# From Postmodernism to Milk Cartons: Junk Art sculptures and Preservice Teachers' Philosophies of Schooling

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Abstract: This essay focuses of an arts-informed inquiry performed by sixteen pre-service teachers who created sculptures to explore their teaching philosophies. Through this creative process changes occurred in their assumptions and expectations about what is of value in teaching and relationships between themselves, their students, and the community. The ideas of philosopher Michel Serres are used to analyze the themes that emerged from this creative process. Specifically, I examine the relationships between three of Serres' key themes: 1) prepositions, 2) spaces "in-between", and 3) noise, and how aesthetic forms of expression such as creating sculptures open alternative pathways for pre-service teachers to imagine or re-envision transformative pedagogies.

Key Words: curriculum, arts-based inquiry, social justice, autobiography, postmodernism, pre-service teachers

#### I. Introduction.

Repetition is death. It is the fall into the similar, like the fixed identity of the too well-known. If the only concert(s) in the world came from the already written, the world would quickly become a pale hell where shades floated about.

(Serres, 1982, p. 122)

In a school-world increasingly land-marked by predictability, accountability, measurability, and homogeneity, more creative risk taking practices are being watered down or filtered out all together. The journey across this terrain, using the birds-eye map view of the world as a metaphor, is one staked out with push-pins, which exact the journey to be traveled. This is especially true for beginning teachers made fearful of the thought of "getting lost" as they begin their teaching quest.

The existing school climate requires them to follow a two-dimensional framework of linear and prescribed directions as they make their way from one push-pin to the next with an eye toward teaching the standards and ensuring their classrooms will pass the standardized tests. However, when we turn our imaginary gaze from a two dimensional map of "known" terrain to one of three-dimensionality, endless possibilities for alternative connections, ruptures, pathways, pits, and layers emerge. Here, beginning teachers might discover (or better yet, create) a teaching journey that invites invention rather than repetition in their practice. Using this metaphor of three-dimensionality we might argue that beginning teachers can challenge existing paradigms and promote change by wandering off the path and getting lost in new terrains.

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Getting "lost" brings the beginning teacher to a place where they can wander away from a two dimensional charted map of the "known" into a three-dimensional "rhizomatic" maze of multiply intersecting, connecting, overlapping moments between their thinking and their actions. A rhizome according to Deleuze and Guattari (1987) is constructed through multiple connections:

Any point of a rhizome system can be connected to any other point. In other words, the rhizome is not hierarchical in structure. It is the anti-hierarchical: no point must come before another, no specific point must be connected to another point, but all points are and must be connected. (p. 131)

Similarly, we might rethink the journey to becoming a teacher, one in which pre-service teachers can create, or discover, multiple and unpredictable connections between themselves, their students, and the community. They might break away from the traditional lesson plan formatting brought to us by the positivist model supported by the Tyler rational, in which all outcomes are predicted and labeled in hierarchical fashion. Instead, a rhizomatic paradigm, embodied in three-dimensional, non-hierarchical, emergent and aesthetic engagements with the world, might empower beginning teachers to transform their pedagogies.

I examine how pre-service teachers might experience such a paradigmatic shift in their thinking by engaging them in an experiment in which they were to represent their meaning-making process in three-dimensional form. For my inquiry, I decided to ask a group of 16 preservice teachers<sup>2</sup> working on their internships within a K-5, requires elementary school to construct sculptures that represented their teaching philosophies. Given its particular aesthetic three-dimensional qualities I wanted to explore how knowledge and knowing might change "shape" for these pre-service teachers, by changing the form of representation such knowledge takes. As part of this process I considered two inter-related questions: How might the process of making sculptures challenge pre-service educators assumptions about 1) what types of knowledges and experiences should shape their curriculum and 2) the possible relationships constructed between teacher, student, community as they shape the curriculum?

Specifically, I illustrate how aesthetic representation that engages one's thinking drawing on forms of expressions that include a) prepositions, b) spaces "in-between", and c) "noise" encourage the development and realization of an educational philosophy based on a complex understanding of the self. I note here that the emphasis in this essay is on the impact of the inquiry *process* for these pre-service teachers rather than on analyzing the "product" as a form of representation. This is different from using the sculptures in order to empirically "discover" what the teachers think and believe about teaching.

To change one's behavior, perceptions and attitudes must be altered as well. One way to encourage a re-visioning of both theory and practice with beginning teachers is to engage them in the practice of imagining, rather than reciting a teaching philosophy, out of which rises their beginning practice in the classroom. In previous scholarship (author, 2001; 2002) I explore the use of collage art, specifically the notion of shifting metaphors, as a way for beginning teachers to represent the inter-relationships between autobiography and teaching philosophy. This practice drew my curiosity towards the idea of working in three-dimensions rather than two, with an ambiguous notion that something meaningful, though I did not know what at the time, would emerge from that exercise. In a profession filled with metaphorical land-mines, buried treasures apexes and pitfalls, the idea of using a three-dimensional format to represent beginning teachers'

beliefs about themselves and teaching seemed a meaningful practice for me and my sixteen preservice teachers.

# II. Sculptures, Curriculum, and Serres.

As a form of inquiry, such aesthetic explorations rest on the premise of postmodern research that "painting, musical compositions, film documentaries, readers-theater, art installations and multi-media projects are valid forms of data representation (Slattery, 1997, p. 1). Further, as Lather suggests (1986), validity rests on how the inquiry improves the lives of those we study. Engaging pre-service teachers in aesthetic modes of examining their beliefs and practices focuses on inquiry not of what "is" but what "could be", utilizing self-reflective inquiry to provoke change. The artistic experiences discussed in this essay demonstrate how self aesthetic reflective inquiry requires "not just the aloof involvement of our sight but a profound investment of our bodies, minds, identities, and all our senses" (Baler, 2002, p. 46).

More specifically, by using "junk' from scraps of recycled items to make the sculptures, beginning educators start to articulate their own philosophy, not as a static "thing," or a series of abstract ideals formulated on a piece of paper that "sound good", but rather as a process, not unlike the creative process itself. Through the process of their creation, the philosophies become dynamic, shifting, and emergent entities made up from the scraps of their daily lives, charting their teaching philosophy as a living three-dimensional topography, one in which they situate themselves, and other elements of schooling into a journey traced-out through the various connections and relationships, emphasizing movement, pathways, connections and ruptures. One pre-service teacher, Erin, made the connection between the sculptures and her teaching this way:

Making different pieces and ideas went together making my teaching philosophy. I believe that this is a true comparison to the number of characteristic that make for a great teacher ... The sculpture helped me realize that much is needed to make a school work and the most important part in the school is the teacher.

As such, their philosophies are assembled of "pieces" that are constantly being connected, disconnected, moved around, discarded, or transformed by their actual practice which is perceived as a living "art."

Generally speaking, I knew two things were of value to me in this form of scholarship. First, the forms and processes required in constructing a philosophy through alternative representation require different ways of thinking, illuminating ideas and experiences that cannot be articulated through other more traditional or two-dimensional means. Secondly, I suggest that sculpture encourages spatial associations needed to represent a three-dimensional terrain that opens up subjective "worldviews" of teaching experiences and languages meaningful within these spaces. In other words, we move from a birds-eye disembodied view of education to a "situated" geography where we map ourselves *into* our own experiences within the space and place of schooling.

As a pre-service teaching supervisor and arts-informed researcher, I wanted to see what might happen when these pre-service teachers represent their teaching philosophies in the form of three-dimensional junk-art sculptures. During their teaching placement at a suburban elementary school located on the outskirts of Baltimore, MD, these pre-service teachers were also completing a seminar course with me one day a week. The teaching philosophy sculptures

served as their final projects for the seminar. The sculptures incorporated their self-perceptions as beginning teachers, their educational philosophies and current experiences during their internship.

Following the construction of their sculptures, the pre-service teachers wrote a brief explanation describing ways that this creative process allowed them see themselves, their beliefs, and their experiences from a different perspective, and answered specific questions I had posed. These questions focused on ways that representing themselves in three-dimensions differed from more traditional linear and two-dimensional perspectives, and ask them to discuss the process of finding, selecting, and assembling the various pieces together to produce their final composition. For the purposes of this essay they have been given pseudonyms when quoting their writing and ideas.

As I was beginning to formulate this activity with my pre-service teachers I "coincidentally" stumbled across the ideas of French philosopher Michelle Serres. Serres, who emerges out of the postmodern semiotics and post-structural frameworks for interpreting meaning that emphasizes how language situates us, or how we situate our meanings, based on the language we use or include, and more importantly, what we exclude.

Serres' philosophy has been associated with curriculum theory (Doll, 2003) emphasizing the notion of a three-dimensional web (Serres [1991], in Doll 2003), much like a rhizome, in which any set of connections, both horizontal and vertical can interact with any other set of connections:

It is horizontal in that a particular set of connections can interact (abductively) with another set of connections. It is vertical in that a particular set of connections (or elements within a set) will have past histories and future possibilities. (Doll, 2003, p.4)

The co-creation of meanings (or "thirds" created by the relationships between two intersecting locals) emphasizes the ideas of "passion and play," which Doll (2003) contends are both lacking in today's school curricula. Playing with traditional boundaries "represents the new challenge for curriculum" (p. 7).

I realized that Serres' ideas about the construction and representation of meaning(s) about ourselves and the world around us resonated with the aims of making the sculptures. The creation of three-dimensional sculptures invited these pre-service teachers to "play" or experiment with their own boundaries, by inventing alternative uses of traditional language (i.e. the written philosophy essay) and creating empowering connections and intersections between themselves and their practice. Hence, they began to "perform" (2003, p. 7) rather than merely represent a transformative pedagogy. Similarly Doll reflects that "an epistemology of performance ... (means) dancing with the text and in that dance (in space the dance occupies) newness emerges" (p. 7).

The framework of analysis used for data presented here is based on three key tenets of Serres' work: 1) the idea of meanings constructed in the fluid and dynamic spaces of an "inbetween" produced by prepositions (in figurative language), 2) the creation of a "third" (within the in-between) born out from contradictions, rifts and ruptures in the metaphorical landscape, and 3) the significance of "noise," which is produced by what is "not communicated-the part that is excluded" (Lechte, 1994, p. 3). Prepositions, intersections (thirds), and noise became the themes used to code the data drawn from the sculptures and written essays. I identified words and phrases from the data that paralleled these three basic concepts.

It is worth noting that although the pre-service teachers knew that their work was to become the grounds for some form of scholarship that promoted arts-informed inquiry, the work of Serres and his basic philosophy were *not* introduced to them. The connections between their thinking and Serres' themes were not deliberately constructed by the pre-service teachers as a way to "match" their ideas to what my own scholarship intended. I did not want to lead them to writing or creating what they thought I specifically wanted to hear or see. However, as their instructor, these pre-service teachers were directly and indirectly influenced by my own thinking (through assigned readings and lectures, etc.) and therefore were most likely affected in their own thinking by what Davis and Sumara (2006) call *inter-objectivity*. There exists an *inter-objective* experience between inquirer and the complex elements of the process of inquiry itself. Davis and Sumara (2006) define inter-objectivity as follows:

It is not about the object, not about the subject, and not just about social agreement. It is about holding all of these in dynamic, co-specifying, conversational relationships while locating them in a grander, more-than-human context. (p. 15).

Rather than seeking "Truths" about the "discovery" versus the "construction" of knowledge in pre-service education, the validity of the study rest not in how or why in the origination of their thinking but the impact that the aesthetic sculpture making process, and changes in their thinking might have on their own lives and the lives of their students when begin their own classrooms. Lori one pre-service teacher expressed it in this way:

As I began putting my sculpture together, it began taking on a life of its own... My plan was to take materials I had and create something out of them that represented my teaching philosophy- I managed to that and much more.

# Similarly, Pam explained that:

This project was a reflective journey because throughout the process of building it, I reflected upon myself, my teaching, and how I hope that my future in teaching will be.

For my analysis I coded the data using Serres' three key themes as a way to explore and discuss possible meanings and purpose to the activity, specifically as Serres themes corresponded to transformations in the pre-service teachers' thinking as they moved through the process. Reflecting on their creative process the pre-service teachers were expressing what they felt would be of most value in their classroom curricula. Serres' three themes also embody the relational dynamics of a transformative classroom which foregrounds the lives and experiences of children within their communities. Carolyn described her experience as follows:

Through creating my sculpture I thought about how important it will be for me to include parts of my own life within the classroom I teach ... I think this sculpture reflects who I am, where I have been and where I am headed. More than likely, if I had not done this assignment the thought of making the outside world a focus of my classroom would never have occurred to me ... The sculpture allowed me to consider and express qualities about myself while at the same time developing my teaching philosophy.

# III. Analyzing Sculptures as Terrain.

# A. Prepositions.

"The real passage occurs in the middle. Whatever directions determined by the swim, the ground lies dozens or hundreds of yards below the belly or miles behind and ahead." (Serres, 1997, p.5)

The sculptures were essentially constructed through the use of prepositions. For example, seemingly unrelated objects needed to be physically assembled together through various connections. These connections both literally and figuratively support Serres' belief in the significance of prepositions. He proposes that meanings are created through object-relations, using terms such as "in" "with" "under" and "through." Similarly, with these prepositions, the pre-service teachers could articulate personal experiences in education that otherwise might not be constructed or revealed.

The most common prepositional spatial references shared by the pre-service teachers related to relationships of center (or base) to outer/inner spaces. Serres (1999) describes an "enclosed" space (inside or within) as "isolated, closed, separated; it also means untainted, pure, and chaste" (p.45). To be isolated or protected from within was an ongoing theme expressed within various sculptures. For example, using a Pepsi bottle for the core of her sculpture (see figure A), Nakeesha explains "I want to be well-rounded and able to keep some of the ideas from myself and others wrapped up safe."



Figure A

Related to enclosed spaces, such as a mailbox made by Andrea (see figure B), she adds that points of entry speak to her values as well. She writes, "I made the opening to the mailbox in the shape of a heart because I believe my students need to be loved."



Figure B

Additionally, spatial references, using aesthetic terms from the sculpture process also represented who and what might be "central" to their teaching:

"The ball needed something to rest on (and) I believe every student no matter what their race, socioeconomic status etc. has the opportunity to be a star student."

"Styrofoam at the base. The base keeps the team of people, school, and students from falling down."

"I chose to use this picture in the center of my sculpture because it shows that children are the focus of my philosophy."

"At the center of the cube is a heart because I feel love is the center of all teaching." (see figure C)

Also of note is that for all of the pre-service teachers who used a base or center as a point of reference they referred to this foundation as being built on (or around) the students they would be teaching.

#### B. Meaning in the In-Between.

In tandem to the use of prepositions is the role that spaces "in between" have in threedimensional language to perform intersections (and contradictions) of meanings. Serres writes:

The image of the weaver arises at this point: to link, to open bridges, pathways, wells, or relays among radically different spaces; to say (*dire*) what takes place between them

...the category of *between* is fundamental topology... to interdict in the ruptures and cracks between varieties... (1999, p.45)



Figure C

Such cracks or contradictions resist the reproduction of meaning or knowledge within a closed system such as those systems of thought and inquiry such scientific Positivism and the search for absolute Truth. In terms of educational inquiry, a closed system predetermines what and who constitutes valid knowledge and how such knowledge can be validly represented. Serres argues that, "to transcend the closed system ... is to fuel invention." (Lechte, 1994, p. 4). Invention is fueled through in-between spaces that break through in the form of roads, bridges, and rivers. Serres describes a ladder as "A path that connects two banks or makes a discontinuity, a continuity, crosses a fracture or patches a crack" (1999, p.45). A river, he continues, "creates two spaces without a common boundary" (p.45).

As pre-service teachers constructed and later described their sculptures, the idea of "inbetweens" formed through ladders, bridges, rivers, wells, and pathways signified the boundaries and connections between various aspects of their teaching beliefs and experiences (see figure D). Some examples drawn across the 16 sculptures include:

"The significance of the ladder is to offer assistance for someone to help them climb into education. The wire is also used to create a ladder that people can use to climb into education; it can assist as well as hold the learner until they make it all the way up."

"The ladder aspect is at the core of my philosophy. I am able to see that as a teacher I want to be actively involved in supporting the students in order to help them to succeed. I can see now looking at my sculpture, that the students are holding me together too."

"The road that extends from the home setting to the school represents how students bring the home environment, family and friends into the classroom. The steps symbolize the student's growth and achievement, and as they grow, the possibilities they posses are limitless. The steps represent the skills that teachers give their students.

"The rocks show the stepping stones you have to take and also the bumpy road that some teachers face."

"The water is my education because like water my education flows into me and nourishes me."



Figure D

#### C. Junk (or) Noise.

Noise, which Serres explains "is outside-it is the world itself-and it is inside produced by our living body," serves several functions. Although on the one hand he points out "noise destroys and horrifies," it also "nourishes a new order" (1982, p. 127). Noise is what's left over or cast aside in communication, the static or cacophony produced outside traditional modes of expression in spoken language or musical harmony. Serres believes we are too quick to devalue noise in favor of harmony. It is the things that don't "fit" he argues that break the pattern of repetition and invite invention.

Like the "noises" literally, or symbolically in the form of ideas, lives, and experiences typically silenced from traditional research, the pre-service teachers used junk (like noise) "to recreate themselves and their contexts ... using the arts and random, aleatoric forms" (Mullen and Diamond, 2001, p. 72). As one pre-service teacher explains:

"The basic tree structure is a PVC pipe ... that was in my basement, from a project that was made by a friend of mine my senior year of high school. She gave the tree to me since I liked it a lot." (See figure E)



Figure E

The use of "junk" to create objects (or noise) of meaning gestures to the notion in schooling that transformation is possible using the materials at hand. The pre-service teachers conveyed how "junk" in their sculptures reflected noise about what's going on the world outside the classroom including their students, who they are, and where they come from. Lisa expressed how:

"My sculpture started off as a playground ball that I found in my shed ... I decided that when teaching, I need to base everything off my students, who they are, and where they come from."

#### Erin reflected that:

"I know the sculpture was supposed to be junk but I did not have enough 'junk' from the students to comprise a work of art, so I took a different approach. I decided to make a sculpture by representing things I really believe in using materials found in a school."

Further, it suggests that things (students and teachers lived experiences) gradually being marginalized out by the one-size-fits-all standardization movement perhaps have power and value when seen from unlikely perspectives. Serres (1982) reminds us that "we are in the noises of the world, we cannot close our door to their reception ... if these sources are stilled, death is there in the form of flat waves" (p. 126).

From trash to treasure, the noise created in our classrooms serves as the foundation for democratic change. In her discussion of the values of Junk Art, Vergine (1997) argues that we need to consider "the fact that each and every one of us is cast aside or used' by other human beings on an almost daily basis. Every day that goes by we have somehow to put ourselves back together, pick up the pieces" (p. 19).

# **IV.** Creating Maps of Transformation.

So what? That's the question I ask myself while engaging in any arts-informed quest. In this study, the pre-service teachers shared how constructing the sculpture provoked their thinking and hence will inform their practice. Their responses to this activity suggest that Serres principles for meaning-making do have a significant place in teacher education, where igniting innovation (or invention) in thoughts and actions encourages us and our beginning teachers not merely to simply read the maps charted by others but to have the courage to chart our own living philosophies. These pre-service teachers expressed how the use of junk became meaningful in their understanding of teaching transformations. One wrote:

I had my students trace and cut out their own hands from construction paper because I wanted them to actually take part in my sculpture as I encourage them to take part in every lesson I teach. Then I paper mached the hands with news paper scraps representing what is going on in the world and how it impacts us as teachers as students.

The application of artistic expression to illuminate thirds, prepositions, and the value of noise provide alternative languages to exhume (or invent) powerful visions otherwise lain buried. Although many of them at the beginning appeared skeptical of such a seemingly "childish" activity for their final project, here is what many of these pre-service teachers wrote following its completion:

<u>Laura</u>: Change can be good and I learned this semester that flexibility is one of the most important qualities that must be present in a good teacher. All of the objects in this box reflect not only my teaching philosophy as a whole but my experiences this past semester as well.

<u>Sara:</u> When I first thought about the assignment of making a sculpture of my teaching philosophy, I was at a loss. I thought that philosophy was a theory that you believe in after many years of experience and thinking and I didn't think that after teaching a couple of weeks I would know what my teaching philosophy was ... I realized to my surprise that I do have a teaching philosophy.

Mary: Instead of speculating what I could make my sculpture out of, I thought about what teaching means to me ... By making an art sculpture like this, I did not really know at the time why I was putting things in certain positions until I sat and thought about it.

<u>Kristina:</u> Designing and putting together this sculpture not only supported my teaching philosophy that children need to learn in an interactive hands-on way, but it also helps to shape it for me.

The creation of sculptures immersed beginning educators in what I believe was metaphorically a democratic process allowing them to consider "critical action of working toward emancipatory goals by opening the schooling process to critical questions" (Carey, 1998, p.310).

#### V. Conclusion.

In keeping with the work of Mullen and Diamond (2001), relating sculpture to teacher education is intended to serve as a "conceptual tool" where "the connections among art, inquiry, development, and democracy might be explored" (p. 72). Echoing the words of John Dewey, Mullen and Diamond remind us that "Democracy is not built on 'rugged individualism'; instead it is cobbed together from the ground up through the communal sharings and involvement of all members of cultural institutions" (p. 68).

Life (not as a noun but as a *verb*), and more specifically transformation, occur at multiple intersections of contradictions. Teachers I speak with on a daily basis, as well as these preservice teachers, express how they feel trapped by the pre-dictated lesson's scripted curricula, standardized testing, where there is little room for else. In an increasingly closed system, all teachers, but in particular here these pre-service teachers, also shared with me how they feel more and more disempowered by fears of "not making the grade" on testing and the crunch to fit in all of the mandated "top down" curricula, which silence critical thinking or creative practices that meet the diverse, and culturally situated interests and needs of their students. Serres' philosophy reflected in the playful invention of junk sculptures provides just one alternative way to conceive of ourselves and classrooms, and invite transformative actions. Nakeesha summarized her experience this way:

Putting together my sculpture really helped me realize the type of teacher I am, the type of teacher I am becoming, and the type of teacher I strive to be... recognizing that every child has the potential to learn, and that it is my responsibility to cater to each child is reflected throughout this sculpture.

In the quest for a one-size fits-all model, education cuts out those parts of teachers and students worlds that we'd rather not see. bell hooks (1997) believes that our current educational crisis stems from, "the traditional technicist attitude of teachers who, unaware of the outside influences in students lives ... (ignore) their cries for relevance in their lives" (p. 95). Instead we dissect their lives, their motives, and their experiences, to fit our theories so that we may paint the picture we set out to create. Deleuze reflects if the protests of children were heard in kindergarten, if their questions were attended to, it would be enough to explode the entire educational system" (Foucault and Deleuze, 1990, p. 11).

Offering arts-informed spaces beyond the traditional boundaries forged in both inquiry and education, students and teachers might pull from the scrap heap of their own previously silenced identities and voices. These silences echo "noise" out from the margins of questions such as "what knowledge is of most worth" (McLaren, 1989, p. 38)? Their lives cast shadows over the fixed and hard data that is supposed to represent "reality" as we plan and predict curriculum "reform." From the noise of contradictions within these intersection teachers might be able to enact forms of resistance against layers of silence and disempowerment buried deep beneath the map's surface.

# References

Baler, P. (2002). Sculpture, May, 21 (4) 44-50.

Carey, R. (1998). *Critical Art Pedagogy: Foundations for a Postmodern Art Education*. New York: Garland.

Deleuze, Gilles and Felix Guattari.(1987) Translation: B. Massumi. *A Thousand Plateaus: Capitalism and schizophrenia*. Minneapolis: University of Minnesota Press,

Foucault, M. and Deleuze, G. (1990). "Intellectuals and power." In Russell Ferguson, et al. (Eds.), *Discourses: Conversations in postmodern art and culture*, pp.9-16. New York: The New Museum of Contemporary Art.

hooks, b. (1997). Wounds of Passion. New York: Henry Holt Press.

Hirsch, E. (2002). The Demon and the Angel. San Francisco: Jossey-Bass Inc

Lechte, J. (1994). On-line abstract from *Fifth Key Contemporary Thinkers*, Routledge. Retrieved February 4<sup>th</sup> 2006 from http://pratt.edu/~arch543p/help/Serres.html

McLaren, P. (1989). *Life in Schools: An introduction to critical pedagogy in the foundations of education*. New York: Longman.

Mullen, C. and Diamond, P. (2001). "From passive rag doll to border-crossing mannequin: designing arts-based democratic projects in curriculum leadership." In K. Sloan and J.T. Sears (Eds.) *Democratic Curriculum Theory and Practice: Retrieving Public Spaces, Papers from the 1st annual Curriculum and Pedagogy Conference, Austin, TX, Oct. 2000.* (pp.'s 67-81), New York: EIP Press.

Slattery, P. (1997). *Postmodern curriculum research and alternative forms of data presentation*. Public seminar/Occasional paper presented to the Curriculum and Pedagogy Institute of the University of Alberta, Sept, 29<sup>th</sup>, 1997. Retrieved January 11<sup>th</sup> 2006 from <a href="http://www.quasar.ualberta.ca/cpin/cpinfolder/papers/slattery/htm">http://www.quasar.ualberta.ca/cpin/cpinfolder/papers/slattery/htm</a>.

Serres, M. (1997). *The Troubadour of Knowledge*. Translated by S.F. Glaser and W. Paulson. Ann Arbor: University of Michigan Press.

Serres, M. (1982). *The Parasite*. Translated by L. R. Schehr. Baltimore: Johns Hopkins University Press.

Serres, M. (1999). *Hermes: Science, literature, philosophy*. J.V. Harari and D.F. Bell (Eds.). Johns Hopkins University Press.

Vergine, L. (1997). From junk to art. In L. Vergine (Ed.) *Trash: From junk to art* (pp. 19-27). Milan, Italy: Electa Inc.