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Abstract:
Recent education policy designed to promote arts education tends to focus on how such curriculum supports “skills for innovation” required for success in the global economy. Emphasis on the transfer of arts-based learning to professional innovation and achievement, a dynamic that is

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Key words: museum, experiential learning, innovative models, citizenship, critical thinking.

Supporting material:
Figures 11)

Methods and Models for Museum Learning

at the Samuel Dorsky Museum of Art

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Introduction

Students across the disciplines at the State University of New York at New Paltz have new opportunities to visit their campus art museum. Lately, instructors have been taking advantage of the Samuel Dorsky Museum exhibitions to promote creativity in courses across the curriculum and to encourage critical thinking in class. Whether or not the arts will finally be proven to promote “skills for innovation” required for success in the global economy, exposure to and involvement with the visual arts enriches the liberal arts and sciences education. *Arts at the Core: Recommendations for Advancing the State of Arts Education in the 21st Century* (2009) identifies the crisis, “that our students’

knowledge and performance are lagging behind many other developed countries in every subject." While the NTFAE's call for a "systemic change" and a "new paradigm," that will depend on new learning environments that use the arts to "help students develop skills in group interaction, self-esteem, reflection, decision making and innovative thinking," we insist, along with the OECD report, that the role of the arts goes beyond the instrumental, that the arts hold value in themselves and must not be limited to serving and supporting established other academic disciplines. Arts education serves the primary goal of *understanding* in ways no other approach can provide (Gardiner 2006: 125-26). Ellen Winner and Lois Hetland have identified the most important reasons for studying the arts, in the museum or in the studio, as (1) appreciating "some of the greatest feats humans have ever achieved" and (2) learning to recognize and express deep thoughts and feelings in themselves and others (Winner and Hetland 2000: ¾). Recent policy designed to promote arts education tends to privilege the transfer of arts-based learning to professional innovation and success, a dynamic that is difficult to determine. As Louise Comerford Boyes and Ivan Reid indicate, both Britain and the U.S. have placed renewed emphasis on arts education in a fairly polemical way that emphasizes the transfer of pre-professional skills:

> Much of the arts participation advocacy literature coming out of Whitehall… and U.S. government bodies… proposes that participation in arts projects and programmes advances the development of wide-reaching and profoundly transferable cognitive and/or curriculum-related skills, in addition to developing personal and social skills, which in turn has an overall positive effect on mainstream achievement. (2005: 1).

While such emphasis on the arts curriculum's contribution to overall academic success can help ensure its inclusion in higher education learning, placing the arts in a secondary or supportive role comes with considerable consequences. As the Reviewing Education and the Arts Project (REAP) report indicates, instrumental claims for the arts are both common and dangerous because they can be challenged to demonstrate *what,* exactly, they teach in a strictly utilitarian way. As Hetland and Winner have argued, "Arts educators should never allow the arts to be justified wholly or even primarily in terms of what the arts can do for mathematics or reading. The arts must be justified in terms of what the arts can teach that no other subject can teach (Hetland and Winner 2001: 5, 3). The 2013 Organization for Economic Co-operation and Development (OECD) report updates and expands upon the REAP report while revisiting the question of arts education's impact on the aforementioned "skills for innovation," technical skills in thinking and creativity as well as behavior and social skills key to today's communal, remote, and cyber - workplaces. The OECD enlarges the study in terms of a global view and includes many statistics including graphs on the dwindling percentage of required instruction time spent on arts education in countries around the world

(http://dx.doi.org/10.1787/888932832896).

Prompted by ongoing calls for policy and practice changes to promote arts education, including the U.S. President's Committee on the Arts and Humanities report, *Reinvesting in Arts Education* (2011), and the 2009 National Task Force on the Arts in Education (NTFAE), *Arts at the Core: Recommendations for Advancing the State of Arts*

Education in the 21st Century, Professors Jennifer Waldo, Dennis Doherty, and Sarah Wyman have developed museum-related curriculum that provide new approaches to course content. Waldo, Doherty, and Wyman assess the potential transfer impact of their own learning activities, yet insist, as well, on the intrinsic value of arts-related experiences for their students.

Waldo, Doherty, and Wyman set learning outcomes for their projects that coincide with OECD - specified skills for innovation in thinking and creativity. Waldo, a professor of biology, used writing exercises about nature-related art works to contextualize scientific problems and to promote the investigative thinking the arts can provide. Doherty, already deeply invested in art-making as a creative writing professor, used the translation of visual into verbal experience and expression to teach narrative formation and the rhetorical difference between poetry and prose. He prompted his students to recognize expressive elements that signify thought and feeling. Wyman exposed her literature students to visual works with the productive tasks of noticing commonalities across genre and media, identifying assumptions including norms and values, and appreciating visual rhetoric as a means of re-presenting realities. By creating writing activities initiated when students come into direct contact with art objects, the professors brought National Core Arts Standards to the fore: they observed students *creating*, *responding*, and *connecting* with paintings, prints, sculptures and installations. By extension, they witnessed students articulate correspondences between these expressive objects and the complex reality they inhabit. The assignments were not intended to teach writing *per se*, but to teach *with* writing, as Smith, Nowacek, and Bernstein would emphasize (2010: 10); activities were designed to support the learning already in progress. Thus, course content from biology, writing, and literary studies could be explored and evaluated in terms of aesthetic representations embodied in tangible art objects. Walking through a museum together also allowed students and teachers to see each other in a new way, free, to a degree, of their respective roles.

In the short term, a semester’s span, such aesthetic engagement provides opportunities for open-ended critical and innovative thinking, practice in verbal expression, and invigorates a sense of community among students. Collectively, these pedagogical ventures follow the Lincoln Center Institute’s Nine Capacities for Imaginative Learning: noticing deeply, embodying, questioning, making connections, identifying patterns, exhibiting empathy, creating meaning, taking action, and reflecting / assessing (Garrett 29). In the long term, such experiences nurture students to become life-long learners who claim ownership of their education, who seek similarities across disciplinary and cultural lines, and who appreciate working collaboratively with colleagues and mentors to solve problems by finding creative solutions.

While no one can fully describe the mysterious and complex way learning takes place, the curriculum created at SUNY New Paltz has produced valuable educational outcomes that foster student agency, creativity, and citizenship. The current crisis in education, exacerbated by the economic downturn and consequent cuts to arts education, results, in part, in despair about U.S. leadership in the global market. What has become of this nation of inventors? As F. Robert Sabol points out,

> Bronson and Merryman (2010) report that American students’ creativity test results on the Torrence tests of creativity steadily

> increased from 1962 to 1990. Since then, they have steadily decreased. It is too early to determine why these declines are happening. Some suggest that there has been little effort to develop and nurture creativity in our schools. (Sabol 34)

One can address this problem of innovation and creativity with case studies that exemplify an *authentic vision* of education within a democratic system that depends on a sense of citizenship and autonomous voice in each of its members (Jed Hopkins xi in Gorlewski, Gorlewski and Ramming 2012). The humanist approach described here emphasizes both objective knowledge and the empathy that promotes community participation and an appreciation for other perspectives. When students express concern that they are not "getting it" at the museum, one can see that they are "getting something:" an awareness of their own efforts at creatively re-imagining familiar course content in a new way. In response to Julie Gorlewski and David Gorlewski's concern over "the growing gap between democratic ideals and neoliberal practices designed to affirm and perpetuate formulaic views of teaching" (Books, ix, in Gorlewski and Gorlewski 2012 *Real*), one can develop arts-infused curriculum as encouraged by Christopher Garrett (Garrett 2013: 27). Whether in an art studio or walking through a gallery, students can benefit from the *studio thinking* Hetland, Winner, Veenema and Sheridan (2007) have described in terms of (1) Learning to Engage and Persist / committing and following through (2) Learning to Express / finding personal voices (3) Learning to Observe / seeing beyond the ordinary (4) Learning to Reflect / thinking metacognitively and (5) Learning to Stretch and Explore / beyond the familiar.

In the face of the *No Child Left Behind* policy, passed with bipartisan support under George W. Bush in 2002 before the 2008 economic downturn, and the more recent version, *Race to the Top*, implemented under Barak Obama, we emphasize the autonomy of our students as thinking, feeling individuals. As Gorlewski and Gorlewski have insisted, participatory democracy calls for meaningful dialogue that entertains dissent rather than "manufactured consent." The cultivation of interpersonal communication skills in a pluralistic society depends on maintaining *dialogue though disagreement* (Carmen Werder and Rebecca Nowacek 2010), as well as promoting tolerance for ambiguity, uncertainty, and contingency (Bernstein, Haluanlani, Smith, Geelan in Smith et all 2010). Therefore, teachers need to encourage all students to use their own voices with conviction and authority. We also strive to investigate and clarify the differences among ourselves as instructors who hail from diverse disciplinary backgrounds. The socially constructed standards that now govern education often obscure the variety and impact of student needs and experiences (see Gorlewski and Gorlewski, 2012 *Real*). Critics warn against hidden biases: "When reading standards and considering how they affect practice, leaders [read all instructors] must continuously reflect on *whose interests are served, whose interests are hindered, whose perspectives are present*, and *whose perspectives are absent*" (Gorlewski, Gorlewski, and Ramming, 2012, *Theory*: 4). However cushioned and relatively autonomous as university-level educators, we nevertheless participate in this federally mandated, budget-crunched arena. Furthermore, a large proportion of our students comes to us via the public system, 88%, and, in turn, enters the teaching field.

We propose our own models as well as assessment projects that reflect the changing nature of our relationship to the students, yet we acknowledge the challenges of this project. Because we can never know precisely how an individual student learns, and instruments for evaluation and assessment generalize outcomes across fields of enormous diversity, our conclusions cannot be definitive. As teacher-learners, we wear two hats, in more ways than one. Gorlewski and Gorlweski demonstrate the “personal and complex” nature of interpreting the results when they cleverly point out that the evaluation of student learning, “places on hold the act of teaching and tries to determine how well learning has occurred…. [this evaluative process] changes the relationship between the teacher and the student. The teacher transitions from the role of a facilitator, coach, and nurturer to that of a judge” (Gorlewski and Gorlewski, *English Journal* 103.1). We experience this uneasy shift from collaborative learning alongside our students in the museum setting to authoritative analysis of their educational experience. Therefore, we propose possibilities for assessment projects that reflect the flexible quality of our relationship to the students, some of whom will feel unsettled and remain resistant to the museum visit itself. In addition, we acknowledge our inter-rater variation as scholars who promote distinctly different approaches to the visual arts. Whereas our curriculum coincides in the open-ended nature of our invited responses, we differ as scientist, poet, and comparative theorist in discrete goals for our students.

The 2009 NTFAE report documents the increasing marginalization of the arts in K-16 public schools and calls for a “systemic change” in practice and policy in the way we integrate the arts (including music, dance, drama, visual arts, etc.) in public education (2009: 5). These policy reformers suggest a strategy for improvement that reflects the thinking of such prominent theorists as John Dewey, Maxine Greene, Paulo Freire, and Nel Noddings, who strive to empower students not with commodity education or the possession of degrees, but by providing a framework for literacy, agency, critical competency, confidence, and compassion. The NTFAE committee states:

> We think that the current system, which segregates subjects and types of learning, splinters the effectiveness of learning by divorcing content from context and purpose. Exclusion of the arts experience in schools means that students miss out on valuable cultural learning experiences as well as chances to develop their innovative thinking skills. (2009: 5)

The task force’s emphasis on experiential learning, associative thinking, and the value of creative reasoning in cultural context perpetuates Dewey’s legacy in particular and coincides with many of our own views on best practices as teachers. More recently, the President’s Committee on the Arts and Humanities report, *Reinvesting in Arts Education* (2011) places emphasis on the economic impact of investing in education and promotes arts education. If the NTFAE’s attention to purpose leads us in the direction of results-oriented earning, we might point out, again, the challenges involved in assessing creative thinking. Our directed, yet open-ended writing exercises provide examples where such creativity can be detected most clearly, although learning outcomes remain difficult to measure.

By demystifying the students’ interaction with museums and with the arts in general, teachers can address the problem Dewey poses in *Art as Experience*: “Recovering the continuity of esthetic experience with normal processes of living” (1934:

10). In other words, with these applied learning activities, our students learn to contextualize the content of our courses within broader perceptual and intellectual experience. For, as Dewey proposes, and we agree, the interaction between the expressive object (i.e. work of art / performance) and its audience (reader/ viewer/ listener) parallels any meaningful, engaged experience between the *live creature* (as Dewey terms the human) and the environment in which he or she exists. To acknowledge the *embedded* nature of existence is to naturalize intellectual inquiry, course content, and the revitalization of perceptual experience. Always with an Emersonian eye to the psychological nature, interests, and particular capabilities of his human subject, Dewey defines a *complete experience* as one that increases self-understanding within a social context through a process of inquiry that elicits a sense of structure for the perceiving subject. Thus, the often confusing and even overwhelming flux of experience can be ordered and clarified by acts of intellectual intervention that bring meaning to the world and to the self. What better project than to consider the social impact of genetically modified food products on the global market or the Marxist relationships of production in the alternate framework of aesthetic iterations where students can practice approximating their perspective to that of an individual artist?

For many of our students in the museum, innate curiosity motivates them, and their attraction to the art objects is immediate and gratifying. Other students require more teacherly guidance to facilitate productive inquiry, to encourage their imaginative responses, and to clarify the learning goals for the visit. A few resistant students never embrace the challenge of leaving their classroom comfort zone, or refuse to take ownership of their museum experience. Nevertheless, during our most successful sessions, we have been able to engineer a dialogic learning process in which the museum visitor/student is an active participant who recognizes and even initiates an "inherent connection between the site/objects and the setting or natural environment" (Taylor and Neill, 2008: 27 in Monk, 2013: 67). This satisfying and even exhilarating experience echoes the embedded nature of student learning within class groups, campus communities, and the broader culture. When our students relate a painting or sculpture to a conceptual problem of scientific inquiry, a rhetorical technique from our course curricula, or their own experience in the world, they have made an interdisciplinary inquiry, assumed a critical stance, and legitimated a position they can confidently defend. The quality of the learning experience depends not on the information conveyed, but rather, as Nel Noddings puts it, on "the vital interaction between student and subject-matter" (Noddings 2010: 271). Most students meta-cognitively notice that their own ideas and enthusiastic engagement with the material are being particularly valued in this museum moment (Duckworth 2005: 18). Both the change in venue and the interaction with the art objects serve to awaken the students in valuable ways.

Exploring the *Dear Mother Nature* Exhibit Through Three Disciplinary Lenses

Waldo, Doherty and Wyman brought their students to the *Dear Mother Nature* exhibit of 42 local Hudson Valley artists. The highly conceptual pieces featured here offered often ambiguous messages about the relationship between humans and the natural world. In Elisa Pritzker's piece, "Zipped Trunks" (Figure 1), for example, the artist combines natural and industrial elements—tree trunks and mass produced zippers—to

create a visual pun on (un)zipping a pair of pants. She defamiliarizes expectations by presenting logs as art; she simulates tree rings on one cut surface, but adds fur to another. By way of introduction, this dada-esque found object that incorporates the museum wall drew the students in by posing more questions than it answered.

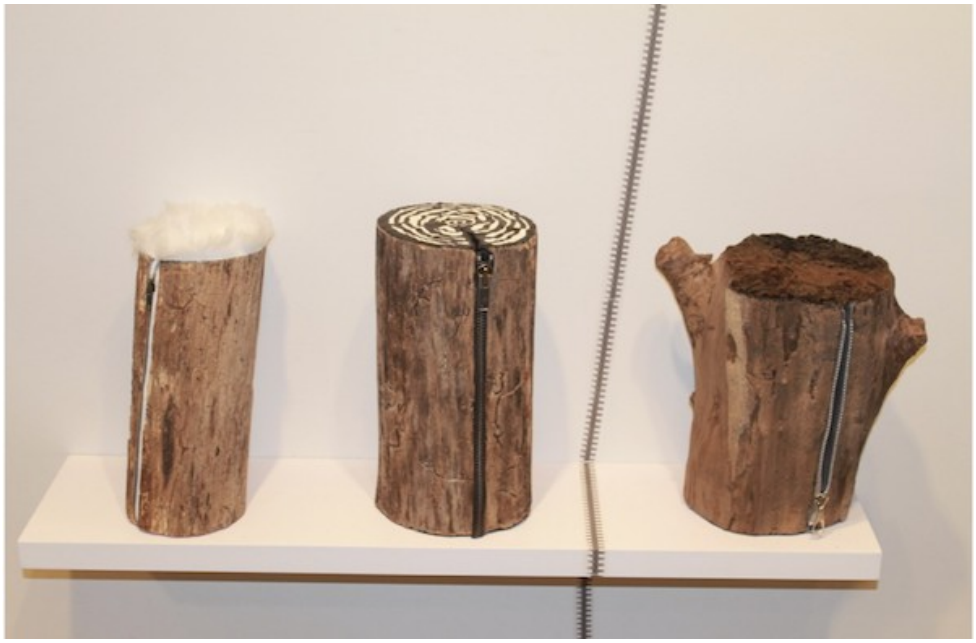

Figure 1: Elisa Pritzker, “Zipped Trunks.” Permission of the artist 5/12/ 2015.

The professors were impressed by the way the works of art inspired the students to think beyond the limits of their respective disciplines and to consider historical contexts. They connected discrete works of art back to academic issues treated in class and to particulars of their own lives. Imaginatively integrating the art object with both its moment of creation and the contemporary circumstances of its perception by the student increases the dimensions by which students draw their own conclusions (Dewey 1934:272; Greene 1988: 125). This pronouncement, the student’s evaluative, analytic response, prompted by the assignment and whispered to a colleague or typed up hours later, constitutes a valuable creative and innovative act.

The professors’ own interdisciplinary conversations as professional scientist, poet, and literary critic revealed assumptions they make as academics or simply as individuals when interpreting works of art. For example, when each expressed his or her own response to Portia Munson’s “Game Farm Reliquary” (Figure 2), a collection of bones packed into a Tudor-style doll house, and shared those of the students, impressions and concerns varied. Whereas the literature and creative writing students tended to react by emphasizing its supposedly scary, sinister, and morbid tone, the science students rarely did. Several humanities learners identified a skeleton-in-the-closet metaphor for family secrets or latched onto the background story once they knew it: the work refers to violations at the nearby Catskill Game Park where animals on display were abused. Yet Waldo’s biology student Stephen Welter responded differently when asked to write a letter back to the artist:

Dear Portia Munson,

I went to the [Named] museum and saw your piece. I know you intended it to be striking and express the damage we do, but it actually struck me differently. It made me feel calm and at peace. Like even after we pass on, the earth looks after us and provides us a home. Thank you for your time and hard work. I really appreciate it.

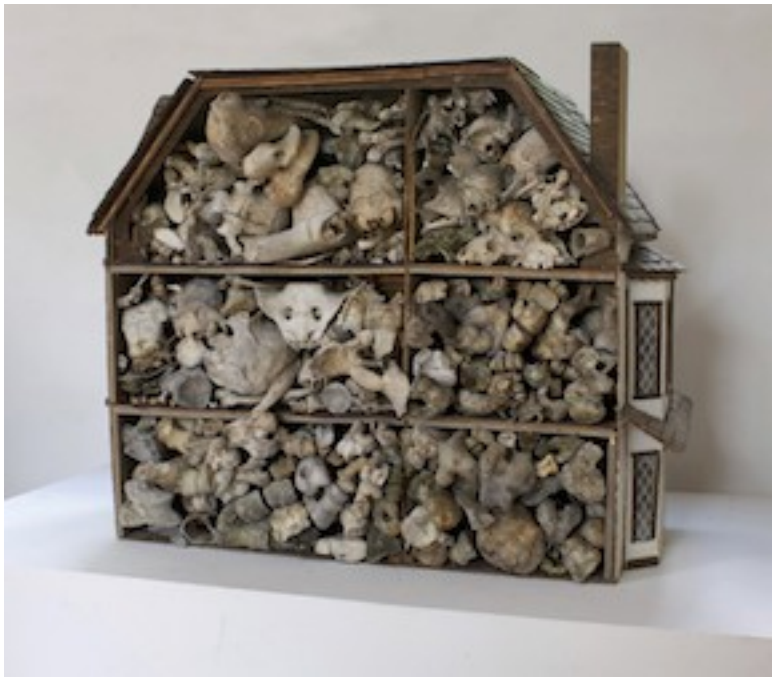

Figure 2: Portia Munson, "Game Farm Reliquary." Permission of the artist 12/17/ 2016.

Welter had thus considered authorial intention (an act of empathy) and couched his response within a broader societal perspective, a factor, Sabol explains, that fosters the development of creativity (Andreasen 2005; Sabol 2013: 35). Waldo clarifies the scientific perspective: these are bones – fascinating and valuable artifacts, the very objects of analysis for biologists, yet, at the same time, of fleeting importance when considering the vast numbers of living organisms and the billions of years of life on earth. Another colleague, historian David Krikun, reminded the group that this would be a treasure trove for an anthropologist or archeologist. Already, a dialog had begun in which students were encouraged to empathize with another subject position or perspective, and the educators themselves reevaluated their own approaches and points of view as well.

Planning, Curriculum, and Activities

In planning for such a museum learning experience, it helps to incorporate a preliminary discussion or writing session about what museums are and the students' expectations, and experience in such settings. Include a space for questions. Many students will have had little to no exposure to museums. Expect resistance. Provide structured guidelines to orient the students, but be sure to allow for much open-ended exploration. Explain that this is not a venue for finding correct answers, or problem solving, but for serious attention to objects. The familiarity of writing exercises will ease them into explorations

they can claim as their own. Most students will be curious and enthusiastic; some will show their skepticism. Museum staff generally welcome class visits and can be invaluable in shaping the curriculum and locating objects of particular disciplinary interest. Ask students to comment on their museum visit or even their creative process a few days afterwards, so they can consider the way the experience has been incorporated into their coursework and college memories.

The basic activities and assignments the professors had developed varied. The letters Waldo had her students write back to Hudson Valley artists were keyed to a consideration of the students’ college studies and / or career interests. Doherty asked his students to answer several directed questions and then create prose narratives or dialogs in which the art works took on voices of their own. While several of his students commented that writing a poem would have been easier (because poems tend to describe), he insisted on *narrative* responses and thus highlighted differences between the poetic and prose genres that would be difficult to explain outside the creative experience itself. Wyman posed open-ended questions in relation to several works that invited U.S. literature and critical theory students to draw parallels between the works and concepts treated by writers and critics from the syllabi.

Making Connections in an Honors Biology Lab Class

In the Fall of 2012, Waldo’s Biology Department launched an honors section of the General Biology 1 class. This course aimed to provide students with interdisciplinary experiences to expand their knowledge of biology and challenge students to take ownership of their studies in new ways. Because engineering and science require innovative, creative thinking, instructors sought to have their students apply what they learned to novel situations as they would later in their careers. Students carried out multi-week laboratory investigations based on recent literature that required them to design, conduct and analyze experiments.

In addition to innovative lab activities, Waldo’s students devoted one of their 3-hour weekly meetings to a visit to the *Dear Mother Nature* exhibit. The exhibition brochure included each of the artist’s “Dear Mother Nature” letters as a narrative to accompany the work of art. Students visited each of the 40 pieces, read the artists’ letters, and wrote a short, one-sentence response to the artist that focused on how the work related to their studies and/or career interests. Following this, students chose a single piece of work with particular personal resonance and wrote a letter *back* to the artist. The epistolary choice offered a departure from the students’ more clinical scientific writing and allowed each to develop an individual voice.

Students took the assignment seriously, and most remained at the gallery for the entire three-hour period. Some students got to work immediately, but many struggled with the simple assignment, asking, “What do you want me to write?” and commenting that they “were not good with art.” Students engaged in conversations in small groups over particularly confusing, funny or troubling pieces. Upon completion, many commented that they were grateful for the opportunity to explore the museum – an activity that they normally would not take the time to do. A few confessed that they had a longstanding affinity for art, but felt the rigors of a college science curriculum prevented them from participating in artistic exploration, both as observer and creator. The fact that

a science faculty member initiated this experience may have helped encourage students to grow intellectually and artistically beyond the confines of their declared academic major.

Students responded to Meadow's, "Rest Hour for Mother Nature / Mother Earth" (Figure 3) with a wide range of interpretations and insights including these:

1. The bed is there to apologize and help mother nature heal from all the hardships we put her through.
2. This LITERALLY represents that we are resting atop nature.
3. This piece of art embodies trees and other forest life, as well as representing anatomy by showing human hands.
4. The material the hands are made of reminds me of beehive fiber. Like a beaver, Meadow has assembled a bed of sticks.
5. Tree branches hold leaves, which provide greater surface area for gas exchange.
6. Mother nature needs time to recharge its natural resources, which we are constantly depleting.
7. The branches represent the habitat of birds, the host of plants and fruits.
8. The artist has crafted a bed and offers the earth a place to rest. The statement here is that we have overtaxed our planet and it is showing symptoms of fatigue and sickness.

Again, one see students considering the ways people conceptualize nature, even as they contextualize the unusual bed in the broader reality and read its features figuratively.

Figure 3: Meadow, "Rest Hour for Mother Nature / Mother Earth." Permission of the artist 12/16/2016.

One student, Dean Mahoney, responded to Khem Caigan’s "Physical/ Metaphysical Fermentations. Distillations," an array of colored liquids and solids in glass jars atop a rustic wooden cabinet, by writing:

> This piece definitely created a mystical, almost paranormal feeling within me about the composure of man. We are all composed of basic elements, but those elements of the soul—those are much harder to characterize. This beautiful work provides insight into a field of thought in biochemistry. If you could isolate life, it would exist in jars of chemicals. But the energy used to create life somehow creates colossal (from an atomic scale) beings, just as these jars, when given energy, become an exceptional piece of art.

Students next considered Riva Weinstein’s “Lifeline,” a cord of feathers, bark, and other natural elements reaching from floor to ceiling. While literary theory students tended to connect this piece to Freud’s notion of accessing the unconscious or Vladimir Propp’s narrative function of the fairy tale quest, biology student Andrea Pacione read the work in practical terms of human impact on the environment, as inflected in her own personal experience:

> This letter really brought tears to my eyes. I personally decided to pursue a biology major not because I want to be a doctor, but because I am deeply concerned about the environment. It seems that our current way of living is extraordinarily non-sustainable and why this issue is not the first thing on people’s minds is even more alarming. It is also my wish to extend my heart, hand, head, my life—as a lifeline to hopefully help correct this problem and save the planet that I love (however unlikely that may be).

Not only has this student expressed a high level of empathy for the environment, understanding of her own deep feeling, and sympathy with the artist’s perspective, but her words also demonstrate what Nel Noddings would call an “ethic of care,” promoted by the contemplative exercise of viewing the work itself (Noddings 1984: 15-16). The empathy Martha Nussbaum insists upon as fundamental to a liberal arts education (2010) and that Dewey requires of his instructors relates to the nature-centered concerns of the exhibit, informed by the contemporary eco-critical lens that fascinates so many students today.

Waldo concluded that the museum visit and this responsive activity precipitated valuable discussions, not only on the meanings of the pieces, but on the place of science and technology in the broader U.S. and world culture. Many of her students, motivated scholars on a pre-med or similarly ambitious track, were taken aback by critical views on the dangers of technology or the potential consequences of scientific progress. In the context of taking first-year science majors to the museum, the goal of the activity is to provide an opportunity for students to utilize their disciplinary knowledge in a different way that contextualizes the course content in the real and aesthetic worlds, and to provide an opportunity for personal self-reflection.

Engaging the Narrative in a Creative Writing Class

Doherty's class performed the museum assignment at the beginning of the narrative unit. He wanted to open his students' imaginations to the narrative element in *all* things, from natural processes to the activities of the human perception in making art, and where they intersect. To engage the work and the students' own comprehension of what an object aspires to convey, he asked them to extrapolate their own stories from both their conscious reactions and their own imaginations. Upon selection of a piece to work with, the students produced written responses to the following questions:

1. What do you think the artist sees through his or her eyes?
2. What do you imagine the process of making the piece was like?
3. How do the colors and patterns work? What seems to be the organizing principle? How does it affect you?
4. Is there a place or memory that it brings to mind?
5. If you could ask it (the art) a question, what would it be?

The actual narrative assignment, minimum 500 words, could be (1) a third person limited narrative in the head of the artist at work in which s/he tries to bring his/her vision to fruition; (2) a vision of a narrative you see enacted in or inspired by the work; (3) a brief story about the place or memory the piece takes you to; (4) a dialog between you and the art, starting with its answer to your question (#5) above.

The students enjoyed the museum assignment immensely and asked to do other such work. Doherty acted not as a teacher, but as a fellow visitor, and observed that the change of venue worked upon his students in a new way, as opposed to the usual written prompts or reading of short stories. They seemed relaxed, freer, acting as individuals within a community in a world of imaginative atmosphere rather than institutional confinement. Eventually, each student settled on the floor before an installation and began writing. When class time expired, Doherty left to teach another class; the students remained.

The written responses to works that engaged the strange intersect between the natural and industrial worlds ranged from the spiritual to the familial to the political. One student, S. Prosser, went with associative memory, as she developed her narrative technique, the vision of plants taking her back to an unhappy teenaged visit to Disneyland, where you are, "miserable in the happiest place on earth." She describes a boat ride with her mother: "But the plants interest your mother. The plants that have been altered to weather floods and bugs, disease. The pumpkins surrounded in plexi-glass molds, forced to become the same shape, over and over again. You wonder if Walt Disney liked his gourds in the silhouette of mice heads." In a writing workshop later on, Prosser would have the opportunity to reflect upon her museum visit, refine her writing, and work collaboratively with colleagues on strengthening her narrative.

In topical response to Laura Moriarty's desk filled with rocks, bones, feathers, and other collections from the forest, an installation called "Carrel," student Maggie Melito named it *God's Desk*, and gave voice to the semi-deity who created the northeast:

> "People….didn't want to hide the fact that they were a part of something much bigger than any Costco they've ever stepped foot in." In the wake of Hurricane Sandy and weeks before Newtown, Melito's imagined god claims, "People only establish belief when there is no one else to blame. We [the

> gods] have no control of natural disasters – or which men buy guns.” Her story ends with this god observing a man on Long Island with only an oil lamp, riding Hurricane Sandy out: “I sat with him last night, and I think he may have been the kind of man who could feel me.”

The students seemed to have pushed themselves beyond mere observation and plot planning into intuitive and somewhat spontaneous and organic story forming, which can be useful in discovering one’s own creative processes. Invited into an exploration of both self and world, self-generated meaning making emerged without external agency or fear of “correct” understanding. The final component consisted of students reading their work aloud in class. Peers responded by comparing the ways they viewed the given artwork and discussing the approaches, ideas, and creativity of the written work at hand, thus deepening the sense of possibilities in creative perception as transformation and the interaction between particular media and artists.

Doherty’s exercise taught creativity in an organized way. As the National Arts Education Association holds,

> As skillful educators have found, teaching students to be creative is a deliberate process, much like teaching students to be literate or to be able to solve mathematics problems. It takes more than simply handing out materials; expert teachers break down the creative process to enable students to identify the problem, gather relevant information, try out solutions and validate those that are effective. (NAEA 2009).

Doherty’s assignment, far from a problem-based activity, remained entirely open-ended to allow the students to attempt various approaches, to fail without punishment and start again, to remain self-reflective in the way they used language to build stories.

Finding Verbal/Visual Parallels in Literature and Theory classes

When Wyman brought her *U.S. Literature* students to the *Dear Mother Nature* exhibit, they considered ways themes and rhetorical questions in literary texts play out in works of visual art. They thought across disciplines and pondered the way both verbal and visual artists make sense of their world and express meaning. In various media including language, paint, wood, video, sound, found objects and collage, the exhibit’s focus related to many of the U.S. writers who meditate on the natural world and our place in it. Students worked individually or collaboratively, writing responses or documenting their activities. To meet her teaching objectives, Wyman paired literary works from the syllabus with visual objects and posed analytic questions. Students identified common themes or subject matter, considered rhetorical and stylistic features or *ways* of signifying meaning (point of view, narrative elements, tone, symbolism, etc.), stylistic features (degrees of realism or abstraction), historical and cultural contexts, and the work’s relationship to both the artist and student.

While Wyman’s students easily linked the transforming vision of Emily Dickinson’s poetry to Angela Basile’s dream-like “Good Luck II” (Figure 4), where plants sprout through the floorboards of an improvised hospital bed with heater headboard and green fluid drip, other works presented conceptual puzzles to decipher or

raised complex contemporary issues. Many students felt awe at the power of technology similar to Henry Adams' "Dynamo and the Virgin" commentary from *The Education of Henry Adams* (1907), as they encountered works in the exhibit. Lisa Breznak's "The New Botanicals" (Figure 5), for example, presents a ceramic display with animal DNA grafted onto plant DNA to make genetically modified food, so that nature becomes highly conceptualized and remote, tucked behind glass. In these DNA segments, molecular models of plant life sprout teeth and wings. Conventional categories of flora and fauna collide, and viewers are challenged to "hold contradiction" (in the words of contemplative teacher Daniel Barbezat) as they puzzle through the wonders and warnings of this compelling piece. The work's merger of plant and animal offered a segue to return to such problematic binaries discussed in class as W. E. B. DuBois's *two-ness* and *double consciousness*, as well as Jack London's literary naturalism as it relates to the conflicted relationship between humans and the natural world.

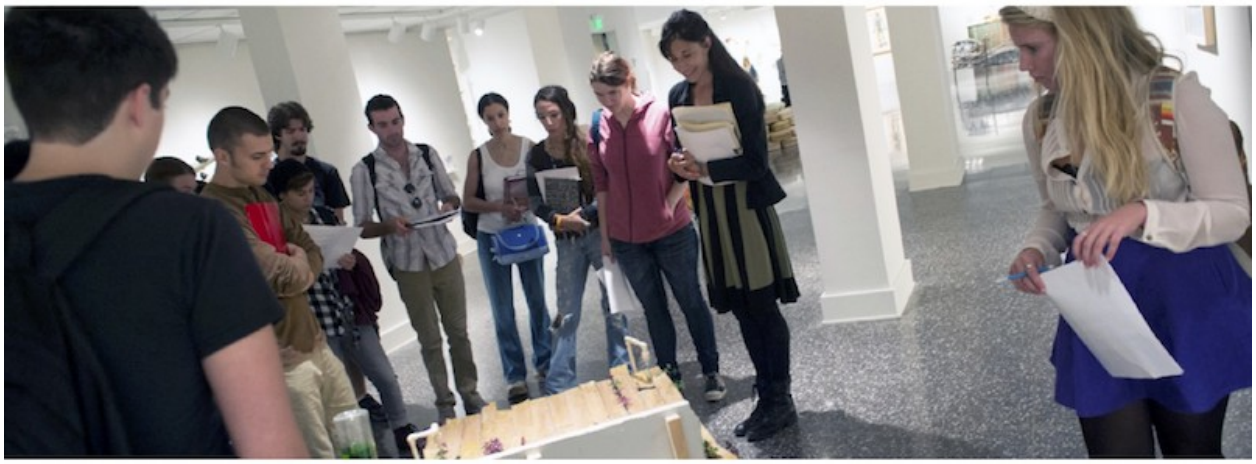

Figure 4: Students observing Angela Basile's "Good Luck II." Permission of Museum 6/3/2013.

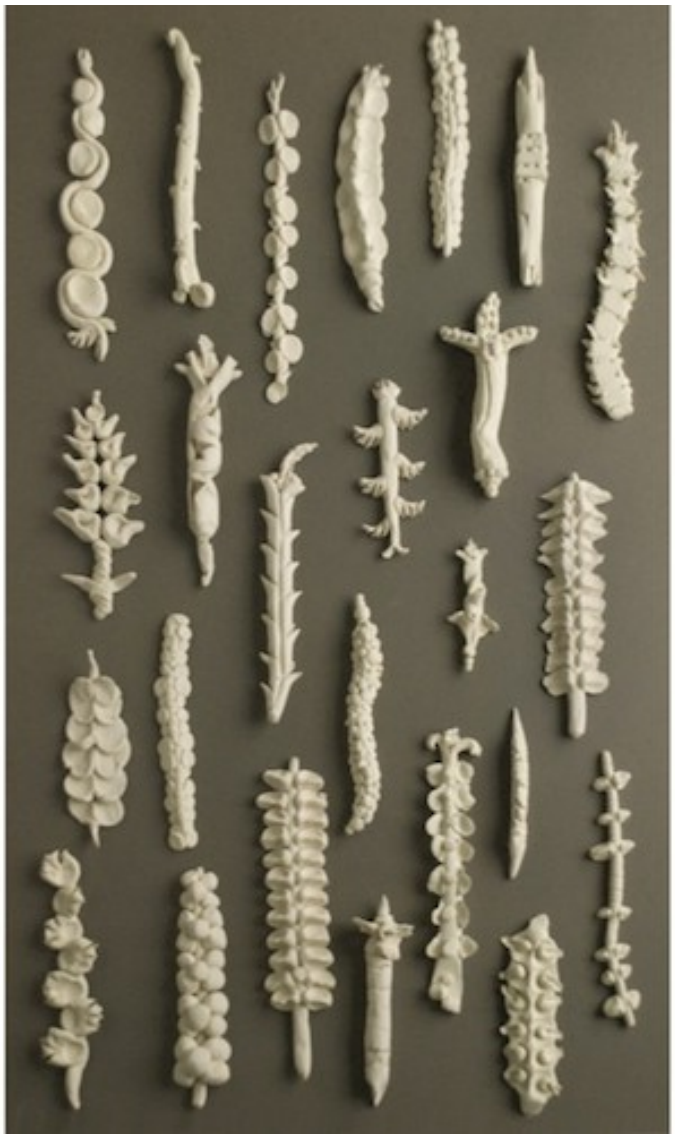

Figure 5: Lisa Breznak’s “The New Botanicals.” Photo: Howard Goodman. Permission of the artist 5/12/2015.

When Wyman took her *U.S. Literature* students to the spring 2013 faculty art show, *Fields of Vision*, the initial challenges were daunting, as the works themselves tended to be far more abstracted and less overtly thematic or message-laden than those in the *Dear Mother Nature* exhibit. This new set of students and objects, however, proved that increasing the degree of abstraction can yield even more fruitful results for teaching rhetorical interpretation. These works were less likely to deal with identifiable problems or social issues, but were closer to primary acts of human perceptual experience. For this reason, the art works in *Fields of Vision* provided particularly rich opportunities for critical thinking training.

Ceramicist Bryan Czibesz’s *Prototype: Wheel* (Figure 6), for example, presents a simple wheel and axel as an idealized or platonic form emblematic of the tools that differentiate humans from other creatures. The artist offers iterations of this object in

various media from clay to candy. Invited to compare depictions of a constant subject in a multiplicity of materials (drawing, wax, sugar, etc.) the students made connections through the generative activity of writing between the way various literary artists depict particular subjects in differing styles or genres.

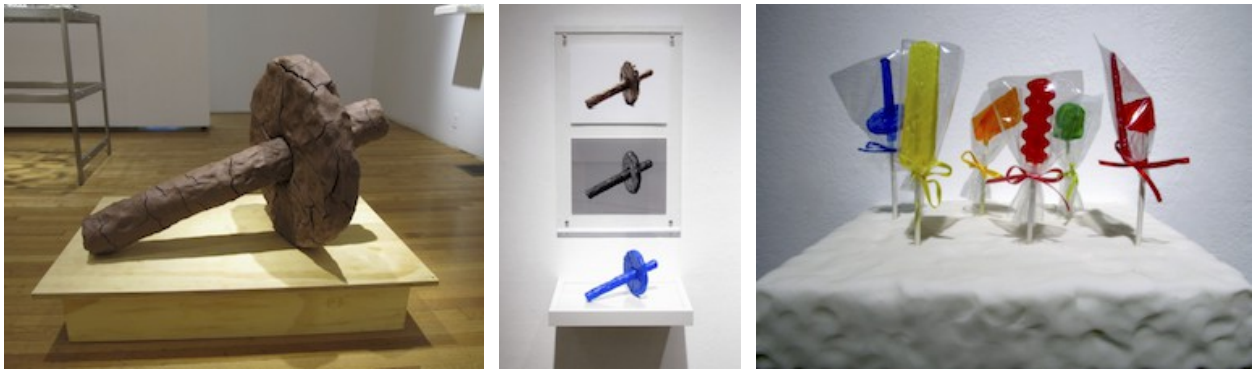

Figure 6 A/B: Bryan Czibesz, *Prototype: Wheel* (Details). Permission of the artist 5/11/2015.

Students matched Czibesz's iterative works with the following comparative writing prompts tied to course readings and wrote responses:

Richard Wilbur and W. C. Williams depict Queen-Ann's Lace

Emily Dickinson and Jack London depict the experience of dying

Eugene O'Neill and Allen Ginsberg depict drug addiction

John Cheever and Eugene O'Neill depict denial and repression

Kurt Vonnegut and Ernest Hemingway depict war

Bernard Malamud and Tennessee Williams depict desire

While style and genre difference can be the most difficult features of literature to describe and explain to students, the visual example of a common object or theme depicted in multiple ways helped; comparative analysis helped clarify variations in linguistic representations of physical reality and lived or imagined experience. This class enjoyed the added pleasure of an impromptu visit by Czibesz, who had stopped by the museum with a water spray bottle and cloth to surreptitiously "extend the life" of his object (by moistening the cracking clay of the largest version of the wheel prototype). The students were fascinated by this behind-the-scenes peek at the way the artist consciously worked to produce the effects of age and decay on an impermanent art object. They were further gratified to learn that when moving from the original hand-held clay model "sketch" to this larger prototype, the artist used his knees in order to simulate textures and declivities left by his fingers in the smaller one. Considering the creative process behind the displayed work led the students back to discussions of writerly motivation and strategy, the interface between literature/art and the cultural/historical moment, and even artist/writer biography as a consideration in literary studies.

In many of Wyman's classes, students investigate art as representation, not only in terms of *mimesis*, or imitation of reality, but also in terms of perceptual experience and

the bringing forth of new realities. Ceramicist Anat Shiftan presented a thickly textured 3-D tile, *Celadon and Bronze* (Figure 7), which she layered in thin petals of porcelain to create effects of softness and light in one, a luminous darkness in the other. Some students interpreted the title *Celadon and Bronze* in terms of medium and mistook the material for metal. This serendipitous misunderstanding precipitated a compelling discussion on the materiality of the linguistic medium. One of the more challenging teaching points in this course is the explanation of language itself as a medium for the creative act. Looking at highly estranged and estranging poems by e. e. cummings or Gertrude Stein, for example, demonstrates writers who call attention to language as a seemingly tactile and concrete. In the museum exercise, Wyman invites students to compare Shiftan’s expression of *petaledness* to the poet Richard Wilbur’s neologistic *leafier* leaf in “The Beautiful Changes,” stanza two:

> The beautiful changes as a forest is changed
> By a chameleon’s tuning his skin to it;
> As a mantis, arranged
> On a green leaf, grows
> Into it, makes the leaf leafier, and proves
> Any greenness is deeper than anyone knows.

By reading clay and language in parallel fashion, students can think about literature in imaginative ways. Thinking about the material used to make meaning brings the viewer’s experience closer to that of the artist herself, who becomes a viewer of her own work as well. Viewer, maker, and expression thus link via the medium of creation: clay for Shiftan; language for Wilbur.

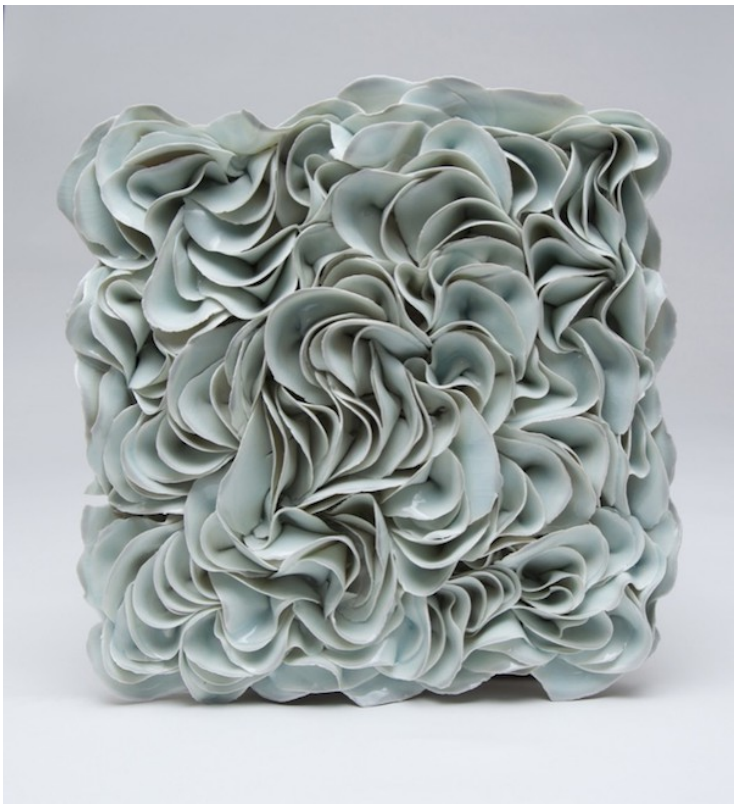

Figure 7: Anat Shiftan, *Celadon and Bronze* (2006) (Detail). Permission of the artist 12/13/2016.

An instructor can invite the student to consider his or her impression of the work both before and after reading the artist's or museum curator's commentary. Looking at Myra Mimlitsch-Gray's *Four-Handed Skillet* (Figure 8), for example, the class focused on the unexpected presentation of this domestic object as a way to re-consider William Faulkner or Flannery O'Connor's Southern Gothic style. For many, this was the most memorable object from the exhibit. The estranging, cartoony effects of Faulkner's and O'Connor's depictions made more sense when students could see the way such distortions can open up possibilities for interpretation, humor, or perceptual experience. Suddenly, through the effects of defamiliarization, a familiar object takes on new connotations: the challenge of communal cooking, the eroticism of the unexpected extra curves, etc. Reading the artist's comments on the work can, of course, completely change the viewer's experience. In this case, the artist sees her object as concretely grounded in a cultural-historical moment. As Mimlitsch-Gray explains, "I explore… metals' varied social histories. A cast iron skillet is endearing, and its familiarity inspires other narratives. These particular forms refer to Wisconsin's bratwurst culture, and also to the genetic engineering of corn and the monoculture that is one devastating result of globalization" (Mimlitsch-Gray 2013). For the students, the primary experience of observation seemed to outweigh even the information-rich commentary.

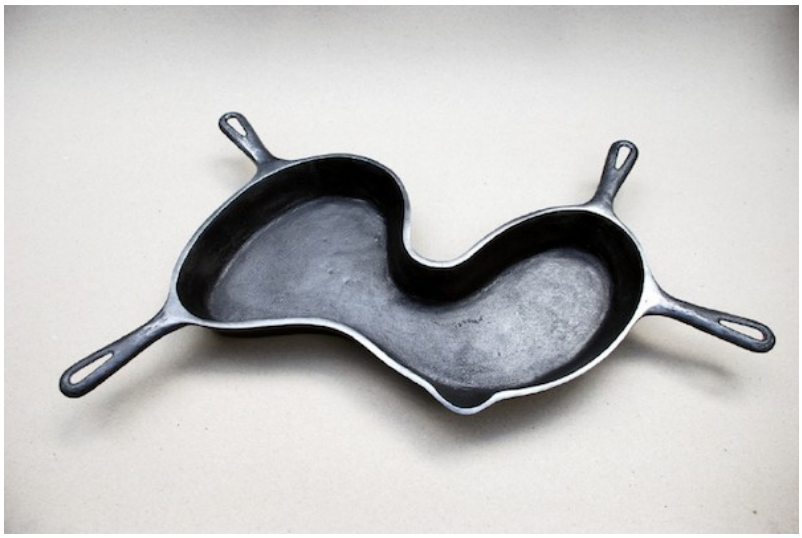

Figure 8: Myra Milmitsch-Gray, Four Handed Skillet (2007). Permission of the artist 5/11/2015.

A second object by Mimlitsch-Gray, *Clove Oval* (Figure 9), fascinated the students by its sense of removal from the expected, communal real. Although some students connected the object to the world via its imitation of a chunk of tree, a boat, etc, this piece seemed to say, simply and elegantly, that something had happened. Some slide into solid had transpired, and we were examining the evidence. Students examined the degree of precision involved in the craftsmanship of joining metals and texturing various surfaces. This most abstracted object in the exhibit that, in the artist's words, suggests, "a

return to the table,” allowed the students to bring their individual past knowledge of the world and of substances in transition into the creative process of inquiry.

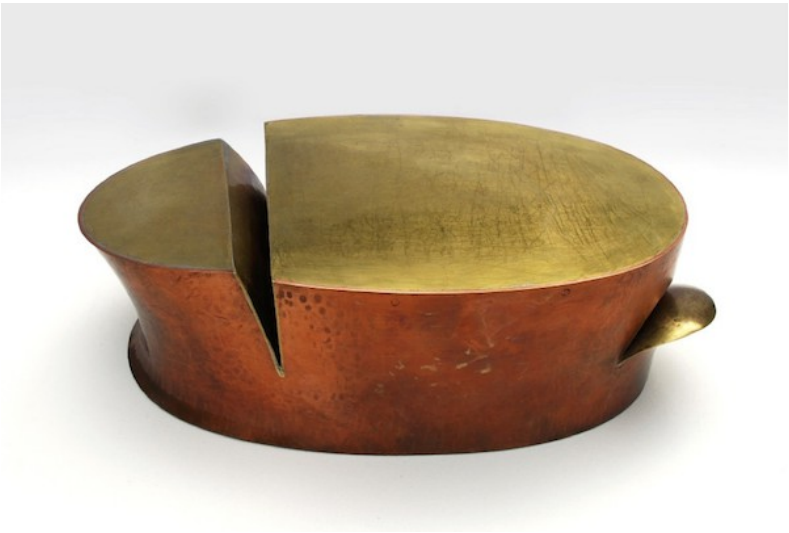

Figure 9: Myra Milmitsch-Gray, Clove Oval (2007). Permission of the artist 5/11/2015.

For 20th *Century Literary Criticism and Theory*, Wyman created questions to encourage students to probe the juncture between verbal and visual signification. She asked them to *read* the art works in terms of verbal/visual art’s relation to truth, the writer/artist’s strategies for representing reality or human perception itself (and the assumptions involved), semiotics, structuralism, storytelling, psychoanalysis, archetypes, Marxism, defamiliarization, Walter Benjamin’s aesthetics, and the contemporary crisis of signification. A course in critical theory or cultural studies invites further considerations of the verbal/visual work including classifications based on ethical content, inter-textual references, appropriation, voice, elements of ambiguity or political protest. In the *Shinohara Pops!* exhibition of Japanese Dada art, for example, Wyman introduced the topic of the contemporary art market by telling her students the story of Ushio Shinohara’s *Coca Cola Plan* (http://s3.amazonaws.com/moma-post/assets/9368/full/fig5.jpg?1406560761). In 1964 Shinohara made a copy of Robert Rauschenberg’s *Coca Cola Plan* (1958). Rauschenberg was initially delighted when Shinohara presented his version to the artist. Since then, Shinohara made many more such “imitation paintings,” and Rauschenberg’s enthusiasm waned. When Wyman asked the students to surmise what Rauschenberg may have feared in Marxist terms of *surplus value*, a lively conversation on art-as-commodity and the market ensued.

Finally, Wyman took her upper-level poetry students to see François Deschamps’ exhibit on Malian photography. The students had spent the first weeks of the semester considering *portrait poetry* as a particularly diverse genre and were familiar with the distinction between the neutral document (mug shot) and the interpretive portrait. In the gallery, Deschamps reminded them of the aphorism that, “Any portrait is really a self-portrait” of the artist. The students examined Deschamps’ works in which he invited the depicted subjects to select patterned frames for instant photos he took, and then made photos of the subjects holding these pictures, as in *Bajoba Nyakateé*, Badalabougou Market, Bamako (Figure 10). Deschamps explained his strategy to circumvent the

colonizing activity of the intruding artist by inviting the depicted subject into a collaborative creative activity. In other words, he elaborates, "It wasn't the idea of this white guy coming into another culture and photographing like an ethnographer or an anthropologist, but I saw it much more as an exchange where I gave them something" (Mejia 2013). Wyman's senior English majors linked Deschamps' comments to Edward Said's post-colonial ideas expressed in *Orientalism* (1978): Western representations of the East tell us more about the West than they do about the depicted East. Back in the classroom, the students reflected on these theoretical ideas about visual portraiture.

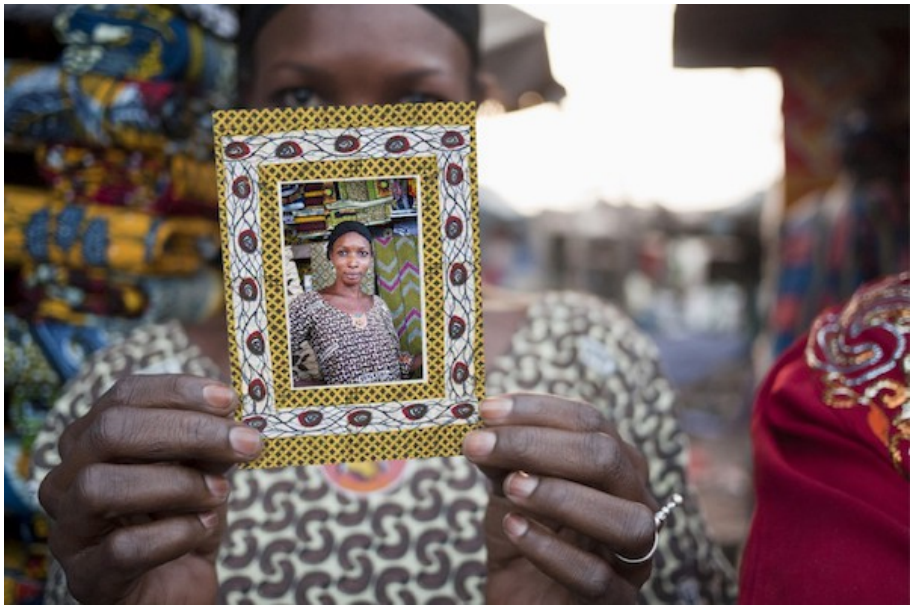

Figure 10: François Deschamps, Bajoba Nyakateé, Badalabougou Market, Bamako. Permission of the artist 12/ 17/2016.

Integrating the Assessment of Museum-integrated Learning Within the Liberal Education Framework

In thinking about assessing student work in activities such as ours, we confirm that students understand their task, why the assignment is important, and how their work will be evaluated. In our respective examples, the "what" and "why" for visiting the museum differ and, therefore, the expectations for student work vary. Mansilla and Daurisingh (2007) present an excellent starting point for assessment in which they develop a framework for interdisciplinary work that reveals three dimensions of student learning across the curriculum. Such activity should: (1) be well grounded in the disciplines; (2) advance student understanding; and (3) show critical awareness (Mansilla, Duraisingh, Wolfe and Haynes, 2009). Another useful framework for thinking about assessing student progress associated with interdisciplinary museum pedagogy is the Integrative Learning VALUE rubric of the AAC&U (Rhodes, 2010; Rhodes and Finley, 2013). We found this approach to be more conducive to facilitating discussion of learning across disciplines and across different types of student work, including creative writing, short answers, and discussions. The Integrative Learning VALUE rubric consists of five aspects for evaluation of assignments that can be evaluated with a resultant score of: 1/benchmark, 2/3 milestone, and 4/capstone. Evaluators of student work are directed

to look for: connections to experience, connections to discipline, transfer, integrated communication and reflection, and self-assessment. These analytical approaches to the learning process itself, can mesh gracefully with Mary Huber and Pat Hutchings’ conceptualization of a *teaching commons* (2005) that takes into account both the individual’s interests and capabilities as well as the situation in which the experience takes place, including the cultural exigencies of living communally in a democratic society.

The AAC&U Integrative learning VALUE rubric is useful for our group to discuss our varied experiences, because it provides a common language and framework that spans disciplines, assignment types, and student levels. It is also valuable as a way of explicitly showing students the reasons for these types of activities. As we move forward with expanding these types of initiatives across the curriculum, this foundation for student learning outcome assessment will be critical when we examine the effectiveness of our approaches and make the case to the broader academic community for the importance of this type of learning. As Sabol warns, “Traditional assessment methods often fail to explore the most significant kinds of learning taking place in arts classrooms, such as growth or sophistication of thinking and development of creative thinking pathways” (Sabol 2013: 37). Yet, our qualitative reflections on the case studies we present demonstrate the valuable learning outcomes we enjoyed as they relate to innovative thinking and community building between students and across the campus.

In terms of assessing the work in Waldo’s honors Biology class, in particular, we would expect “novice” levels of integrative learning to predominate. The AAC&U VALUE rubric for integrative learning defines this, in part, as work that “identifies connections between life experiences and those academic texts and ideas perceived as similar and related to own interests.” The student responses included here certainly reflect this ability to identify connections. While science students may be somewhat comfortable with integrative learning among scientific disciplines (chemical principles are frequently discussed in biology classes, for example), trying to build connections between biology and art is likely to be a novel experience for many. Therefore, this assignment was constructed to be non-threatening, with the goal of inducing students to engage fully.

In the creative writing assignment that initiated creative works with a museum visit, the expectations for student work are more substantial. This second or third year class includes advanced students, many of whom are exploring careers related to creative writing. For these students, the expectation is that they are significantly developing an increasing ability to “transfer, adapt and apply skills, abilities, theories or methodologies gained in one situation to new situations.” In the AAC&U Integrated learning VALUE rubric, a benchmark level for this skill is to “use, in a basic way, skills, abilities, theories or methodologies gained in one situation in a new situation,” as they did when using the visual imagery of a museum piece as a springboard to develop a work of creative prose. Clearly, students at this level would be expected to meet this novice level benchmark. However, it is not simply basic application that we are interested in developing, but rather a more profound transfer event, as described in the VALUE rubric as applying “skills….gained in one situation to new situations to solve problems or explore issues” (level 3) or to “…..solve difficult problems or explore complex issues in original ways”

(level 4). We hope all students achieve this transfer of knowledge from one discipline to another in a way that results in exploring complex issues in original ways.

In all of these assessments of museum learning, the primary criteria of the Integrated Learning VALUE rubric emphasized are those that explore "integrated communication" and "reflection and assessment." Students in Wyman's theory classes are usually junior and senior English majors who have completed a number of courses for which the definition of *text* is wholly restricted to the written word. Bringing these students into the museum invites them to employ the same type of analysis they have developed and applied to literary texts to a new medium—the visual arts—much the way Waldo's biology students grappled with new situations for their questions of biology. In the VALUE rubric, mastery of this skill is described as "choosing a format or language in a way that enhances meaning, making clear the interdependence of language and meaning, thought and expression." Whether students are being asked to respond to prompts in short or long written work, or orally, this ability to enhance meaning through integrative learning is exactly the skill we are hoping to develop. Further, an important part of the work in these classes is to allow students to "envision a future self (and possibly make plans that build on past experiences) that have occurred across multiple and diverse contexts." This capstone (level 4) achievement for students in reflection and self-assessment is an important goal of integrative learning experiences.

Conclusion

Outside their typical routine, the students' sensory perceptions sharpen; they examine closely and evaluate. By making the familiar strange, art prompts them to heighten their attention to both the signifying object and the medium of signification itself (paint, language, series of notes) (Schklovsky 1917). Maxine Greene evokes the functional value of art by recalling Virginia Woolf 's "cotton wool" of habit, routine, of automatism, that blinds the human to the world, and the way aesthetic experience can charge the senses. Like Greene, Dewey emphasizes the dangers of the "routine and mechanical; it does not come to consciousness in perception" (1934, 272). His focus on the revitalizing power of the aesthetic proves so central to his theory that he actually identifies the *anaesthetic* as, "what numbs people and prevents them from reaching out, from launching inquiries" (Greene 1988: 125). Incorporating the arts into any discipline prompts students to "imagine otherwise," in Greene's words, to re-evaluate self and society and "look for openings," or consider alternative ways of being, a fundamental orientation for citizens engaged in democracy (Greene 1988: 2-3; Greene 1995: 19; 22). It also challenges instructors to work outside of their areas of expertise. While students spontaneously appreciate the visionary propositions of the artists, writers, and scientists that they encounter in the museum, teachers begin to fully appreciate and assess the students' own imaginative visions and critical inquiries as they listen to comments and read written work.

Waldo, Doherty and Wyman's ventures at the Samuel Dorsky Museum of Art yielded excellent learning outcomes in creativity and innovative thinking and developed them as inter-disciplinary thinkers and teachers. One could see the impact of the museum experience in the way the students responded in writing and assume from follow-up assignments that many students held onto valuable impressions that might surface in their

futures as life-long learners. Many of the weaker students in class took these experiences as opportunities to shine in ways not reflected in their test scores and were thus brought into the academic experience through this *motivational entry point* (Hetland and Winner 2001: 6). Maxine Greene muses on this aspect of the teaching profession:

> You are working with human possibility. You are trying to awaken people and overcome what Dewey used to call the ‘anesthetic’ in life, the numbness. You are doing what Paulo Freire talks about when he talks about overcoming silences and giving people the capacity to overcome whatever internalized oppression they feel. (2005: 64)

As Greene suggests, teachers have the potential and the capacity to lead their students to experiences that will enliven their perceptions and sharpen their critical thinking skills in ways that will render them imaginatively engaged members of a changing society. By exposing students to the varieties of human perception and expression represented at the museum, instructors can introduce them to a new “teaching and learning commons” (Huber and Hutchings 2005) where their learning inhabits an unbounded arena. Here and there, one witnesses transformative learning, “where a student’s outlook on the world seemed to have taken a decisive turn,” yet we acknowledge the mutability of that moment, and that each such experience fits into “the developmental arc of the college years” (Huber and Hutchings 2010: xi). Once their education begins to unfold beyond the college walls, students can recognize themselves as the agents of their own learning and continue to increase their capacity for citizenship and development throughout their lives.

As these museum writing activities demonstrate, arts education is valuable in its own right, not simply for the critical and creative thinking skills it appears to develop in conjunction with other disciplinary study. Artists approach the world and create understanding in different ways than do the sciences, and by nature, enact the human experiences of perception and expression. By extension, these museum activities allowed already engaged students to approach their subject matter from a new angle and thereby improve fundamental skills. The biology students looked at their disciplines in a cultural context, one that brings ethical questions to bear upon real-life applications and upon scientific progress itself. They considered non-scientific ways of knowing and representing the world and made their own attempts to do this through writing. The creative writing students took a new look at the ways verbal signs deliver meaning and the impact of rhetorical forms and genre limits on their own expressions. Rather than the typical verbal models for their work, they attempted the more challenging transfer of visual expressions to their own verbal capture and expansion in prose. The literature and theory students worked on translating themes across various media and new visual contexts for ideas of democracy, citizenship, and stewardship. Using Shinohara’s sculpture and Deschamps’ photographs, they considered economies of value related to the taking of cultural property, collaboration, and the gift as exchange.

The students of all three professors practiced the *potentially generalizable cognitive skills* identified by Hetland, Winner, Veenema and Sheridan (2013): *Envision* (Mental imagery); *Express* (Personal voice); *Observe* (Noticing); *Reflect* (Meta-cognition / critical judgment). Furthermore, these activities depended upon two kinds of potentially broadly generalizable working styles: *Engage and Persist* (A kind of motivational skill)

and *Stretch and Explore* (Another way of talking about creativity). Hetland, Winner, Veenema and Sheridan hypothesize transfer based upon these activities: "Art students who learn to stick to art projects in a disciplined manner over long periods of time may become more focused and persistent in other areas of the school curriculum." They also suggest, "Art students who become comfortable with making mistakes and being playful may be willing to take creative risks in other areas of the curriculum" (OECD 2013: 137-38). The students visiting the Samuel Dorsky Museum all engaged in creative writing activities in response to visual art works in ways that engage cognitive skills and appear to support these transfer hypotheses.

As the OECD report emphasizes, "The impact of arts education on other non-arts skills and on innovation in the labour market should not be the primary justification for arts education in today's curricula" (Winner, Goldstein and Vincent-Lancrin 2013). The common policy practice of justifying the arts instrumentally, a peculiarly American phenomenon, can be dangerous when only the arts are challenged to demonstrate transfer (Hetland 2002). Arts must be taught, and taught effectively, according to pedagogies that continue to develop with the changing times. The *Recommendation of the European Parliament and the Council on key competencies for lifelong learning* (18 December 2006, 2006/962/EC) identified *cultural awareness* and *expression* as key competencies and specified that "critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings play a role in all eight key competencies" (OECD 2013: 22). Furthermore, at the 2010 OECD Ministerial Meetings, education ministers from 38 countries looked to empowering and preparing students to succeed by developing not only professional but also "generic" skills including "entrepreneurship, creativity, and communication." This emphasis on humanistic education deserves special recognition in light of present world crises, however, as Barbara Ishinger summarizes, "There is far too little research on the impact of *arts education* [our emphasis] on student outcomes of creativity, critical thinking, persistence, motivation, and self-concept, and this prevents us from making strong conclusions about these outcomes" (OECD 2013: 3). Scholars of every discipline must look for ways to measure transfer, but not by quantitative means that could jeopardize the inclusion of the arts in core educational requirements. Historically, educational institutions around the world have celebrated the arts as fundamental to the nurture and development of thinking, functioning citizens. Whether or not the arts develop "skills for innovation" that secure our place in the global economy, the arts remain vital to the growth, development, and cultural awareness of students at every level of education.

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