

THE THEORY AND PRACTICE OF ALCHEMICAL CURRICULUM INQUIRY: AN “INNER-ACTIVE” JOURNEY

By Morna McDermott

Towson University

And in a moment I can “see” the picture of all that has happened before me, here in this place, as the partial form, which has brought me to this present unfolding in my life. My memories are an inner labyrinth that forge a definitive outer form from the myriad of possibilities that swirl around each of us every second of every day, making order out of chaos...It is easy to feel so far removed from it all sitting at my computer at 2a.m. pounding away at the keys in hopes that, if I hit them hard and fast enough, my future can somehow be cast forth from such a frenzy. But here, on the beach, with a broken spiral shell in my hand I am all too fully aware that who I am on the outside has been born out of the inner spiral that is the sum total of all my past lived experiences. And the opus, the ultimate act of creativity, which is our future, holds its partial form in the past. And the empty spaces that make something partial and incomplete are the unknowns that can only be gleaned through the eyes of an artist...Possibility cannot be named without excluding out all other meanings. The unknown, like smoke, will dissolve and float away in our tight grasp. We are its partial form.

(From *The Spiral of the Shell*, McDermott, 2012)

SCIENCE INTO ART INTO SELF

Some people might say that we see with our eyes; I say we see with our hearts. Some say we know with our minds; I say we know with our souls. This essay is about relationships between art, curricula, and the inner life of the inquirer herself, those crossroads where mind, heart, and (perhaps) soul intersect in complex and powerful ways. When we speak to the different forms and frameworks artistic curricula can take, I find it equally valuable to consider how the process of using art and aesthetics to represent what we understand about the world around us corresponds to the inquirer's knowledge of “self.” Working from within, inquiry as curriculum theory and practice might be best understood as the “alchemy” of transformation.

In curriculum inquiry, alchemy¹ is better represented as a frame of mind, rather than as a structured format. As an inward-focused approach, alchemy parallels, in many ways, other theories about the relationships between self, inquiry, and education, such as the notion of *currere* explored by Pinar (1976; 1994), and Grumet (1978). As a way of working in inquiry, alchemy similarly grounds itself on the premise that, as creative beings, we are in a perpetual state of becoming(s), a state of mind where knowledge and experience are always in flux, rather than static elements to be arranged and fixed. A researcher as alchemist recognizes herself as a seeker of new knowledges while also being the source and end “product” of the knowledges being sought. Hence, “no longer should we see ourselves as seeking to uncover a pre-existing reality; rather we are involved in an interactive process of knowledge creation” (Beck, 1993, p. 201).

Although alchemy in its own right, historically speaking, was not directly aimed at social change, I suggest that an appropriation of the key concepts and practices of

alchemy lead toward arts research that challenges dominant paradigms and oppressive circumstances within existing school curricula. Borrowing from the idea of *currere* (Pinar, 1976; 1994), alchemists use artistic thinking and actions to explore and ultimately transform themselves. Pinar (1994) explains how, “*currere* seeks to understand the contribution academic studies makes to one’s understanding of his or her life” (p. 520). “*Currere*,” he explains:

...is not content to be a process that merely produces reflexive representations of self. It conceives of these representations as a field for the activity of self-as-agent who operates upon them and in that operation discovers the intentionality and energy that it extends into the world through the actions of self-as-place. (Pinar, 1976, p. 73)

Madeleine Grumet (1978) extends the notion of *currere* towards psychoanalytical constructs in which the unconscious and conscious awareness of self inter-relate with larger social and political contexts. Seen through the lens of socio-political discourse, *currere* can be considered an, “interpretation of experience involving the examination of the manifest and latent meaning, conscious and unconscious content of discourse, as well as the political implications of such reflection and interpretation” (Grumet, 1978, p. 513).

Alchemy mistakenly has been (mis)understood as a medieval science of literally transforming base metals into gold. However, further research exemplified by Carl Jung (1968) reveals that the “true” alchemical process was (and is) really a spiritual art form; one that required change not only of the substance(s) at hand, but also a change within the alchemist herself. The “act” of performing alchemy, the science of mixing together substances in a scientific lab, is rather a metaphor for personal, inner alchemical transformation. According to Jung, “The alchemists paralleled these experiences in their souls as a withdrawal into the darkness of their interior space, a darkness pregnant with possibility” (p. 319).

One of the vital components of engaging in curricular inquiry as an alchemical art form is that the idea of infusion replaces the so-called dichotomous walls between the knower and the known, between form and substance, and between who we are and what we do. Through various stages and processes, the edges between the alchemist and her practice are blurred, thus creating a more fluid, contextual, and porous image of reality. “The concepts of alchemy and the individuation process are,” according to Jung (1968), “matters that seem to lie very far apart, so that the imagination finds it impossible at first to conceive any bridge between them” (p. 3). This occurs only through a surrender of self as an “agent” of the creative process itself.

Alchemists (as artists and researchers) use metaphor to allude to the spiritual inner workings that in many ineffable ways affect what is revealed to others in our work. In inquiry, like in alchemy, it is through metaphor and art in general that others can, “perceive particulars, respond emotionally, and interpret what they find against the backgrounds of their own lives” (Greene, 1997, p. 6). Inquiries that occur from within, traces of which are revealed through artistic acts, carry the language of “soul” and convey these revelations to others who, in turn, might experience their own transformation as well. Our research becomes, “an act of passion, driven by the hope of somehow capturing the illusive power of (our) visions” (Greene, 1997, p. 4).

In *The Spiral of the Shell* (2012) I reflected:

The smell of the ocean comes rushing up into my nostrils and I absorb it into my pores. It races up my spine and I know something that I cannot name but have known all of my life. Some secret I cannot put my finger on. Before I was born, my birth mother, whom I never knew, supposedly used to take long walks on the beach with my biological father. She was only 16 years old at the time.

THE SPIRAL OF ALCHEMICAL INQUIRY

I want to be continually being born, like the universe. My thoughts and feelings must be as alive as my corporeal matter. If my body cells are dying each moment and being born each moment, why should my thoughts last longer than my body cells?...I don't have one theory; I have continual death and rebirth of theories.

(Jodorowsky as quoted in Cobb, 2006, p. 17)

The Spiral of the Shell, segments of which are presented earlier in this essay, was a creative “playfulness” with the various ways that inquiry in and within curriculum and the journey into artistic worlds intersect. In writing *The Spiral of the Shell*, I used elements of visual space, verbal rhythm, and metaphor to render a mental watercolor with words, blurring the edges between my personal history and my work as a researcher. The writing of *The Spiral of the Shell* was my first revelation of how alchemy had become inquiry for me. Central to the alchemical process was my willingness to be transformed through the experience itself, as well as through my artful creation of it. My “wide awakesness,” at the moments as they unfolded, shifted my thinking and being, as did the actual writing. I reflect on the words of Eliade (1956), “One can put life into what one has created by giving to it one’s own life (blood, tears, sperm, ‘soul’, etc.)” (p. 32).

Alchemy is an artistic practice that uses metaphor as a tool to create and express transformations that occur within the alchemist herself, while she engages in aesthetic experiences with the world and others around her. More than art aimed at changing others through their responses to the work and more than being art that changes the artist through the process, alchemical-art-processes, as inquiry, emphasize transformation “within” the artist, which subsequently incite embodied actions affecting changes in the outer reality.

SELF: THE PRIMA MATERIA OF INQUIRY

“Knowledge” can be considered a relic, or fragments of relics, of past experiences or meanings that are continuously re-presented as facts from which we create or re-create revelatory formations of present “realities.” As a signal towards understanding and the re-creation of experience, knowledge, like other signals, reveals a message that, “is neither here and now, but then and there” (Kubler, 1962, p. 17). However, what the standards of learning and the Tylerian pedagogy delete or dismiss from the educational landscape is the recognition that, “each relay [or signal] willingly or unwittingly deforms the signal according to his [the learner’s] own historical position” (Kubler, 1962, p. 22). The “space” of an individual, in turn, shapes knowledge into “archeological artifacts” of individual cultural and autobiographical origins. This requires us to consider that “what counts as knowledge, of course, necessarily begins with knowledge of who the subject thinks she is” (Sumara and Davis, 1998, p. 4).

Highwater (1994) proposes that it is the arts, “that change biology into metaphors that imagine the fire we cannot see” (p. 117). He continues, “they transform the ordinary into the extraordinary. Through the sensual and metaphorical transformation of a reality composed of shadows, the arts are able, at least momentarily, to allude to the fire” (p. 117). Ultimately, the elements of the *prima materia* emerge from our intangible palettes of the “soul” or spirit. If we hold this as a possibility, then the “self” cannot be removed from the process. Although we may like to think of our “self” as removed, or separate from, our objective realities, alchemists remind us that it is ourselves that we are working with, and all else lies secondary.

Like the method of *currere*, the practice of alchemy is an inquiry journey of the mind and soul, as well as the body, one that relates the self to society in ways intangible to discern by conventional means. Our interactions with arts-based experiences rupture and shift awareness about the “frames” of being that shape our own identities and realities, while seeking to represent what can be known on the outside. Such responses to lived experiences, especially those that tap into our deeper psyches, are most difficult to convey and are, therefore, frequently excluded from traditional bodies of research knowledge.

The alchemist relies on artistic elements, such as metaphor, to complete this work. Greene (1995), referring to Hannah Arendt, suggests that metaphor (like alchemy) bridges, “the abyss between the inward and invisible mental activities and the world of appearances” (p. 6). She concludes that it, “is the greatest gift language could bestow on thinking” (p. 6). Therefore, alchemy is really an artistic form of self-transformation disguised within a creative play of language and visual representation.

The basic “ingredients” involved in any alchemical process are called the *prima materia*. A scientific perspective on this process perceives actual chemical substances such as sulphur and mercury to be part of the *prima materia*. According to Briggs (1990), “The alchemical symbol is S, which stands for Sulphur, meaning passion, the heat of the spirit, the flame of absorption-sweat” (p. 200). Passion is the embodiment of alchemical “sulphur” or fire essence necessary for such an act to be transformative. When we do something with a passion, our spines tingle and our hearts race, and we are completely immersed in the moment, and our senses are heightened.

Mercury becomes the fluidity within the process. Briggs (1990) describes mercury as, “the distilling agent...representing spirit or mind” (p. 178). As such, “it slithers in many disguises” (p. 178). Mercury like soulful insight is “many sided and changeable” (Briggs, 1990, p. 178). To have a mercurial mind enables one to see things from many angles, to remain fluid and accessible to necessary changes. Mercury symbolizes the essence of what we can feel, breathe, and dream, yet cannot fix in our linear models of time and space. It is, therefore, spontaneous and impossible to truly grasp.

The sulphur and mercury (of the self) create the *prima materia*, which is placed in a container known as an “alembic” (Jung, 1968), where the elements are placed under great heat and pressure. This heating process causes form and substance to become a swirling liquid mass from which new forms will emerge. The act of creation is, “brought forth from the chaos as a dark sphere...the chaos is a ‘massa confusa’ that gives birth to the stone” (Jung, 1968, p. 325).

ART/INQUIRY/SOCIAL CHANGE

Living our human experience, learning to know ourselves, we disclose the variety and ineffable nature of Mystery. It is, rather, disclosed to us; and in that disclosure are revealed the contrary impulses of the heart. Thence comes responsibility; for either we must enlarge ourselves to embrace them, or they shall tear us apart.

(Clarke, 1997, p. 441)

The self becomes an agent of change only by changing the self. Using alchemical processes in artistic engagements with curriculum inquiry, we forge visions, rather than findings, inviting others to tap into their own creative reserves and draw out other ways of seeing the world. Alchemical philosophers all argue that a change in basic, modernist, scientific theories and practices must occur in order bring about a fundamental change in the structure of society. Such change must occur first within the individual in relation to the direct community. Like Carey's (1998) notion of critical art pedagogy:

(w)e transact the art world in lived experience. When integrated with critical consciousness and emancipatory action, connections between life worlds and the school art world...become individual engagement in art-as-praxis. (p. 298)

Yet, such responses to lived experiences, especially those that tap into our deeper psyches, are most difficult to convey and are, therefore, frequently excluded from traditional bodies of research knowledge. How might we access these sensory and artistic conceptions in inquiry so that they might, in turn, help transform our work and worlds?

As alchemical curriculum inquirers, ours is not merely an intellectual task, but a moral, political, and socially responsive one as well. It is through the imagination that we "map our world" (Rethorst, 1997, p. 3) and, hence, "our moral obligation" (p. 3) to others. By turning our powers of sight both inward and outward, inquiry becomes a task of working in moral and social arenas that emerge from the acknowledged subjectivity of the researcher herself, in which the, "act of authoring is now exposed as arising from within a peculiar perspective bound to issues of personal meaning, history and power" (Barone, 2000, p. 248).

If we are to enact change of a social moral or political nature, I suggest that such change comes through body and spirit, rather than intellect. It is what we *feel* or experience that moves us (figuratively and literally) toward alternative worlds. Filmmaker and self-proclaimed alchemist Alejandro Jodorowski suggests the question we should ask in response to his films is not, "what does this mean?" but rather, "how does this feel?" (Cobb, 2006, p.18). Such feelings occur during moments of great pain, discomfort, displacement, passion, and/or confusion. It is not the elements of the alchemical process in themselves (such as mercury and sulphur) that bring about a changed state of matter (and spirit), but rather the *process* called *opus contra naturam*. *Opus contra naturam* is translated as an effect contrary to nature. This process occurs through metaphorical great heat and pressure (experiences of pain and passion), causing "death" to the existing state of the elements (sulphur and mercury) and transforming them into something unexpected.

According to hooks (1994):

Paradox and contradiction are the mysteries of the soul. The weird, the uncanny are sources of knowledge. To know the self...one must open the heart wide and search every part. This requires facing the unacceptable, the perverse, the strange, even the sick. (p. 17)

She continues, quoting Thomas Moore, that:

Sometimes deviation from the usual is a special revelation of truth. In alchemy this was referred to as the *opus contra naturam*...When normality explodes or breaks out into craziness or shadow, we might look closely, before running for cover and before attempting to restore familiar order, at the potential meaningfulness of the event. (p. 17)

Social change, like the alchemical artistic process moves through *opus contra naturam*, between the inner and the outer, blurring boundaries between the two. At such junctures, we are more open to situations of oppression, sadness, or anger that exist outside the norm of our own worlds. The changes we believe are necessary in the world (that which is “without”) begin with that which is “within.”

EMBODIED CHANGE/DISEMBODIED ART

Let us consider that, while we are in a dis-embodied state of being, we are able to perhaps “see” past our own blocked and static thinking to consider other realities. Part of this process took place for me while creating a series of black and white photographs charting my own alchemical journey. We engage ourselves in such experiences by being open to artistic experiences of discomfort, dis-embodiment, or dis-embowelment.

According to jagodinski (1992), we are the artwork being created through each lived experience and interaction with the aesthetic world around us. We are informed by the various roles of the aesthetic and these moments become, “part of the arch-writing on the body, part of the body’s recollection of being” (p. 159). jagodinski (1992) blurs the boundaries between self and the outside world, erasing distinctions between, “‘thing’ as an object or ‘thing’ as a person” (p. 160). He continues that this distinction has been blurred purposefully, “to try and eliminate the mind/body dichotomy prevalent in positivist thought where *res extensa* is distinguished from *res cognita*” (p. 161).

Curriculum becomes not an act of doing, but an act of being (or living). The dichotomous distinctions between self and the work disappear and are replaced by a series of complex shifting and living relationships among the various “pieces” of knowledge and experience.

Similarly, alchemical acts require a spiritual and/or psychic willingness to be open to the weird, uncanny, unknown, or unthinkable. The contradictions, fissures, and ruptures emerging from *opus contra naturam* might alter static states of being or re-entrenchment of set thinking in exchange for fluid ambiguity and openness.

The photograph entitled *Disintegration* (Figure 1) is, for me, a “third space” (Bhabha, 1994), that place in-between worlds where, “identity is constructed and reconstructed, where life in its ambiguity, complexity, and hybridity is played out” (p. 37). The image expresses a soulfulness that emerges from chaos or “darkness,” rather than from a state of harmony and beauty. It aims to disturb the expectations of my viewers, but it also provoked discomfort in me as I arranged the sculpture to be photographed.



Figure 1: Disintegration, black and white photo, cement statue and sheep skull

The headless statue of St. Francis of Assisi embodies my belief that soul arrives from the imperfect and from moments of discord. I wanted to work from a statue (piece of religious iconography) normally associated with beauty and serenity, altered by having the head (intentionally) severed off. The statue was originally dismembered and given to me by a former lover who, more than anyone, in the course of relationship taught me the meaning of *opus contra naturam*. The sheep skull (head) was found while wandering across the open rangelands of Montana and South Dakota, during a time of inner spiritual questing right after my father’s death. It was during this same time period in which I wrote *The Spiral of the Shell*.

The skull is the distilled remnants of what is left after the body decomposes, elements transformed through an alchemical process of sorts. With the sheep skull affixed where Saint Francis’ head used to be, I feel the disembodiment of my own spiritual condition, a discomfort at this action (*Will I burn in hell for doing this to Saint Francis? Strangely, I don’t believe in hell...but this thought still haunts me...*) and yet a strange personal

alignment with this altered image. Both objects are literally and figuratively a part of who I am and my lived experiences. Juxtaposed with the body of Saint Francis, I create my own effect contrary to nature. The body of a saint associated with life is symbolically re-animated with a skull, usually associated with death. Neither is what you expect in their new poisonings. It is the *opus contra naturam*.

Moments of perturbation or discord to my inner stasis are more soulfully significant to me than moments of beauty and harmony. The imbalance felt emotionally and bodily by great pain or passion (sulphur) leads me to re-think, re-feel, and re-perceive myself and my outer reality. This process, in effect, “un-skins” (Sumara & Davis, 1998, p. 2) structures that reinforce patterns of social behavior. Sumara and Davis propose that curricula, “un-skin, recasting self-images” (p. 2). As the fixed (either in the guise of absolute knowledge or systems of pedagogy) breaks its static form, we begin re-naming and un-fixing old forms. Instead, we can allow for transformative and re-combinant aesthetic arrangements that lead to a curriculum that, “feels risky, dangerous, forbidden—for within it, we are able to imitate nothing but who we are” (p. 2). Like being placed in an alchemical alembic (place of great heat and pressure), engagement with these moments, provoked by aesthetic sensory interactions, diffuse and recombine my inner being and the *prima materia* of who I will become in my outer form. The bones remind me of a passage from *The Spiral of the Shell*:

I am standing at one fleeting heartbeat in the span of my life. I am drawn to the broken shells. The fractures on the outer layer give me a *view into the spine*, the inner workings that brought the outer into being.

The photograph entitled *Spinal Recognition* (Figure 2) brings me back to the *spine*.



Figure 2: *Spinal Recognition*, black and white photo, stones and sheep spine

The photo reveals the spine open and vulnerable to pain and to the “outer” elements. It lies across a series of stones that metaphorically speak to the alchemical “stone,” which is created through the process of great heat and pressure. Though bone structure laid bare suggests death, the stones gesture toward emerging transformation, “rising from the flotsam, detritus, and ruins” (Dimitriadis & McCarthy, 2001, p. 51) of the *opus contra naturam*. Just as the primary substances of sulphur and mercury paralleled the inner change of the alchemist herself, the bones and statue in my photo series not only represent me; they *are* me. They are fragments of my lived experiences, the geographical and spatial intercepts that brought change to my inner being.

When I am shaken to my “core” and feeling completely and utterly shattered in my sense of being, I am then willing to “see” things from unexpected and often uninvited perspectives that leave me changed inside and how I act on the outside. It is this process that confronts our inner moments of blocked conditioning that perpetuate oppressive and biased world circumstances, and it is the painful and/or passionate aesthetic moments, that leave us feeling dismembered from who we thought we were or our perception of others, that can re-arrange our *being-ness* and our actions towards a social consciousness.

I am reminded of Carpenter (2004) who, reflecting on his own artistic processes, suggests that art ought to be:

Informed by personal connections, experiences, understandings, and relationships in the world...some of the connections viewers make are uncomfortable...I hope viewers embrace the variety of connections and responses...no matter how uncomfortable, and move toward the development of more profound understandings of themselves, historical events, cultural practices, and their world. (p. 8)

OPUS MAGNUM: KNOWING AS BECOMING

Paradox and contradiction are the mysteries of the soul. The weird, the uncanny are sources of knowledge. To know the self...one must open the heart wide and search every part. This requires facing the unacceptable, the perverse, the strange, even the sick.

(hooks, 1994, p. 17)

Being an alchemist art inquirer is not something I “do;” it is something I “am.” “The alchemist,” according to Jung (1968) relates “himself not only to the unconscious but directly to the very substance which he hoped to transform through the power of imagination” (p. 278). As a form of arts inquiry aimed at social justice, alchemy engages the inquirer-as-artist in two key ways.

First, (symbolized by sulphur) as a matter of *being*, I must embrace my lived moments of discord or “darkness” or passion as spaces for openings, rather than of closings, and see new threads connecting where previous ones may have been dismembered. Second, (symbolized by mercury) as an act of *doing* alchemy, I transform such experiences through the aesthetic body of my senses, creating or responding to art that shapes me as I am shaping it. Such artful experiences as part of the *opus contra naturam* bring instances of ambiguity, confusion, and discomfort. They take me to unexpected places where I may be open to change. I become a source of living material, an element in the process, the *prima materia* to be transformed. It, “involves a re-orientation of consciousness, it also enables us to cross divides, to make connections between ourselves and others, and to look through their eyes” (Greene, 1997, p. 6).

Not unlike Carey’s (1998) notion of “critical art praxis” the approach of curriculum inquiry as alchemy, “avoids attempts to arrive at first principles or universals by

rigorously disciplined systematic inquiry” (p. 269). To perform an alchemical act breaks the stasis of fixed forms, “signifying the possibility of transition into another mode of being—the freedom to change situations, to abolish a petrified, or blocked system of conditioning” (Gablik, 1991, p. 42).

Alchemy re-elevates art to the status of soulful practice, one that “deals with revelations rather than observation” (Highwater, 1994, p. 22). Through alchemical practices and knowledges, *exchanges* are born in the place of our traditional researcher roles as “objective” observers and collectors of facts. More linear or scientific approaches to curriculum inquiry have, to some extent, marginalized the very voices of creative inspiration we crave because we cannot weigh and measure them first. Often those voices come knocking at our door, uninvited. It is the alchemist/artist, not the logician or the scientific theorist, who is armed to open that door and to begin a dialogue or a dance with “essence.” Unlike scientific methods of observation that “murder in order to dissect” (Wordsworth, 1888) in order to “know,” alchemical experiential forms of observation draw on the “soul” or “spirit” of the artist “within” to comprehend and to express more tacit and intuitive forms of knowing.

As I continuously step toward the edge of unknown worlds, every moment is filled with a multitude of ongoing sensory perceptions and minute choices, irretrievable gestures, and non-repeatable pulses of energy that intersect across material contexts.

“Reality” is a translucent veneer covering and containing the fragmented shards I collect from each moment as it washes over me (and through me). Waves of experience continuously shape the contours of my mind and being, leaving remnants like sea glass and dissolving foam to hang scattered along the shoreline of my awareness. I selectively gather them in the palm of my hand to bring home and arrange them so that I may look to them and recall, to recreate and to “know,” and to become.

References

- Barone, T. (2000). *Aesthetics, politics, and educational inquiry: Essays and examples*. New York, NY: Peter Lang.
- Beck, C. (1993). Postmodernism, pedagogy, and philosophy of education. *Philosophy of Education Society, 1996-2001*, 105-130.
- Bhabha, H. (1994). *The location of culture*. New York, NY: Routledge.
- Briggs, J. (1990). *Fire in the crucible: The self-creation of creativity and genius*. Los Angeles, CA: Jeremy P. Tarcher, Inc.
- Carey, R. (1998). *Critical art pedagogy: Foundations for postmodern art education*. New York, NY: Garland Publishing.
- Carpenter, S. (2004). I love you once a year: My funny valentine. *Journal of Curriculum and Pedagogy, 1*(2), 8-13.
- Clarke, L. (1997). *The chymical wedding: A novel*. New York: Fawcett Columbine.
- Cobb, B. (2006). *Anarchy and alchemy: The films of Alejandro Jodorowski*. Washington, DC: Creation Books.
- Dimitriadis, G., & McCarthy, C. (2001). *Reading and teaching the postcolonial*. New York, NY: Teachers College Press.
- Eliade, M. (1956). *The forge and the crucible: The origins and structures of alchemy*. Chicago, IL: University of Chicago Press.
- Gablik, S. (1991). *The reenchantment of art*. New York, NY: Thames & Hudson.
- Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco, CA: Jossey-Bass.
- Greene, M. (1997). Metaphors and multiples: Representation, the arts, and history. *Phi Delta Kappan 78*(5), 387-401.

- Grumet, M. (1978). Songs and situations: The figure/ground relation in a case study of *currere*. In G. Willis (Ed.), *Qualitative evaluation* (pp. 276-315). Berkley, CA: McCutchan Publishing.
- Highwater, J. (1994). *The language of vision: Meditations on myth and metaphor*. New York, NY: Grove Press.
- hooks, b. (1994). *Teaching to transgress: Education as the practice of freedom*. New York, NY: Routledge.
- jagodinski, j. (1992). Curriculum as felt through six layers of an aesthetically embodied skin: The arch-writing on the body. In W. F. Pinar & W. M. Reynolds (Eds.), *Understanding curriculum as phenomenological and deconstructed text* (pp. 159-183). New York, NY: Teachers College Press.
- Jung, C. (1968). *Psychology and alchemy* (2nd ed.) (R. C. F. Hull, Trans.). Princeton, NJ: Princeton University Press. (Original work published, 1953)
- Kubler, G. (1962). *The shape of time: Remarks on the history of things*. New Haven, CT: Yale University Press.
- McDermott, M. (2012, May 7). *The spiral of the shell*. Retrieved from <https://educationalalchemy.com/2012/05/07/spiral-of-the-shell-15/>
- Pinar, W. F. (1994). *Autobiography, politics, and sexuality: Essays in curriculum theory 1972-1992*. New York, NY: Peter Lang.
- Pinar, W. F. (1976). *Toward a poor curriculum*. Dubuque, IA: Kendall/Hunt Publishers.
- Rethorst, J. (1997). Art and imagination: Implications of cognitive science for moral education. *Philosophy of Education*, 1997, 278-284.
- Sumara, L., & Davis, B. (1998). Underpainting. *Journal of Curriculum Theorizing*, 14 (4), 1-5.
- Wordsworth, W. (1888). "The Tables Turned." In S. Gill (Ed.), *William Wordsworth: The major works* (p. 130). Oxford, UK: Oxford University Press

Endnotes

¹ Alchemy is often misunderstood as a method of medieval pseudo-science done by "quacks" and "charlatans" to manipulate the natural world and deceive others. In our current age of "fake news" and "alternative facts," such an interpretation is indeed problematic. The application of the concept of alchemy in this essay **is not as a scientific term** but as a psychological or artistic one in keeping with the work of Carl Jung who suggested that alchemy is a powerful **metaphor for experiencing and expressing** acts of self-transformation. Alchemy should be understood as a spiritual art, not as a science.