Nokes, 2005). Yet, we may surmise now that (indeed) students operate out of several frames of reference and experience. Whereas frames of mind or MI, seem to be mere sentimental, pedagogical pap. I always thought Gardner's co-founder of Project Zero at Harvard, D. N. Perkins with his book *Knowledge as Design* (1986) had far more value to add to pedagogy. His notion that you can teach any subject as a design process is uniquely measurable (but more on this another time).

We are all of us students of the phenomenal world. Students are blossoming generalists, and this is to be encouraged in our ongoing endeavour to guide them towards a more effective *reading of the world*. Ideally, they will acquire increasing ability to solve challenging environmental and psychological design problems in the stochastic, hypersensitive biosocioecological milieu that is their world, their rural or urban landscape, neighbourhood, classroom, household. Ultimately, as educators we offer them in the classroom a growing repertory of practical and conceptual usages.

Egosystem: *Incentives to Learning and Critical Thinking Amidst Uncertainty*

The egosystem filters the world through multiple frames of reference linked by invisible tendons to

spiritual, psychological, intellectual, experiential, neurological, physiological, chthonic, meteorological, familial, social, cultural and political influences (see Figure 1). Accordingly, the ego falls under the influence of what Jung calls “an unconscious factor” when (for instance) at the mercy of unknown, subtle or barely invisible disturbances, the ego succumbs to external forces. “Hence it is of greatest importance,” continues Jung, “that the ego be anchored in the world of consciousness.” (1958, pp 23-24) I agree. If students in the classroom happen to be reliving some familial confrontation, it may reveal itself in-class daydreams, mouthing angry words given and received, jerking arms and shoulders as they relive an incident they want to forget, forgive, surrender and *un-feel* again. Deeply. This form of *irrational* behaviour has a definitive anchor in shared reality. Teachers say, “Child, put your thoughts in writing, in your sketchbook and on canvas. See what happens to them. Just know you are not alone.”

Egosystem is anchored to this *world of consciousness*. Teachers see these mysterious disturbances in the classroom all the time. They are often mistaken for bad behaviour. In fact, these disturbances are just students acting within multiple frames of reference of the multivariable function characterized as *egosystem*. Embedded within a complex and uncertain world, egosystem is linked to an individual's several frames of reference — embedded in their frames of experience — and (yes) more than to any *frame of mind*. I choose frames of reference over *frames of mind* because the former involves an external reality linked to intellectual, emotion-historical experience, whereas the latter involves only sentimental recognition of perceived unique individual strengths divorced from the objective world of signs. Often overt (possibly negative) student behaviour patterns are associated with conflicting psychological spectra within their cognitive systems, wherein sign-signification processes, and a personal repertory of emotion-historical experiences, are a consequence (pure and simple) of life in this hypersensitive, stochastic world. Teachers must always keep in mind that the most difficult students come to the classroom with several or all of their invisible tendons pulling them in many psychological and physiological directions. They are survivalists (by degrees) of chaotic circumstances in their homes, in their neighbourhoods, within their cultures, even within their own bodies.

Chaos theory has informed us of the tentative and precarious nature of the world. (Dendrinis and Sonis, 1990; Gilmore, 1993; Ozorio de Almeida, 1988) In that respect, complex emotion-socio-historical experiences, and subsequent responses and actions, are maintained in a databank of what Mandelbrot might call, *turbulent moments of record* (1983) as deep and cumulative memories. Let no teacher forget that each student's life is the result of an *emotion-historical past*. (Bloom, 1996) There is nothing more

evident in ESA studios than a student that comes from a single parent or split household, and who is dealing with depression and other forms of emotional-physical illness. And there is nothing more evident in ESA studios than children dealing with major physical-physiological diagnoses like scoliosis, epilepsy and other birth defects, and dyslexia, diabetes (the list goes on). Again, ESA provides a sanctuary, a creative outlet, a cool though warming breeze, while students wend their way through these physical-emotional disturbances, and while teachers tell them, *all is good and fight the battles worth fighting and it gets better and (now) make some art about your experiences in a bold and powerful and beautiful way.* Surrounding these students is also a community of like-minded, creative souls.

The quintessential visionary and creative mind always sees viable, workable and (more important) identifiable options and solutions, nurtured by, and with easy access to, strong powers of recollection. So, how do educators tap into visionary minds that all students possess (by degrees)? The key challenge for educators is this: expanding students' cognitive range of accessing and understanding symbols and signs this complex and uncertain world presents to them. Emotion, intelligence and effective behaviour patterns are shaped by wide-ranging *domains of cognition* suggests Dolan (2002), cognitive domains that in turn shape attention, memory and reasoning. These *domains of cognition* represent, not just one, but several frames of reference out of which people operate on a daily basis. Again, educators must rethink the limitations of the Gardnerian frames of mind and multiple intelligences, and expand the conceptual framework to include frames of reference, frames of experience and egosystems. These offer more tangible, assessment and evaluation of student performance, than Gardner's sentimental recognition of a student's objective tendencies.

Egosystem: *Intellectual-Spiritual Emancipation within a Complex World*

The progress of sapian settlement on Earth, and the emergence and progress of civilization, represent a voyage of individual and communal discovery, liberation and maturation. It is a voyage that serves as an allegory of a child's education and intellectual development, as well. Prehistoric excursions into the realm of pictorial expression, represented sapian's first *science*, if you will. It was magic, of course, like the pictorial representations so elegantly and poignantly displayed on the walls of the caves of La Chapelle-aux-Saints, the Wilderness Chapel, Chauvet, Altamira and Lascaux by Upper Paeolithic *H. sapiens sapiens* of 30,000 to 17,000 years ago. (Figures 10 to 12) The same pattern of aesthetic development is revealed in child art as it progresses forward through the formative years of junior school to freshman years of high school. (Figures 13, 14 and 15, respectively)

Child art evolves towards a pastiche of the child's world, a self-portrait, of sorts — akin to Chagall's *I and my Village* (Figure 2) — yet within the child's environmental milieu.

Figure 10. Chauvet Caves, I am Man. Figure 11. Spotted Bull, Lascaux Caves. Figure 12. Lascaux. Dead Hunter



Primitive cave paintings actually display a rather sophisticated, surprisingly modern calligraphy, sparsely drawn, beautifully coloured, and possessing a strong narrative quality. Generally, they represent an awakening of consciousness in Upper Palaeolithic sapien, and (perhaps, even more significantly) a realization that the whole world, and everything in it, is spread out and ready for the taking — the Promethean spirit. It is the same awakening of consciousness children experience from birth. The mythical mindedness of small children is a reality that (in the best of all possible worlds) feeds their imaginations. Egan points out in *The Educated Mind* (1997) that this is the direct consequence of storytelling and the development of language and a *mythic understanding* of the union of opposites — another Jungian archetype — (rational-irrational, natural-artefactual, dominance-submissiveness) and the nurturing of imagination through fantasy, metaphor, pictures, narrative and abstraction. (32-69) Whereas Erik Erikson refers to sensual childhood growth and repair of the *organs of the senses*, Egan attaches intellectual growth to *organs of the imagination*. (69) Although he does not reference Gardner directly, Egan suggests that pedagogy surrounding multiple intelligences (in fact) tend “to sentimentalize childhood.” (69)

The notion that children fall into some poetic or artistic or physical category, suggests Egan, really denies the evolutionary development of children.

Figure 13. Child Art . North American. Figure 14. Child Art. North American. Figure 15. Jamaican Child Art



This poetic world — emotional, imaginative, metamorphic — is the foundation of our cultured life, as a species and individually. Logico-mathematical forms of thinking, or rationality, do not properly displace the poetic world, but rather grow out of and develop along with it and provide ample use of language and lore...play and games of young children and these constitute...the ...power ... language gives us. (69)

Children foster the same connections with their art: an emancipation of the creative spirit, will and intellect. Ernst Cassirer attests to sapian's emerging spirit illustrated on the walls of the Palaeolithic temple caves. "Art becomes," Cassirer proclaims, "a discovery of reality . . . art leads back to the very source of reality." (161) This beautiful connection between early childhood and their art is a record of an awakening to a reality that will follow them hopefully to their primary and even junior schooling.

It is the same for teenage art, you know, the art of recovering primary and junior school students who have survived early child education. Art becomes a *re-discovery of reality* precisely because it represents a renewed exploration and self-discovery of the real world and original life experiences of one's mythically-minded origin as a very young child. The act of creating cave paintings was a celebration of life itself. In the same way, the act of a child creating art is a celebration of reality, and (perhaps) even a critical analysis of reality, yet in the most fundamental and simplest of terms. (again, Figures 13 to 15) Thus, cave paintings of our ancestors and the first tentative paintings of our young children mirror burgeoning intellectual freedom and a release of the creative will, a creative leap into a different, hopeful future reality, a renaissance of hope and self-determination — a leap into nuance. And (more often than not) children place themselves amidst a complex, greater world, in which they do not perceive themselves as egosystems, and (yet) see themselves intimately attached to a world of objects, feelings and events. It is the role of teachers to maintain and sustain this hopefulness and inclusiveness, and what becomes a growing sense of free-will and self-determinism, not merely to modify student behaviour, but rather to

modify a teacher's own behaviour in order to address the concept and complexities the neologism *egcosystem* implies. It is not surprising, then, why Immanuel Kant declared that “the freedom of the will is a fundamental problem in psychology.” (1966; 320)

Cave painting attests to the need of human beings to communicate ideas, as well as to proclaim human hegemony and control over natural forces (Figures 13 and 14). However, these same paintings were not simply one society's iconic method of expressing and identifying uniqueness. Even more they proclaim new insights and tentative knowledge of a mysterious universe and forces controlling it. In essence, the first cave paintings re-presented epiphanical awakenings, a new road map to understanding and negotiating through the world more completely. In the same way, instructors in visual arts understand that every work of student art and every *work of mind* (Perkins, 1986), also represent a moral-intellectual awakening. Kant speaks of the Self as, *a complete, well-ordered unity of experience*. (1966; 321) True, if the Self is not fragmented from childhood and on-going historical-emotion negative experiences. Still, we must understand the notion of a *well-ordered* egcosystem in terms of potentiality, and of interconnected and interdependent parts.

We examine (then) a new paradigm of learning and psychology. Mystical modern artists, like Kandinsky and his emotional, sensual expression of lost childhood (Figure 16), Picasso and archaic primitive spirits and authentic values (Figure 17), childlike inspirations of Klee's pastiche of day-to-day life in an ideal land- and townscape (Figure 18), Miro's *Summer* (Figure 19) populated with gravity-less, balloon-like, vaguely anthropomorphic creatures from a child's sketchbook, and (finally) Chagall's reference to childhood whimsy and the Jungian archetype of the dream of flying (Figure 20), are evidence of a resuscitation the Jungian *eternal child within*, a rediscovery of the sanctuary of innocence modern art brings to us. All represent the origin of human consciousness embodied. These images peel back layers of convention and civilisation, to guide students of the world to an enlightened reading of the Self — and an enlightened *reading of the world* — through rediscovery of innocence and childlike exaltation of life, and unadulterated celebration of the five senses. Essential psychological and physiological reconstruction of the fragile process of “individuation — the conscious coming-to-terms with the Self.” (1964; 169)





Figure 17. Picasso. Les Desmoiselles d'Avignon (1907).

The process of human development is one of self-awareness, self-actualisation, individuation and self-assertiveness. This is nowhere more evident than modern classrooms, modelled after ESA (and somewhat after IB visual arts). The artistic process has always (by definition) revealed visual evidence of spiritual-intellectual-emotion emancipation. By comparison, art processes have revealed a form of imprisonment, or withdrawal into the inner Self — a shutdown, as one of my self-proclaimed autistic students said — a complete disassociation and shut down of communication with others. However, even in a student's *shutdown mode*, instead of emancipation from the conventions and burdens of (for lack of a better pedagogical phrase) a television view of reality — *tele* from the Greek meaning *far off*, and *vision* from the Latin meaning *visible* — ESA students inherently tend to see the world through a multi-coloured and ever expanding lens. Providing students with an expanded view of the world allows them to make contact with the world of ideas. What I call *the world of ideas* falls into four categories: scientific-technical, rational-nonfiction, philosophical, and narrative-romantic fiction. Egan describes the first two categories as “a hard, calculative, dehumanizing and arid form of thought inhospitable to myth.” (135)

Still, their relevance and importance in education cannot be diminished, so long as they are given context akin to David Christian's notion of *Big History*, specifically through historical, literary and philosophical perspective. Regardless, Egan writes, “Philosophic understanding comes from a belief that one's general schemes disclose the truth about reality, often pellucid and simple forms that draw together everything one knows. It is as though the dark glass has been drawn away, and at last one really understands.” (136) Egan is right. Art is a self-liberating process that leads back to the very source of life. Likewise, for Cassirer, “Art is the process of self-liberation.” (224)

Figure 18. Paul Klee, *Moonrise and*

Figure 19. Joan Miro, *Summer*

Figure 20. Marc Chagall, *Above the Town* (1915)



Sunset (1919)



(1938)



Therefore, can we affirm that art is life? Well, yes it is for many students. Art is a method of solving physical, physiological, psychological, familial, social and cultural life problems. It is the same for “students” of all ages and all times. It is the same for students of the African forests and Savannahs — archaic *H. habilis* — as it is for students of the modern world, each in their own way embedded in a complex, stochastic and uncertain world from which they seek some form of physical-intellectual-emotion liberation.

Egosystem: *The City as Metaphor of Self-Repair, Self-Healing and Self-Renewal*

Consider the city as a macrocosmic analogy of the Self. In a city, what provides (or ensures) any sort of unity or interconnectedness are lines of communication, including networks of railways, subways, skywalks, underground concourses and roadways. There is also technology and social media — telephone, blackberry, iphone, television, personal computer, lap-top, note-book, ipad, and email, twitter, facebook, aps — devices and platforms that are turning modern technological society, the modern city, the planet, into a living, breathing, pulsating organism capturing the global human condition in a digital nutshell — and all dedicated to *making the world a better place*. It is the same universal historical experience that Canadian artist John Hartman (for example) has referenced in his painting series entitled, *Cities*. (Figures 21 to 24) The modern city is a global city, a global mirror of a planet-wide visual culture that is transforming the world into unified economic-political-cultural global societies — a global city to be sure. Cities like Hartman's London, New York, Shanghai and Paris, have endured invasions, World Wars, depressions, terrorism, street violence, and have witnessed community renewal and philanthropic, transformative measures (too), all on a grand scale. City is the Gestalt of a breathing, pulsating, complex

organism, a multi-variable function destined to succeed or to fail in the most grandiose fashion.

Likewise, students are poised to succeed or to fail in the most grandiose fashion, depending on a teacher's insight into student egosystems in all their complexity, and to what chaos theorists say is *sensitivity to initial conditions* (Ozorio, 1988; and many others). It is all about the transformation and transmission of information, as McLuhan would say, not the *message* only, but lines of transmission — *the medium of the message*. In education the medium is the teacher (along with an enlightened visual arts program like the one engineered by Varey at ESA), whereas the message is completely dependent upon the teacher's general and specific knowledge, as well as student interest and effort. The challenge of modern teachers is to dig beneath layers of electronic flash and bling in order to discover the true message.



Figure 21. John Hartman, London (2005).



Figure 22. John Hartman, New York (2005).

On the other hand, the challenge for students struggling against the seductive influences of technologies like iphones, notebooks, MP3 players, laptops, twitter, facebook and a multitude of games, and all the aps that promise, *to make the world a better place*, and (at the same time) promise to connect them to the wider world, is to find their authentic voices. Remember (again), these are the ones that years of primary school education and years of familial and cultural pressures whose creative freedom seem to have been suppressed — the suppression of the eternal child within — suppression of the beauty of the art-making process.

Of course, to a great extent ESA encourages the use of technology (such as film, digital photography,

PhotoShop), while it asks students to reach deep inside themselves in order to resuscitate the childlike, gentle spirit of creativity and that unending desire to make art. The medium is the message (yes); but the true message is fragmented by the very medium that (to use a Heideggerean hyphen) re-presents it, and is framed by the telescopic, television lens of respective media. Media, therefore, editorializes the true message due to the size of the lens. The true message (or a close approximation of it) can only be gleaned from multiple technologies, multiple voices and multiple media outlets. And this line of argument brings us to my preference for *frames of reference*, rather than *frames of mind*. The actual *message* is the underlying voice, language, symbolic thought and accompanying literary, historical and philosophical perspective akin to David Christian's *Big History*, and is accessible through electronic media at the very least, and — in the best of all possible worlds — books.





Figure 23. *Shanghai, Pudong from above Bund.*
Bund (2010).

Figure 24. *Paris from the Eiffel Tower Looking East (2010)*

The true message in education attempts to effect psychic wholeness in students. Likewise, a city's master plan, under the guidance of an enlightened municipal government, with its infrastructure, built form, pedestrian and vehicular traffic patterns, integrated gardens, arts, culture and heritage programs (arguably) ensure urban psychic wholeness. Nevertheless, both student and city need a kind of roving, self-repair, self-healing entity, whether in the form of intellectual-emotion strength at the core of a student, or in the form of a functional, forward-looking, progressive municipal government. Context, content and meaning of the message go a long way to protect and ensure psychic wholeness of the individual student, and city. At the same time, signified meaning is the sole domain of our students, and involves (in the language of semiology and the cognitive sciences) sign-signification, recognition and interpretation of objects, events and feelings. Students remain immersed in a complex and uncertain world trying to make sense of it all. Perhaps the best offering teachers can make is to strengthen students' ability to *make sense of it all*. How does this happen? I have been a great advocate (even before his article) of Professor David Christian's concept of *Big History* (2004). It is certainly not enough for all students to have completely, unfettered free reign of their studio space and their head space. I am compelled, because of my contact with intelligent, generalist International Baccalaureate students — simply because it is just damn good pedagogy — to introduce my students (from grade 9 to 12), to the world of ideas. So, if it takes them through a tour of art history and global visual cultures from early human development to the history of civilizations, then I necessarily must provide them with literary, historical and philosophical context, as well. This is especially true given the cultural atmosphere out of which various, transformative art movements have emerged.

We are confronted (then) with the essential goal of education, namely: to make whole the fragmented intellectual and historical-emotion experience of our students, and at the same time, to recognize that they are intimately and forever tethered to a much larger, complex and uncertain world. (Again, see Figure 1) Within this framework, art education must proceed, and must focus on challenging design problems that address some version of Professor David Christian's *Big History* incorporating the progress of human development, art history, literature, philosophy, and (generally) the history of ideas, not only as a contextual approach to art and design, but also as background knowledge supporting the free development of a student's creative spirit. In his prophetic little book, *The Undiscovered Self*, Jung speaks of new modern art that explores (or more correctly) is *nurtured* by social-political fragmentation:

. . . the prophetic spirit of art has turned away from the old object relationship and towards the . . . dark chaos of subjectivisms. Certainly art . . . has not yet discovered in this darkness what it is that holds all men together and gives expression to their psychic wholeness. . . . The development of modern art with its seemingly nihilistic trend towards disintegration must be understood as the symptom and symbol of a mood of [both] world destruction and world renewal . . . (1957).

At ESA self-renewal is a key goal of our visual arts program. What postmodernists call fragmentation is, in fact, the reality of the human condition. It does not exclusively countermand wholeness. Rather, fragmentation is a precursor to wholeness, just as wholeness begs for fragmentation in a process physicists call entropy. Education essentially guides and nurtures fragmented intellectual, emotional and spiritual conditions of students towards a state of wholeness (by degrees). Cognitive science does not need to be an Oedipal process, whereby we cast away old family portraits when we clean house. Everything is relevant. Everything applies. "We live in a symbolic universe," writes Ernst Cassirer in *Essay on Man*. "Everything has meaning. Every feature of human experience has a claim to reality." The experience of an individual ego is multidimensional and multifunctional — it is an egosystem connected to this world in the most profound and definitive way.

Egosystem: *The New Literacy of Psychic Wholeness*

What ensures psychic wholeness? If components of the Self are analogous to components of a city, then the city infrastructure is a kind of subjective inner world. Objective influences constitute everything

coming in from outside, from other villages, towns and other cities, from other continents and cultures, or economic-social renewal from some meteorological or atmospheric event that should unite humanity (like the kind we hope will be the source of for Porto Rico, or like we thought might happen in Haiti as an investment in future renewal), and social, political, judicial, scientific, technological, industrial, agricultural, environmental and educational policy, all provide context for the pursuit of a kind of psychic wholeness in the city — again it depends on an enlightened municipal government. This is the context for Hartman's visions of the *city*: a complex animated being; a product of, not only human invention, but also human history, creative (and destructive) energy. Nevertheless, some kind of a self-healing, self-renewal entity needs to exist to keep all of the disparate parts together. In the expanding metaphor of the Self as a kind of city (an ego-system with its own individual identity), and the city as a kind of Self (a techno-bio-sociological system with its own civic identity), what is the make-up of this self-healing entity? In an urban context, self-healing and self-renewal require voice and imprint, and must carry meaning and interpretation from the content of the objective outer world, to the inner world of city life on a day-to-day basis, citizen-to-citizen (and student-to-student). Yes, there is an inner voice of the city we listen to, or (more often than not) ignore. Consider collective civic consciousness, like the kind we witnessed during the *Occupy Wall Street* or *Black Lives Matter* movements. It became a balance of two minds: one part creative expression, and one part critical-rational analysis of true social-economic-political injustice. Creative expression in the form *Occupy Wall Street* (but in the classroom), is akin to self-recognition and self-actualization of personal issues and resolution in terms of a clear way forward, perhaps using art-making as a solution. Regardless, the idea and reality of *Occupy Wall Street* and *BLM* can be viewed as, not only the cause, but also a positive influence on the kind of self-healing a socio-political being, like a city needs for both reconciliation and re-discovery of civic pride and humanism.

In many ways this civic consciousness corresponds to a self-healing entity, just as egosystem responds to its self-healing inner voice. It is the same for any student trying to make sense of all the signs flooding into consciousness from objective reality. The self-healing, self-renewal mechanism in us (in our students) conveys visual imaginative images (to capture the essence of Jung's phrase *visual typical images*), options and solutions of an associative (albeit interpretive), dissipative, internal psychic landscape, that is at once embedded in experiences of the external landscape, and (at the same time) effects repair, healing and renewal through recollection of past failures and successes. After all, "Learning is recollection," wrote Plato in *Phaedo*. (1969; 76, line 8) Recollection requires students to access his/her database and repertory of literary, historical, philosophical, emotion experiences in order to apply previous successful, learned

behaviour. Within this repertory of recollections resides the source of self-healing and self-renewal. Healing often occurs during sleep or periods of contemplation. Remember the times you went to bed distraught, pulled apart in many directions, and awoke the following morning with an unbearable lightness of being — or at least a problem solved? What is the explanation for this psychic phenomenon if not related to self-healing and self-renewal? In fact, Arthur Jersild, writing in the *Manual of Child Psychology* way back in 1946, provides tangible evidence of a self-repair, self-healing mechanism in very small children: “A change from helplessness to a greatly increased capacity for self-help, with a consequent progressive freedom ... [and] ... an increased ability to take a panoramic view of things.” (861) A small child wakes up and greets its abusive parents with a hopeful smile, as if anything will change. If I were to define a teacher’s role in self-healing, it must be in guiding students toward a relevant frame of reference from which to approach their perceived emotional, physical and intellectual *weaknesses*. Still, at ESA we address these weaknesses directly as potential creative *strengths*. And that is how teachers at open studios like ESA or IB programs, approach students’ vulnerabilities. We celebrate their perceived weaknesses as *creative strengths*.

Remarkably, Jersild notes later that, *expressions of anxiety* come into play whenever a child’s “*self-system* involved in his or her accustomed way of life is threatened.” (870; emphasis my own) At the core of this *self-system* — this egosystem — is a student’s ability to self-heal. To define a teacher’s role in student self-repair, self-healing and self-renewal is not an easy task without the professional experience of having taught in a visual arts program like the one offered at ESA. However, self-repair and self-healing lead to self-renewal through art-making, so long as it happens in a process-oriented, student-centred, design-focussed environment that allows students to thrive and (more especially) to re-discover that sanctuary of the eternal child within themselves. At ESA we expect students to make art that reflects how they have found that creative oasis. They re-discover and explore their personal passions through art. We may begin to understand (then) the import and value of identifying our students as complex egosystems, rather than merely as egos or *minds* or *intelligences*.

Within the milieu of their complex and uncertain world, an individual’s *reading of the world* flows from an ongoing accumulation of acquired historical, literary and philosophical perspective (P). It is directly proportional to their growing intelligence (I), in tune with, and governed by, the individual’s self-healing entity and self-renewal capability (ϵ). Therefore,

$$\text{perspective} \propto (\text{intelligence} \cdot \text{self-healing entity})$$

(1)

or,

$$P \propto (I \varepsilon)$$

(2)

Thus, strong literary, historical, philosophical perspective is directly connected to an individual's intellect (by degrees) and their self-repair, self-healing capability. In the final analysis, the function $P(I \varepsilon)$ is equivalent to the strength of the invisible micro- and macroscopic ties of an egosystem immersed in its own environmental milieu. So you can argue that wholeness of an egosystem (**E**) is equivalent to intellectual perspective and the strength of that individual's self-healing entity:

$$\mathbf{E} \equiv P(I \varepsilon)$$

(3)

Conclusion

What (then) is the primary educational focus while students are being trained to renew themselves through a conscious effort to read literature, history and philosophy as a background to making art? When all is said and done, what we give students is sanctuary, self-esteem and hope. I have found the first step is to allow children to rediscovery that child within, that creative spirit by giving them freedom to explore their personal passions and to experiment with a variety of media. Removing constraints of a teacher-directed project is how we promote self-esteem at ESA (and IB schools) through creative freedom, while encouraging students to tap into their self-healing capability by providing a program of positive incentives — by *setting the tune*. Thus,

$$\text{self-esteem} \propto \text{creative freedom} + \text{incentive} \quad (4)$$

In the final analysis, we may propose that,

$$\text{self-esteem} \propto \text{incentive} \quad (5)$$

whereas,

1

self-esteem ∝ _____

(6)

disincentive

I have defined incentive as *setting the tune*. However, what does that mean in the modern classroom? It is all about belief and faith: belief that a perfect classroom environment is focussed on solving challenging design problems students set for themselves; and faith that whatever they do will be perceived in the right direction towards their creative emancipation.

References

- Anderson, H. H., and Anderson, G. L. (1954), *Social Development*, from *Manual of Child Psychology*, p. 1178; ed. Leonard Carmichael; John Wiley & Sons, Inc., New York, NY.
- Anderson, J. E. (1927) “The Dream as a Re-conditioning Process” from *Journal of Abnormal Sociology and Psychology*, 22; pp. 21-25.
- Bloom, P. (1996), “Intention, history, and artifact concepts” from *Cognition*, Volume 60, 1-29.
- Bohm, David (1980) *Wholeness of the Implicate Order*, Rutledge Classics, New York.
- Bryson, Michael (2014) *Reclaiming the Self: Transcending the Fragmentation of the Individual Subject, Chapter 1*; <http://www.brysons.net/academic/chap1.html>; page 2
- Cassirer, Ernst, (1970) *Essay on Man*, Yale University Press, Boston, Ma.
- Christian, David (2004) *Maps of Time: an Introduction to Big History*, University of California Press.
- Dendinos and Sonis, D.S. and M. (1990) *Chaos and Socio-Spatial Dynamics*, Springer-Verlag New York Inc.
- Erikson, Erik, (1963) *Childhood and Society*, W. W. Norton & Company, New York, NY.
- Foucault, Michel (1988) *Madness and Civilization: a History of Insanity in the Age of Reason*, Vintage Books Edition, Copyright 1965 by Random House Inc.
- Freire, Paulo, *Pedagogy of Hope* (1995) Continuum, New York; pages 112 and 129.
- Freud, Sigmund (1930) *Civilization and its Discontents*, The Hogarth Press, London.

- Freud, Sigmund (1938) *The Interpretation of Dreams*, from *The Basic Writings of Sigmund Freud*, translated and edited by A. A. Brill, Modern Library, New York NY.
- Freud, Sigmund (1939) *Civilization and its Discontents*, The Hogarth Press, London.
- Gardner, H. (1973) *The Arts and Human Development* (John Wiley & Sons Inc.) New York, NY.
- Gardner, H. (1983) *Frames of Mind* (Basic Books, New York, NY).
- Gasset, Jose Ortega, (1961), *History as a System*, W. W. Norton and Company Inc., New York, NY.
- Gilmore, Robert (1993) *Catastrophe Theory for Scientists and Engineers* (Dover Publications Inc., New York, NY).
- Hart, Hillary (2005-2014) *Living Oneness: Restoring Wholeness in a Fragmented World*, A Global Oneness Project Study Guide, Global Oneness Project Films publication.
- Hobbes (1668) *Leviathan*, originally published in 1651; ed. C.B. MacPherson, Penguin Books.
- Holden, A. V. and Muhamad, M. A. (1986) "A Graphical Zoo of Strange and Peculiar Attractors", from *Chaos*, edited by Arun V. Holden, Princeton University Press, Princeton, NJ.
- Jersild, Arthur T. (1954) "Emotional Development" from *Manual of Child Psychology*, second edition, Leonard Carmichael (ed), John Wiley & Sons, Inc., New York.
- Jung, C.G. (1954) *The Psychology of the Transference*, Princeton University Press, Princeton, NJ.
- Jung, C.G. (1958) *Psyche and Symbol*, Doubleday & Co., Inc., Garden City, NY.
- Jung, C.G. (1964) *Man and his Symbols*, Dell Publishing, NY.
- Jung, C.G. (1968) *Analytical Psychology: Its Theory and Practice*, Random House Inc., New York NY.
- Jung, C.G., (1938) *Psychology and Religion*, Yale University Press., New Haven.
- Jung, C.G., (1957) *The Undiscovered Self*, Mentor Book, New York, NY.
- Kant, Immanuel (1966) *Critique of Pure Reason*, translated by Max Muller, MacMillan Publishing Company/Anchor Books, New York, NY.
- Kant, Immanuel, (1964) *The Metaphysical Principles of Virtue*, translated by James Ellington, The Bobbs-Merrill Company/Library of Liberal Arts, New York, NY.
- Kieran, Egan (1997) *The Educated Mind*, The University of Chicago Press, Chicago 60637.
- Lacan, Jacques, (1966; 2002) *ECRITS: A Selection*, translated by Bruce Fink, W. W. Norton and Company, New York, NY. (p. 141).
- MacWhinney (1998) "Models of the Emergence of Language." *Annual Review of Psychology*, Volume 49, February; pp. 199-227.
- Nokes (2005), "Holistic Integrated Design Education" from the *Journal of Aesthetic Education, The University of Illinois Press.*, Volume 39, Number 1, Spring 2005; 31-47.
- Nokes (2006), An Essay Review titled "A Global Art System: An exploration of current literature on Visual Culture" from the *Journal of Aesthetic Education, The University of Illinois Press.*, Volume 40, Number 3, Fall 2006; 92-114.
- Ozorio de Almeida, Alfredo M. (1988) *Hamiltonian Systems: Chaos and Quantizations*, Cambridge University Press, New York, NY.
- Perkins, D.N. (1986) *Knowledge as Design*, Lawrence Erlbaum Associates Publishers, Hilldale, New Jersey.
- Piaget, Jean (1962) *Play, Dreams and Imitation in Childhood*, W. W. Norton & Company, New York, NY.
- Piaget, Jean (1968) *Six Psychological Studies*, Random House Inc., New York, NY.
- Piaget, Jean (1971) *Science of Education and the Psychology of the Child*, The Viking Press Inc., New York, NY.
- Rosen, Steven (1996) *Wholeness as the Body of Paradox*, After Postmodernism Conference; http://www.focusing.org/apm_papers/rosen.html.
- Saussure, Ferdinand de (1916; 1972) *Course in General Linguistics*, Open Court Publishing Company, Chicago and LaSalle, Illinois (pp 112-115)
- Scheibel and Schopf (1997) *The Origins and Evolution of Intelligence*, Jones and Burkett Publishers Canada.
- Schopenhauer, Arthur (1966) *The World as Will and Representation*, Dover Publications Inc.
- Sebeok, Thomas A. (2001) *Signs, An Introduction to Semiotics*, University of Toronto Press, Toronto; pp. 11-23,

39-63

— Thales to Aristotle, *Greek Philosophers* (1966) ed by Reginald E. Allen, The Free Press, Macmillan Publishing Co., New York, NY; P. 42.

— Wheelwright, Philip (1974) *Heraclitus*, Atheneum, New York, originally published by Princeton University Press in 1959.

— *The 20TH Century ArtBook* (1996), Phaidon Press Inc., New York.

— *The Art Book* (1994), Phaidon Press Inc., New York.