Effective Learning in the Modern Classroom

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Abstract

Effective learning is viewed as an evolutionary process, and as such, it involves an expanded version of the Crenshaw-Collins view of *intersectionality.* It demands an in-depth view of the complex socio-cultural-ethnic milieu in which students are embedded. Even more, effective learning requires effectance problem-solving, investigation and semiotics, along with effectance motivation, to form a quadripartite framework for effectance holism, which becomes the foundation for equity. Equity in the classroom requires shared human experience, research, process, ideas, as well as product. Effectance motivation associates walking, awareness, attention, perception, thinking and adaptation to one's environmental conditions that encourage effective, competent interactions of students with their surroundings. Arguably, effectance, rather *effective*, motivation is evidentiary in childhood development, and is responsible for acquisition of increased intellectual awakenings in the home and in the classroom. However, effective motivation alone is self-limiting. I include effective problem-solving, investigation and semiotics into the equation. That students are active, constructive participants in the learning process is also evidentiary. With Susan Harter effectance motivation encompasses the developing intellect of children and evolution of their independence, mastery, competency and success. Against this background of scholarship research, Gardner's *multiple intelligences* portray student success and motivation as a pathway *only* to stereotypical roles, without any educational value. In contrast, *egosystem* provides a viable framework for understanding students and their complex makeup. In fact, I argue that frames of reference should replace *frames of mind*. In terms of the value of learning through the arts, early modernism, especially Dada and surrealism, have inspired students to reimagine their own art as having not only intrinsic aesthetic value, but also extrinsic narrative value as social-political commentary. Essentially, art and design education must reimagine what students *could* do, if only they did not have to conform to a set curriculum, and were allowed to research art history on their own, explore their personal passions and experiment with various art forms.

Keywords

Effective Learning, Motivation, Semiotics, Investigation, Egosystem, Holism, Intersectionality

Introduction

What is effective learning and how does it apply in a classroom geared toward art education? I argue that it involves an effective, holistic approach to reading the world through a rational lens and solving challenging design problems in a student-directed environment. It involves an understanding that the Kantian "I" and the ego of Freud and Jung have evolved to egosystem with all his or her embedded vulnerabilities and physical and spiritual complexities (Nokes, 2005, 31-47). Finally, effective learning recognizes the interconnectedness of all things that has been characterized in earlier literature as *intersectionality* in a far too limited way (Crenshaw 1981; 1241-1298).

Effective Holism

Anthropologists have examined early human forms, when they found that *effectance motivation* (Harter, 1978; 31-64: White, 1959; 297-333) was a key contributing factor in the descent of intelligence leading to *H. Sapiens sapiens* — you and I and, every human being under the sun. However, effectance motivation is a self-limiting term. I would add also effectance nomadism (searching for better habitats), effectance problem solving (inventive survival methods) and effectance semiotics, the ability to recognize and read environmental signs that have either toxic or nourishing value. This represents a holistic, more inclusive approach to evolution and human development.

In the modern classroom, effectance motivation, or rather *effective motivation*, can be interpreted as inspired curiosity. *Effective nomadism* may be understood better as *effective investigation* and the desire to research. *Effective problem-solving* really has not changed over the millennia and it remains a key aspect of twenty-first century learning. Finally, the reality of *effective semiotics* has not changed very much either, except we now live in a sign-filled world replete with technological innovations, people of all kinds, advertising and commercial, residential, industrial and institutional structures. Paolo Freire said it best when he encouraged his students to make a clear *reading of the world* (Freire, 1995; 112, 129).

Effective holism (*H*) is then imagined as the sum of effectance problem solving, investigation, motivation and semiotics. As the degree of *effective* holism increases, the sphere of knowledge increases. Effective *holism* really defines high level intelligent behavior, and new knowledge:

$$\text{effective holism} \propto \text{sphere of knowledge} \quad (1)$$

Ultimately, the sphere of knowledge is intimately connected by memory to the level of intelligence. So, expression (1) becomes,

$$\textit{sphere of knowledge} \propto \textit{intelligence} \quad (2)$$

The relationship between intelligence (*I*) and an ability to a *read the world* is an essential aspect of *effective* holism.

Effective problem-solving, investigation, and semiotics represent the missing components of effectance motivation. Effective holism effectively motivates students to *move*, and to explore their complex, uncertain, sign-filled world, and to provide innovative solutions when they encounter social, cultural, religious, and political issues, in classrooms and in the world at large. This is how they learn environmental signs and effective responses to those signs — objects, feelings and events. This is how they build a repertory of usages, a databank of both failed and successful responses and actions.

In the cognitive sciences a sign (s) initiates a signification process (S):

$$s \Leftrightarrow S \quad (3)$$

For "⇔," read *generates*. Likewise, all organisms are subject to environmental stimuli (s). This stimulation initiates some kind of response (r), as illustrated in the conventional expression,

$$s \Leftrightarrow r \quad (4)$$

Oddly, the whole semiotic stimulus-response mechanism applies in the classroom wherein video lessons (say) of Jean DuBuffet or David Hockney provide inspirational insight and stimulate, not only an emotional-intellectual response — which I reward with marks — but also a literal, written response — which I reward with marks, as well. This is one pathway I have established that addresses equity in the classroom. In other words, I recognize perception as well as product (Figure 1).

Figure 1. *Bwana Devil, JR Wharton Eyeman (1952).*

Here is a hypothetical assignment: you have all witnessed the very first 3-D movie, *Bwana Devil*. Now, write about your experience and your mark will be 100. If you do not write about what you saw and heard with your own eyes and ears, then I assume you were not part of this *shared human experience*, and you get a mark of zero.

Equity in the classroom involves creative educational thinking. In the example above, the first 3-D movie produced by Hollywood, *Bwana Devil* (1952), clearly represents a shared human experience. Now, even though the conventional teacher insists that if one does not write about it, it was not experienced there will be no reward with marks, my personal version of equity in the classroom assesses, in this case, the value of both the experience of viewing, seeing and hearing, *and* the written response. I attach equal value to witnessing and writing about a shared human experience. As a result, one of my administrators accused me of giving marks to students, "for just showing up." Frankly, yes, I do. Of course, I monitor during any screening or seminar if a student is fully engaged or on a cell phone or escapes to the washroom for thirty minutes. True equity in the classroom must involve a positive shared human experience, plus a record of that experience.

Saussure, in his famous book *Course in General Linguistics*, laid the groundwork for semiology when he recognized that objective and subjective reality involved something signified (S, the subject) in response to a signifier (s, the object, event or feeling). Notably, for Saussure, in an objective field of signs, each one possesses a subjective *emerging value* (Saussure, 1916; 112-115). A sign changes significance as we acquire knowledge and experience. For instance, the sign of the cross, an icon of the crucifixion and symbol of death, resurrection and redemption for some, changes meaning from a childhood image of death on a cross (Figure 2), to a politico-religious symbol of prejudice (Figure 3), to a free interpretation of abstract art signifying

nothing, or everything (Figure 4). Indeed, every referent object, feeling or event carries with it an *emerging value*. As the individual matures and assembles a repertory of experiences and recollections, a sign (dog, cat, flower, chicken, baby or hammer) may also take on new levels of meaning, new intellectual and emotional interpretations and adaptive responses. Clearly, semiology is essential for *learning through the arts*.

Figure 2. *Mathias Grunewald, Crucifixion (1501)*

Figure 3. *"Festive Lighting Design" American Family Association (c. 2006).*

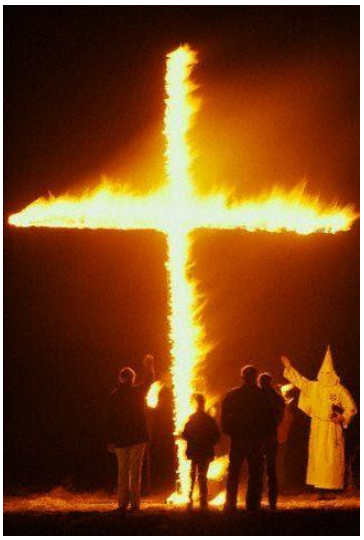
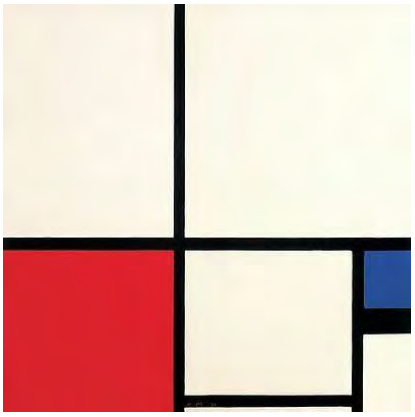


Figure 4. *Mondrian Composition No, 1 (1929).*



It is this concept of *emerging value* in the objective landscape that impacts the moral-intellectual, subjective landscape that encouraged me to introduce semiology to my Grade 11 International Baccalaureate students. I realized that the study of signs, kinds and significations represented a pathway for them to partake in the *reading of the world*, and to understand objective reality according to Schopenhauer's*, the world as will and representation*.

Students confront an objective reality with unique *emotion-historical experiences* (Bloom, 1996; 1-29: Bloom, 2005; 311-314). Thus, their sign-filled world elicits various emotional-ethical-moral responses. Arguably, the value of art is that it sets the stage for shared human experiences and offers shared or different narratives. "The common aim of all the arts is the unfolding and elucidation of the Idea... of the will objectifying itself," (Schopenhauer, 1966; 252). That *Idea* may very well be a student's personal passion objectified in a work of art. That Idea may also represent a personal moral imperative to tell a story that needs to be told.

Dikovitskaya, in *Visual Culture*, understands that, "In the endless chain of significations, artwork has come to be seen as a "thing"... in its own right. I argue that this is the result of the semiotic approach: For the first time in art studies, the work of art is talked about as having its own specificity, that is, as being neither an autonomous entity nor a mere reflection of social and political processes, but a maker of culture," (2005; 24, 44).

A key lesson for art students to learn is the narrative value of their work, especially as it comes from an internal place of honesty and vulnerability, or if it comes from some shared confusion from a dark place within. Through their art students question themselves and they question society, culture and the world, as we learn from Michel Foucault.

> "[A work of art] … 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 question itself" (1988, 288).

In our reading of anthropology (*Physical Anthropology,* Nelson and Jermain, 1994), or human evolution and development (Bilsborough, *Human Evolution*, 1992), early in our pre-history, nature selected the genus Homo for its highly effective motivation, curiosity, mobility, nomadism, skillfulness, adaptability, learning and problem-solving ability, and (notably) a penchant for reading a sign-filled world of varied and complex kinds, and assembling an astounding repertory of significations, interpretations and responses. The genus, in fact, utilized the natural world as a kind of classroom in order to acquire knowledge. Interestingly, this conforms to Maslow's concept of *basic needs,* outlined in his seminal article *A Theory of Human Motivation*, whereof knowledge, understanding and curiosity, Maslow argues, rank high in a list of basic human needs, specifically human "desires to know and to understand.... Curiosity, exploration, desire for the facts... may then be largely a function of relatively high intelligence" (1943; 370-396).

It is within the context of an uncertain world that students learn to move effectively. Effective motivation (*M*) moves students' curiosity to a higher level. Effective investigation (*I*) determines how and why students investigate and research. Effective problem-solving (*R*) determines how and why students assess and solve challenging problems to achieve success. Finally, effective semiotics (*S*) governs the degree of adaptation and understanding of signs and significations in order to improve their effective *reading of the world*. Therefore, the development of students' intelligence and knowledge depends on an effective holistic (*H*) approach to learning whereby intelligence (*I*) becomes a multivariable function, such that,

$$I \propto (R \bullet I \bullet M \bullet S) \quad (5)$$

or simply,

$$I \propto H \quad (6)$$

Intelligence is proportional to effective holism. Solving challenging design problems for the modern student may include the following: making new friends, surviving difficult teachers, difficult peers, familial, cultural and social issues, socio-political chaos and difficult or impenetrable subjects, not to mention the whole process of art-making.

With respect to socially challenging design problems, I suggest that a typical classroom at any level, except perhaps for preschool and kindergarten, consists of four tribal groups: seers, creators, makers and searchers. Arguably, there exists a generalized social infrastructure that pervades human society and classroom tribal social order. Levels of perception (*by degrees,* Darwin would say) are evidentiary, namely: intellectual and analytical skills, identification of problems, ideas, practical and technical skills, research and discovery skills. All form the relationship to effectance holism (Figure 5).

Figure 5. *Social Hierarchy of Effective Learning.*

TRIBAL SOCIAL GROUPS							
SEER		CREATOR		MAKER		SEARCHER	
Intellectual	Analytical	Identify problems	Ideas	Practical	Technical	Research	Discovery
Effective semeiotics		Effective problem-solving		Effective motivation		Effective investigation	

Now, we have examined the notion of *effectance holism* as a descendant form from archaic origins in the classroom of the African marginal forests and savannahs to the modern classroom. A quadripartite form of archaic human evolution (Figure 6), illustrates intelligence as the intersection of effectance motivation, nomadism, problem-solving and semiotics in the archaic African classroom:

Figure 6. *Quadripartite Evolution of Intelligence in the Archaic Classroom.*

effectance motivation	effectance nomadism
effectance problem-solving	effectance semiotics

in the modern classroom, effectance becomes *effective* motivation, and nomadism becomes effective *investigation* along with *effective* problem-solving and *effective* semiotics. The same structure of survival and continuance *is* transferable as a holistic strategy, again with this goal: *the emancipation of a student's will and intellect* at the intersection (Figure 7).

Figure 7. *Quadripartite Evolution of Intelligence in the Modern Classroom.*

effective motivation	effective investigation
effective problem-solving	effective semiotics

In the pressure-stress milieu of the modern classroom, solving challenging practical, environmental and abstract design problems involves effective sensory-motor readiness, adeptness and curiosity, effective ethical-moral-intellectual research, and effective social diplomacy, and effective reading of environmental warning signs and adaptation.

Whether in the archaic classroom of the African savannahs or in modern twenty-first century classrooms, solving challenging design problems is the key to Whitehead's claim that, intellectual and psychic clarity, "is part of the creative advance into novelty" (Anderson and Anderson, 1954; 1178). This "creative advance into novelty" is the essential premise of learning through the arts and ensures that art education continues to provide a pathway to self-liberation.

Egosystem

Sapian — my philosophical euphemism that includes both *man* and *woman* — has always struggled against fragmentation, and sought, instead, emotional and spiritual *wholeness*, Jung's archetype of *teleiosis* (Jung, 1958; 112, 141; Jung, 1964) perfectly predicted the neologism *egosystem* (Nokes, 2017).

Egosystem is the Gestalt of the ego, the sum of its parts, namely: spiritual, psychological, physiological, intellectual, neurological, experiential, and all embedded in larger systems, namely, ecological, exosystems — the other — meteorological, as in being *under the weather,* cultural, chthonic, like the tectonic forces underfoot as Californians live with every day along the San Andreas fault where they must learn to *walk on frozen toes* (Mayes, 1996) or *walk on gilded splinters*, as Doctor John would say, and even cosmic effects, like the tides. Egosystem is the ego embedded in its total environmental milieu. One of my Grade 9 design problems was to create an *unself-portrait*. I did not want a selfie, nor a

mirror image portrait. Rather, I offered them Chagall's image, *I and my Village* (Figure 8), and outsider artist Natterer's image, *Witch's Head* (Figure 9) as references to create heritage works of art that expressed themselves in terms of all the things in their lives that have made them who they are now. Marc Chagall's painting is an idyllic image of a Russian Jewish boy growing up in a rural, agricultural village. In contrast, Natterer's image is a darker, bleak picture that emphasizes a harsh female figure that clearly represented negative influences on his life.

Figure 8. *Chagall, I and My Village (1911)*

Figure 9. *August Natterer, Witch's Head (1915)*

Two examples of resulting works of art are shown below. Figure 10 is the unself-portrait of a Grade 9 girl struggling with mental health. Figure 11 is the unself-portrait of a Grade 9 boy openly admitting his dyslexia. By the way, both students were by far and away the most productive artists in class.

Figure 10. *Grade 9 Student.*

Figure 11. *Grade 9 Student.*

This type of creative freedom to pursue personal passions in an honest and vulnerable way tends to produce rich, textural, textual images.

Acquisition of skills and knowledge about one's environment figures strongly into conditioned learning and behavioural development of children, since it establishes a level of mutual trust and confidence early on in a considered and measured routine of conventional classroom settings. Now, routine and familiarity with any environment is habit forming. The notion of habit — or as the anthropologists say, *habituation* — raises interesting questions in the psychology of human behavior. The downside of *habituation*, for anthropologists and social biologists, is the process that leads a species toward decreased sensitivity and responsiveness to incremental degradation and increasing toxicity or changing elements of its environment. Habituation is a double-edged sword and becomes dangerous to species when comfortable familiarity develops amidst environmental warning signs unheeded, such as increased predation — yes, people do *prey* on people — or increased social toxicity, climatological and ecological changes like increased average temperatures, or the invasion of some insect or amphibian species — locusts, frogs or cicadas — or drought like the decade long drought in California. A classroom where there is a homogeneous curriculum without cultural, ethnic, religious blending and student-directed design problems is imbalanced and does not represent the diversity of life. Other factors may disrupt students' comfort level and have a serious impact on effective learning.

Two other factors are: the sudden introduction of a new teacher, an administration unwilling to break with municipal or federal convention, and social-political upheaval like the Black Lives Matter protests or the insurrection at the US Capitol.

Habituation, especially within the realm of education, is something to avoid. It encourages incremental learning only, behavioral habituation without solving new and challenging design problems, or curricula devoid of creative novelty and nuance. Rather, classrooms must be dynamic. Students must be exposed to challenging design problems, especially if they are of the student's own making, and must be encouraged to solve them, whether or not the "design" problem is an essay, poem, dance, piece of music, film, painting or graffiti. Students in the arts must be given the opportunity to explore their own passions, to choose their own pathway, and create their own art. Based on Robert Frost's understanding that "art is the one thing we bring forward from childhood," students explore their own strengths and vulnerabilities and freely express them through art-making. In contrast, mind-numbing lessons and follow-up exercises in hand positions, sketching techniques, perspective, elements and principles of design, color theory, painting techniques, the classical canon of art, offer little or no experimentation, nor a chance for students to pursue their own passions, their own creative energy bottled up inside. In that respect, teachers must remind themselves of Ernst Cassirer's words, "Art is an act of self-liberation," and provide students with plenty of opportunities for *self-liberation* (1970; 228).

Art and the self-liberation of students is what teachers in the visual arts seem to place on the sidelines. Andre Malraux in his seminal work *Voices of Silence* reminds us that the process of art and art history is "a series of successive emancipations of the will and the intellect" (1953). A dynamical classroom that incentivizes students to perform at their creative, innovative best, is surrounded by books on outsider, modern, classical, primitive and global visual culture and art history, as well as classical and modern literature. In this classroom there are no desks or chairs. The floor is a canvas for making art and for dialog. Students have access to stretchers and canvas of all sizes, even up to 8 feet high by 22 feet long. Students may choose to paint on easels if they prefer or anywhere in the classroom-studio, or in the school hallways or cafeteria. Work left unfinished anywhere throughout the school remains respected and untouched by students in other disciplines. When finished, art work is hung on the school walls. The school itself becomes an art gallery.

If students are curious about hand positions, sketching techniques, elements and principles of design, color theory, perspective, painting techniques, the classical canon of art, they research these things on their own. Effective learning is a research-based, self-directed visual arts program. The emphasis is on student-directed projects encouraging them to show their personal passions. Students work toward gallery exhibitions within the city, with official openings and invited guests. Also, students submit work to international poetry, art, film, animation competitions not for marks, but simply to hone their skills as creative designers and artists. I encourage art and design educators to reimagine what students could do if they did not have to conform to a set curriculum, but could explore art history, various media and experiment on their own.

Class-studio time should be devoted to group conversation and honest sharing of vulnerabilities, feelings, motivations, and current art projects on which students are working. We should rethink routine or conventional, daily curriculum programming. If students control how the class process, then there is no structured habituation. And even during discussions or inspirational art videos, students may quietly knit, or sketch or work on their tablets as they listen to their colleagues without cautious intervention from the instructor. It all comes down to a matter of trust.

In actuality, habituation often tends to obfuscate incentives within any socio-cultural milieu. Environmental incentives must be there before students can begin (*by degrees*) to manifest competence and discerning choice, in both *a reading of the world*, and in research to solving necessary challenging design problems that guarantee success in navigating the objective field of the twenty-first century classroom and its social-political-cultural-ethnic milieu.

The Latin root of *incentive* is *incentivus*, meaning (literally) *setting the tune*. Time evolution of a child's intellect and free-will is like the tuning effect of a succession of experiential awakenings: psychological, intellectual, physical, social and spiritual. In a very real sense, then, education is like *tuning* a musical instrument, tuning the human creative spirit and intellect and will for a waking. A child's intellectual spirit awakens as it responds both to external emotional and socio-environmental incentives, and to natural stimuli, as well as to internal psychical and physiological fluctuations and transformations as the egosystem matures.

Therefore, learning, acquiring knowledge toward a change in behaviour, increases clearly when incentive is high:

$$learning \propto incentive \quad (7)$$

Conversely, learning diminishes when disincentive is high. In other words, learning is inversely proportional to disincentive. Thus,

$$learning \propto \frac{1}{discincentive} \quad (8)$$

Disincentives within learning environments force students to adapt or to fail. Environmental incentives for success may very well be associated with creative, effective problem-solving and effective investigation, effective motivation, and effective reading of their world in all its complexities. Education is not necessarily an *award* system. Students of their environment do not learn if and only if they are assured of certain rewards. Students learn because they see a new way or a new use or a new idea that is manifestly relevant to them, and reward is properly distributed between shared human experience, ideas and product.

It is thus, if and only if, students are assured equity, access and success. Incentive is uniquely bound to the success of students if they perceive their classroom as friendly and unimposing. At the same time, incentive is the very reason students want to come to a classroom, especially if a teacher allows students to explore their personal passions in a way that is relevant to them. Everything else will follow, in particular, the discipline of making art, research, practice, expertise, and a manifestly strong ability to overcome personal hardships and vulnerabilities and turn them into creative strengths — this works for all subject areas.

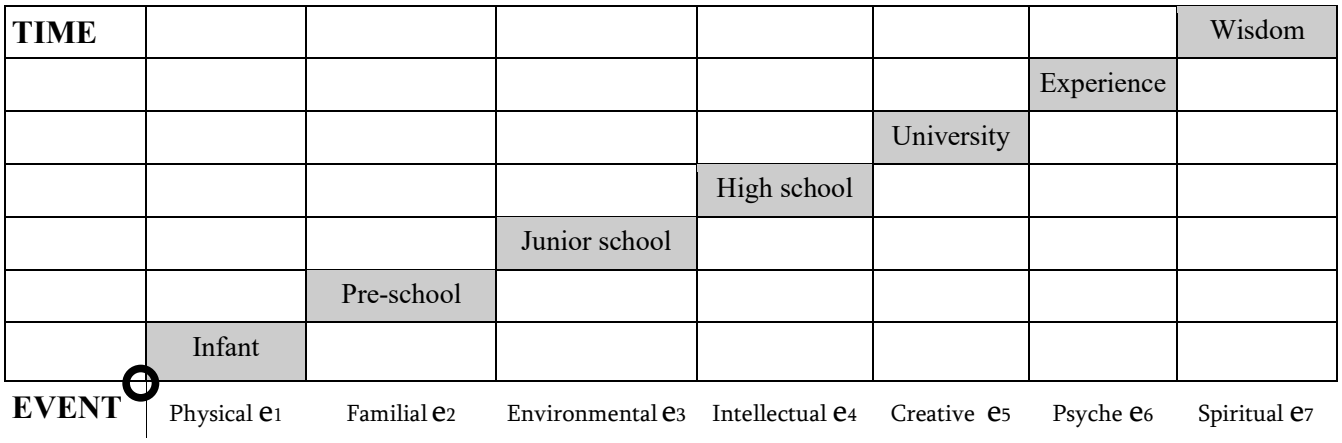
Students' resilience and adaptability to highly negative personal, medical, familial, social political and other environmental circumstances seem to be evidence of a kind of self-healing, self-repair mechanism within the egosystem that functions to maintain system-equilibrium, psychic balance, recovery, renewal and individual wholeness. One need look no further than holocaust survivors, whose source of internal light and hope belongs to that *unassailable place of freedom* Viktor Frankel alluded to in his book *Man's Search for Meaning* (1946). It also belongs to the realm of Jung's *mysterious something* — "the inner consolidation of the individual" (1954; 70, 90). Experiential action research suggests that students possess — people possess — a kind of roving, self-healing entity that exists at the inner core of our psyche (Nokes, 2005). This source of healing seems to unify the fragmented mind of an individual who, having fallen asleep confused, depressed and hopelessly despairing, awakens to a fresh new outlook on life, and, to use Milan Kundera's phrase, an *unbearable lightness of being* (1983). We have all experienced this renewal, this *mysterious something*, that *unassailable place of freedom*. It tends to keep most students on an even keel, when everything around them may seem chaotic and confusing. How do we reconcile the same issues and demons in the students who truly struggle with their own uncertainties?

One of the great roles of visual arts teachers, and the arts in general, is to fortify that *mysterious something* and that *unassailable place of freedom*. It is essential that learning through the arts confirms the value of humanism, confirms the value of humanism and conscious awareness of everything in a student's objective field, and confirms consciousness of the value of those students' subjective reality. "Man's greatest sin," writes Jung, "is unconsciousness." Yet, sapian must exist on both the conscious and unconscious levels in a state of constant external-to-internal communication. And so, "man's wholeness," continues Jung, "consists in the union of the conscious and the unconscious personality" (Jung, 1958; 112, 141). Indeed, these thoughts did lead me to understand the need for the Kantian "I," and the Freudian and Jungian *ego*, to undergo a transformation — an evolution — to *egosystem*. Egosystem represents a model far more appropriate than Gardner's stereotypical *frames of mind* or *multiple intelligences* (1983), simply because it recognizes the Gestalt of the ego: what truly makes you, *you*, and what makes me, *me* (Nokes, 2017).

Perhaps the true struggle of students (at all levels) is the conflict between a parent's dream and a student's dream; apparent reality and true reality; original love and future love; dependence and independence; expectations of the group and personal expectations; internal truth and external truth; submission and dominance; self-blindness and self-awareness. How students are instructed to make their first critical and discriminatory steps into the world, and its component systems, is the mandate of a new generation of teachers, who bring to the classroom, an understanding of design as a process of perception and apperception applied to challenging design problems, whether a design problem is a sestina converted to a visual poem, a history essay, original biological research leading to an mRNA foundation for universal vaccinations, or a found object sculpture with an accompanying socio-political, philosophical statement. Challenging design problems — whether teacher- or student-directed — revolve around understanding *design processes* across curricula (Perkins, 1986). Design provides unique methods to explore knowledge through cognitive learning and activity modules directed toward solving challenging practical, environmental, and innovative solutions to sometimes banal and mundane, sometimes interesting problems. This is effective learning.

For modern sapian, the evolution of learning patterns is revealed in a stepped progression of human development. In the course of archaic human development, meteorological, tectonic, extinction events and predation, had a profound effect on success and survival of species, forcing a kind of *diversification through randomness* (Miller, 1997; 195-221). The modern classroom does have its parallels, although not on the same scale. Arguably, we may associate death in the family, loss of friends, loss of family home through flooding or fire, with a metaphorical *extinction* or *cosmic* event that transports individuals involved to a profoundly negative moral, cultural, social, intellectual, psychological and spiritual space.

Figure 12. *Episodic nature of a typical individual human worldline.*



Nevertheless, throughout the course of human history, an individual's development is intimately tied to a series of independent epiphanical events that, in the most general terms form into seven categories: e_1 = physical; e_2 = environmental; e_3 = familial; e_4 = intellectual; e_5 = creative; e_6 = psychological (psyche); and e_7 = spiritual (Figure 12). Interestingly, a student's progress and internal psychological milieu, is connected to a stochastic, uncertain world, but a world that is mitigated, questioned and reconciled through the pursuit of art.

Effective Learning

Egosystem is the evolutionary consequence of ego in a world, a universe, of complex systems: floral, faunal, artefactual, architectonic, chthonic, cosmic, egosystems (you and I), and exosystems, the *other* — the *FACE* model (Nokes, 2005). This *worldsystem* has always been the contextual framework of all living things. It is the contextual framework for survival and success. Since the contextual framework for life and everything is what I define as the *worldsystem*, we recognize that life and everything is subject to decline, or (as physicists say) *entropy*. *Entropy* literally means *a change from within*, and is the second law of thermodynamics. It applies everywhere in *our visible* universe (Prigogene, 1984: Rapp, 1986; 179-208: Beamish, 1993; Conrad, 1986; 3-14: Grassberger, 1986; 291-311). Things fall apart, sometimes rapidly, and sometimes slowly. Sometimes things emerge from chaotic, entropic circumstances — like *not* ready-to-learn students in a crowded, stochastic classroom, for example, may undergo a positive change in behaviour and learning, and consequently regenerate, reshape and reform their psyche, during successive grade level experiences.

Given the spiritual and physical reality of entropy, the law of symmetry suggests that if things degenerate, then things may also regenerate. Thus, exotropy, in its literal meaning of *a positive change from without* becomes a useful antonym to entropy. Perhaps the neologism *exotropy* must be included in the entropy equation as a rational consequence of both observable physical phenomena, as well as evolutionary, behavioral change.

Against every positive, *exotropic* evidence of curiosity and new knowledge gained in the process of human development, we still face the law of *entropic* recession. This balance is a key to maintaining human equilibrium and is the global state of play.

Given this entropy-exotropy equilibrium, and consequential shape-shifting landscapes of everyday life, sapian has always been confronted with two options, as Hannah Arendt suggested: *contemplation* and *activity* (1958). We access and assess reality through *contemplation* or rational deliberation, and we modify reality through considered *action*. The egosystem is the condition of state for the ego. It is the ego in *context*. The complex environment of the classroom tends to create challenge and nuance because of the many levels, or degrees, of cultural, social, political, intellectual, religious complexities therein.

Within any classroom setting *moments of turbulence* (Mandelbrot, 1983) impose their brief, yet dictatorial, rule. Ironic (then) that the universe appears as a superficially, profoundly stable, homogeneous structure in relative equilibrium. The universe is fundamentally unstable and unknowable as any chaos theorist would tell you. This speaks to ancestral *sapian's* dependence on religious belief and god and common ideological principles in an attempt to understand the vast expanse of the universe, as well as more relevant, if not terrifying, meteorological and chthonic phenomena. That the universe is fundamentally unstable at its core is not a bad thing. In fact, it is good. Chaos is order shifting to disorder, and exists at boundaries of transition, between physicochemical states: equilibrium and disequilibrium, reversibility and irreversibility, (Prigogene, 1984; Holden and Muhamad, 1986; 15-35: Rossler, 1986; 315-320: Schrodinger, 1946). Yet, chaos, or disorder, is the harbinger of a creative leap into nuance since it encourages — no demands — solutions to social-environmental challenging design problems. The world described by the senses, and by Newtonian-Einsteinian science, defines the current paradigm or roadmap showing us how to navigate through current empirical metaphors. The metaphors we use to describe our phenomenal world are poetic devices attempting to describe the indescribable. Yet, metaphor itself is shape-shifting; and the *road map* of the universe must be redrawn periodically, as it needed to do with the revelation of quantum theory. Ultimately, we reshape our physical and spiritual metaphors to keep pace with the science of the day.

Similarly, education must undergo periodic paradigm shifts, and educators also need a fresh metaphor, which is why we

have seen a constant change in pedagogical hegemony and focus from Thorndike's *law of effect* (1911), Maslow's *human motivation* (1954), Erickson's *fragmented child and society* (1963), Piaget's *sensory-motor modeling* (1962; 1971), Gardner's *fexperiential learning* (1973), Brophy's *classroom management* (1983), Crenshaw's *intersectionality* (1981), Freire's *pedagogy of hope* (1995), Tomlinson's *differentiated curriculum* (1999), Greenspan and Shanker, *emotional modeling* (2004), and the *twenty-first century learning* of Tindowen, Bassig and Cagurnanga (2017). These are only a few. However, new theories of education and learning approach pedagogy from the standpoint of over-rejection of past theories, rather than from a more holistic approach: the best of everything. There is so much to learn if we can appropriate the best of these theories of education in a holistic way.

The best of everything must embrace what cognitive scientists call *emotion-historical experience* (Bloom and Markson, 1998; 200-204: Bloom and Pizarro, 2003; 193-196) that consists of our repertory of knowledge. Our knowledge of the universe is a metaphor precisely because our knowledge models *what we think* to be the truth, and, at the same time, models *what we do not know*. Everything we presume to know about the world is essentially *metaphor*, because our charming, complex, sometimes simple, clear yet arrogant, sometimes elegant, science continues to scratch the surface of a vast unknown.

On the simplest level, our continued attempts to understand the unknowable universe, or even the knowable world, especially through attendant social-cultural pressures and stresses, tends to encourage moralizing behavior, and ultimately "moralizing gods" (Roes and Raymond, 2003). As sapian strived to define the undefinable, in both the metaphysical and physical realms, a mythology evolved that attempted to explain the inexplicable. When uncertain, we invent gods. When populations become specialized and diversified, we invent social codes of behavior. The spray-painted hand denoting human presence and control (*Figure 13*), the spotted horse connoting some deference and respect for an animal-brother (*Figure 14*), and the deer hunt as a votive rendering (Figure 15), all celebrate a kind of ritualized, moralizing behavior that, not only ensured group cohesiveness, but also continuance.

Figure 13. *Chauvet Caves. Hand* (c. 30,000 BCE).

Figure 14. *Pech Merle. Spotted Horses (c. 16,000 BCE).*

Figure 15. *a172 Lascaux, The Hunt.* (c. 14,000 BCE)

We begin to assemble the contextual framework of complexity surrounding the *egosystem*. The context of the ego is the world as observed. It is a sign-filled, meaningful, subjective world as experienced. How can we understand fully our own conscious and subconscious beings? The short answer is, we cannot. However, we can move closer to it — closer to Jung's *mysterious something*. Penetration into the inner self is brief and cursory. There is indeed a vast universe within, as well as without. What are the physical and psychological boundaries to the Platonic maxim, *Know thyself?* In fact, *know thyself* is the prime motivation of teachers to instill within students the necessity of acquiring knowledge, not only through contact with the world of ideas — among other things, simply *reading* in the English tradition — but also through an honest exploration of their personal passions.

What do we know? It seems so trite a question on one level, and yet so poignant on another. On one level, the answer to life and everything is that *it's all in your head*. That is the metaphor part. Yet, Iris Murdoch reminds us that indeed, we *"*live in our heads" (1973). That is where psychiatrists, psychologists, and psychoanalysts of various academic backgrounds, seek to find answers. Indeed, that is where scientists ultimately find refuge, and turn to reason and logical deduction (or logical inference), for answers to physical-mathematical secrets, or evidentiary predictions. Students live in their heads, and it remains the mission of teachers, especially in the arts, to encourage them to transfer what is in their heads to some kind of art form. Some may call it closure. Some call it the process of art-making.

So often a student's subconscious mind wields great power over their consciousness, and their egosystem must be discriminatory in its thought and action. Human behavior, functioning as it does within its unique frame of reference — that is, within its emotion-historical-experiential milieu, makes sense *only* in context. So, in Shirin Neshat's "Speechless" from her *Women of Allah* series (Figure 16), only in the context of a gun barrel as earring does the message of creative and intellectual freedom of Iranian women become clear. Through Cindy Sherman's lens, a young woman, very tentative about her prospects, enters the male dominated commercial and institutional realm of Pall Mall or Wall Street (Figure 17), and her plight is made

real in the context of skyscrapers looming behind her. That is their world, their frame of reference.

Figure 16. *Shirin Neshat. "Speechless" (1996).*

Figure 17. *Cindy Sherman, Untitled Still #21, (1978).*

Howard Gardner's MI and *frames of mind* (1983), a long time discredited pedagogy (White, 1998; Egan, 1997), need to be revised to include human adaptation and acceptance of the slippage between true frames of mind and the more relevant frames of reference. Human behavior necessarily requires a model that offers a constant state of flux in response to the stochastic, uncertain environmental context, as in this case emerging female egosystems portrayed by Shirin Neshat and Cindy Sherman.

In these hypothetical instances, Shirin Neshat and Cindy Sherman are embedded in social-cultural-political-religious traditions and subject to rules and methods *not their own*. The world of these brave women is transformed to become their personal *frame of reference.*

The environmental milieu of evolution is a double-edged sword. Egosystems are nurtured and develop within a complex of dynamical systems. Language and concept formation (Lacan, 1966; 141: Sebeok, 2001; 11-23, 39-63) are generated within a familial, social, cultural, religious, ecological, meteorological, chthonic context and are sustained by all the attendant stress-and pressure-systems therein. Otherwise, learning does not happen. As students experience ideas and solutions to make an informed *reading the world,* they also acquire competency and effective holism.

Life in the modern classroom is filled with challenges related to social integration and conflict: liberation of the creative feminine spirit and release from the feminine notion of the stereotypical "good-mother" (*Figure 18*); the emergence of women into male dominated roles like engineering, commerce and law; semiotic and problem-solving skills imparted to students in order to reshape their ability to *read the world* as they learn to access and to assess layers of meaning associated with this world of kinds, signs and significations; and students acquiring a personal repertory of observational and critical usages, specifically a growing literary, historical and philosophical perspective, *by degrees*, as Darwin would say (1871) through reading, research and reflection. Thus, education, especially through the arts, opens up to students the possibility of a golden age.

Figure 18. *Hannah Hoch. "Mutter" (1923).*

Remember that out of the chaos of WWI, and the failure of science and technology to create (in Jungian terms) a new

Golden Age, there arose a beautiful aesthetic, a socio-political movement called Dada that celebrated the feminist, creative ideal, and new creative, subversive, revolutionary art forms, and an intellectual spirit that promised to transform society, and the world, positively.

The archetype of a *golden age* is a perfect metaphor students of the arts should keep in mind. Learning is a progressive advance toward informed hope, and a recipe for success.

Student success is directly proportional to hope:

$$success \propto hope \quad (9)$$

At the same time, failure is inversely proportional to hope.

$$failure \propto \frac{1}{hope} \quad (10)$$

Hope resides within a world moving toward nuance and novelty — and the unintended consequence of *nuance* is *hope*.

Intersectionality

Intersectionality has defined the sociological conditions whereby race, ethnicity and gender issues tend to create intersections of confrontations over differences of opinion, cultural and religious beliefs and male-female interactions (Crenshaw, 1981; Collins, 1986; S14-S32). This expands the Crenshaw-Collins model, which too specifically focuses on black female, and generally female, subordination and male dominance in social and institutional situations where inequality, subordination, sexual objectification, gender bias, color-gender bias and ethnicity, are definitely real issues. Nevertheless, just as there are male dominants, there are male subordinates (of any color or ethnicity); and just as there are female subordinates, there are female dominants; and just as there are strong male standpoints, there are weak male standpoints; and just as there are weak female standpoints, there are strong female standpoints.

This is the global, cross-cultural human reality. With such fine root words as *intersect* and *intersection*, the concept of intersectionality does need to be expanded to include what has broadly been defined as historical experience, or *real life*. However, these interactions melt away if, say, a male dominant intersects with a female subordinate, and they simultaneously intersect with a female dominant and a male subordinate, and they are suddenly engulfed by a tsunami, or find themselves amidst a destructive earthquake, or terror attack. Without question, regardless of color or ethnicity or gender, and faced with a greater power and imminent danger, possibly surrounded by injury and death, all respective individuals act as if they are one: members of the human race. They work together to save each other.

A black and white soldier, friends on the battlefield, are recorded in the Burrows 1966 Vietnam photograph, *South of the DMZ* where a black soldier has the "right" to die for his or her country in foreign wars, but does not have the basic human rights accorded to compatriots in their own country. Remember the Oklahoma City bombing; remember the Boston Marathon attack; and remember Black Lives Matter protests of 2020, to name only a few (Figures 19 to 22, respectively).

Figure 19. *Larry Burrows, South of the DMZ (1966).*

Figure 20. *Oklahoma City Bombing, Robert Daemmrich (1995).*

Figure 21. *Boston Bombing, Marc Hagopian, (2013).*

Figure 22. *BLM Protest, Alejandra Loarca (2020).*

When people are confronted by episodic events far greater than themselves, all differences pale and disappear as one's personal survival is subsumed by survival of the other, and we are left with simple human loving-kindness, compassion and empathy — intersectionality at its best. However, in respect to Crenshaw and Collin's research, let us retain intersectionality as a specific reference to a specific history, reality and truth, and let us accept interconnectedness as a general reference to history, reality and truth.

Episodic events, whether social-political, meteorological or chthonic, and whether they are local like the assault on the Capitol on January 6, 2021, or regional like Katrina, or continental like drought, or global like the Cretaceous extinction or COVID-19, all define intersectionality and interconnectedness between people and the natural world in turmoil.

Interconnectedness

As much as interconnectedness involves human interaction on the most fundamental level, it essentially highlights many inequalities. So, then, what are the true inequalities in life that people are born into through no fault of their own? I can isolate nine universal inequalities: war, familial abuse, violence, language, cultural geography, genetics, socio-economic status, natural disasters and uninformed choice. Some clarification of the terms is required. First, the difference between war and violence, is that war is imposed, and violence may be part of the fabric of the street (or the village, town, city, territory, country). Second, by "uninformed choice" I mean that the intellectual fabric into which a child is born may stress blind opinion over education.

These, then, are the very things that intersect and interconnect with an individual's life (or *world line*, as physicists say). Thus, in general terms interconnectedness must include, not only person-to-person intersection and connection, but also person-to-event intersection and connection. It is these intersections and connections that constitute all the variables of human life. Dendrinos and Sonis list some of the more volatile *variables* of human life, such as "fear, greed, power, deviance, mass psychology, demographic, political and social events as, for instance, the leader-follower relationships, the bandwagon effect, over- and underreaction by individuals and collectives to social events," (1990). Welcome to life on Earth.

Oddly, *over-* and *under-reaction* of social and political events are so often the recipe for change, as it was for the Dada movement at the end of WWI. Then, some of the great modernists — like Duchamp, André Breton, Hausmann, Dali, Picasso, Arp, Lee Miller, Man Ray, Picabia, Janco, Hannah Höch, Penrose, Else Von Freytag-Loringhoven — created new forms of art, essentially, a new mythology of primitivism. As we have seen, from this early modern art movement, a new modern woman emerged to release the creative and intellectual spirit of all women previously bound like slaves to the drudgery of household chores (Figure 23). The modern art revolution came as a strong, deep-seated aversion and skepticism toward science and technology and unintended consequences of novelty and innovation. Thus, humanity, went the argument, became distanced from its origins and authentic, primitive values, as technological innovations transformed the human race into automatons without personal identity, just a number, *22* in the case of Haussmann's Spirit of our Time (Figure 24). Else Von Freytag-Loringhoven, as one of the *new modern women*, even had the nerve to portray a base form of technology as a *god*, (Figure 25). Arguably, these new art forms remind us of how interconnected we are with science, technology, society, religious and political ideology. Somehow underlying this *new art* of cynicism, skepticism and insult was hope for a better future. That is precisely the reason why these art forms are so important to encourage in the Twenty-First Century classroom.

Figure 23. *Man Ray, 'Gift' (1921).*

Figure 24. *Raoul Hausmann (1919)* 'The Spirit of our Times'.

Figure 25. *Else Von Freytag- Loringhoven* (1918) 'God'.

Hope for humanity, promised by the same science and technology that was the harbinger of the Industrial Revolution and *la Belle fin-de-Siècle*, seemed to vanish with the horrible destructive forces WWI. In essence, the Dada movement, and Neo-Dada of the 1950's following WWII, was an *over-reaction* to, and *over-rejection* of, the inventions generated by technocrats and scientists involved in developing horrible weapons of the *war to end all wars.* This new art of insult, satire and irony turns out to be an enduring, reflective, discursive platform for self-analysis in which students are forced to question the world, under the same conditions that Foucault insisted the *world is forced to question itself*, (1988).

Figure 26. *Robert Rauschenberg 'Monogram' (1955).*

Figure 27. *Tracy Emin 'My bed' (1999)*

Figure 28. *Marina DeBris, Aquarium (2009)*

More often than not, art forms since Dada can be classified as Neo-Dada and Neo-Dada postmodernism, from Rauschenberg's Monogram and a collision course between technology and nature (Figure 26) to the unmade bed of Tracy Emin surrounded by all the paraphernalia of her life (Figure 27) to Marina Debris and her obsession with plastic waste accumulated in Earth's oceans (Figure 28).

Dadaism, Surrealism, primitivism, abstract expressionism and neo-Dadaism of the fifties, had a profound affect in twentieth century classrooms — and still do to this day, since they allow students an expansive canvas for their own personal narratives and discourse, unrestrained by tradition, convention and the rules of polite society.

"Art is now treated," writes Dikovitskaya, "as a specific discursive system that during the modern period created the category of 'artwork' as a repository for values," (2005).

The Photograph and the Democratization of Art, Archival Records and History

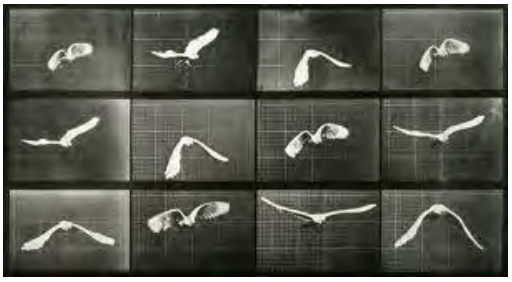
As a method of *discourse*, then, and critical thinking, the value of learning through the arts is evidentiary. Educators have come to grips with the realization that students are proactive, socially hypersensitive, revolutionary, journalistic innovators, especially when allowed to transform what they acquire in their own classroom research into heady expressions of their personal failures, successes, disappointments, depressions and triumphs. In the best of all possible worlds, teachers spend time standing aside, watching, listening and learning.

The energetic beginning of the Twentieth Century ushered in by Eastman's Kodak camera (Figure 29) — *you push the button and we do the rest* — defined the inalienable right of everyman. The camera radiated a sense of personal freedom and personal worth, especially across Europe and North America because the device captured individuals of all races embedded within the complexities of their lives — psychological, familial, cultural, social, religious, political — and it recorded how they survive and thrive through, and after, episodic, natural and sapian-made disruptions and disasters.

Figure 29. *Eastman's 1ST Kodak Camera (1888).*

Figure 30. *(1912) Marcel Duchamp, 'Nude descending a staircase'.*

Figure 31. *Muybridge 'Bird in Flight' (1882) Plate 263.*



Using this technology, early modernists like Marcel Duchamp experimented with the stop-action ability of photography to show motion within the canvas (Figure 30). The photograph introduced a whole new way to frame a composition. This same frozen-action potential of the camera led to Muybridge's frame-by-frame images of moving animals in a series of experiments between 1878 and 1880. The sequential still photographs investigated movement, and eventually led to the creation of moving pictures, and a new way history *had* to be recorded. Photography changed the way we view the world forever. As well, it offered science a new way of studying the fluid beauty of a bird in flight (Figure 31), kinaesthetics of a galloping horse (Figure 32), and choreographic elements of dance (Figure 33). Of course, it is photography of people like O'Sullivan and Lee Miller during wartime, and Gordon Parks and Charles Moore during the civil rights movement, which brought to light many of the issues of social-cultural-political-racial intersectionality, interconnectedness, protest and unrest. It was the video captured on a cellphone by a brave young girl that eventually led to convictions in the killing of George Floyd.

Figure 32. *Muybridge 'Horse and Rider' (1891).*

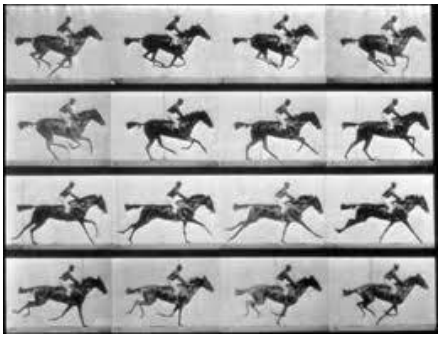


Figure 33. *Muybridge Motion Study Dancer Motion Study Plate 188' (1887).*

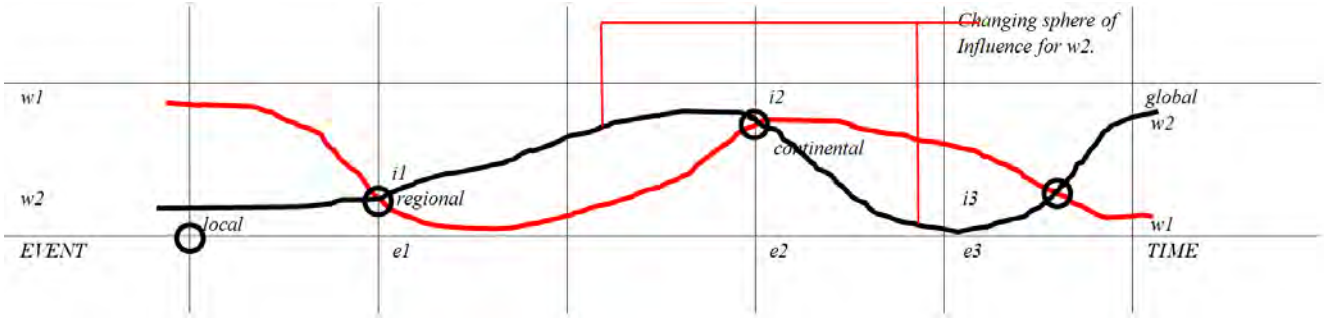
All of these changes and innovations in how people see the world entered the classroom in the twentieth century. Historical, archaeological and paleontological discoveries, sequentially uncovered and published instantly around the world through photography and eventually the world wide web, represent the first instances of globalism — a sense that there is a global history, culture, nature and humanity we all belong to and are responsible for — and a theory of the universality of myth that Joseph Campbell later framed as a kind of grand unified theory of mythology: the monomyth (Campbell, 1949; Campbell, 1969). In order to understand Campbell's belief in the oneness of human mythology, a good thing if it unites the human race under one belief system, it is essential that educators stress the interconnectedness of human activity, a step closer to physicist David Bohm's insight regarding the interconnectedness of all things (1980).

Photography became a critical art form and revealed a new, growing dissatisfaction and skepticism with industry, religion and gods that remained aloof and inaccessible, and, so it seemed, uncaring. The result was a growing cynicism and skepticism in the classroom — like that brave high school teacher, John Thomas Scopes, in 1925 who dared to teach evolution — and in university lecture halls that saw a growing number of female students willing to suffer the ridicule of men, yet daring to be more intelligent, creative, innovative, and to expose the merits of feminism. Additionally, there was Betty Friedan's message to all students subjected to news surrounding the Vietnam War, a message that echoed throughout all the lecture halls and libraries of Europe and North America: *Make love, not war* (1963).

The constant intersections of world lines along cultural, ethnic, religious and ideological pathways define for students of the Twentieth and Twenty-First Centuries new classroom dynamics and new curriculum opportunities. Truth, and the *interconnectedness of all things*, became everything. With each intersection of new science, technology and the integration of all people, an elevated level of consciousness, awareness, and behavioural nuance is attained, especially under the relatively new umbrella of *Interdisciplinary Studies*.

World lines and intersections of people with people, and of people with events, is the global state of affairs. Does this fit into the Crenshaw-Collins model of intersectionality? The short answer is, *yes it should*! It is a sign-filled universe of symbols and significations. It is a universe filled with meaning. Remember Ernst Cassirer's proclamation in *Essay on Man:* "We live in a symbolic universe. Everything has meaning. Every feature of human experience has a claim to reality," (1970; 77).

Figure 34. *Interacting World Lines with the sphere of influence of w_2 shown shaded.*



In Figure 34, w_1 and w_2 represent two egosystem world lines. Where they intersect on the temporal-spatial plane represents interaction points i, an interaction for example where i_1 may represent an encounter in junior school, i_2 may represent an encounter in middle school, and i_3 may represent an encounter in high school. Initially, both world lines have the same range of mobility and sphere of influence. However, w_2 may succeed, while w_1 may fail; and while w_2 advances, w_1 recedes and declines. Both world lines meet and intersect, or interact, at i_1, i_2 and i_3, where one egosystem attains influence or dominance over the other. Still, one world line (w_1) is subdued and feels unsure, while the other worldline (w_2) takes on the world.

The mission of educators is to minimize the negative impact of these intersections on any one student. How? This is accomplished by turning perceived weakness into strength. Only the arts can do this with a certain amount of ease, since art is so much about honest and vulnerable personal expression. The arts celebrate honesty and vulnerability as the very source of creative inspiration.

In the realm of human behavioral evolution, each individual exists, not only on the basis of possibility, probability, potentiality and problem-solving ability, but also on complex interactions with other individuals, and more generally, objects, feelings and events. For instance, the progress of human development involves confronting intersectionality and interconnectedness with conscious awareness of conflict resolution, gender and reconciliation of the sexes in terms of social-physical dominance and subordination, race and all the attendant stresses and pressures of living in society. I am sure this is not a complete list. These pressure-stress confrontations, disputes and environmental challenges, eventually lead to an acquired repertory of socio-cultural problem-solving skills and workable solutions that allow both positive and negative intersections to occur through a mediated rational and empathetic lens — again, interconnectedness at its best.

A classroom is all about children meeting children, students interacting with students at key intersections in their lives. Interconnectedness is a sociological fact that demands expansion into Twenty-First Century thought and curricula. We live in a sign-filled world of many meanings and many realities. Interconnectedness expands intersectionality to embrace a complex historical-experiential, global reality.

Crenshaw does allude to a larger, *multi-dimensional* reality linked to so-called *identity politics*: "[If]... history and context determines the utility of identity politics, how then do we understand identity politics today, especially in the light of our recognition of multiple dimensions of identity?" (1981). Clearly, Crenshaw's concept of *multiple dimensions of identity* provides support for the proposed *egosystem* as well as the broader notion of interconnectedness. Identity politics is alive and well and at play in any twenty-first century classroom. However, identity issues do not just exist *between* students, but also exist within a student who is grappling with their *own* identity.

The *multiple dimensions of identity* do seem to support my argument for the existence of the egosystem. Interestingly, Collins concludes her article with a subtitle on *synthesis*: "Black women are not the only outsiders within sociology.... [*outsiders* also include]. . . Black men, working-class individuals, white women. . . [in fact, any woman in male dominated institutions]. . . other people of color, religious and sexual minorities, and all individuals who,. . . have never felt comfortable with its taken-for-granted assumptions." Those "other people" include members of the LGBTQ+ community, as well as the creative, hypersensitive, vulnerable array of students we educators have grown to love and respect in schools of the arts.

Conclusion

The systemic nature of the ego as egosystem is evidentiary. Also, in evidence is the reality that students belong more to the realm of *emotion-historical experience*, than they are at the mercy and whim of imposed, outdated curricula. Nevertheless, it is our emotion-historical experience that informs and shapes us as human beings with *choice*. Ortega y Gasset informs us, *man has no nature; what he has is history* (1961).

In education this means focusing on two pathways: one, delivering semeiotics and problem-solving skills for our students in order to shape and form their ability to *read the world*, while they learn at the same time to access and to assess layers of meaning in this sign-filled world of kinds and significations as they learn to *read the word*; and two, helping them to develop a personal repertory of observational, historical, literary, philosophical, and critical life skills as essential strategies for increasing intelligent, rational behaviour and to ensure success, and positive *interconnectedness*.

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