VISUAL & PERFORMING ARTS | CRITICAL ESSAY

Archetypes of material use and disuse: An art and ecology primer

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Abstract: Materialism is occupying the forefront of intellection discourse in fields as diverse as anthropology, architecture, social science, cultural theory, feminist studies, philosophy, psychology, and theology. These disciplines are both defining and redefining humanity’s interactions with the materials of the planet. Their shared impulse can be traced to mounting evidence that humanity’s unprecedented abilities to manipulate substances, from nanoparticles to global weather, are undermining Earth’s ability to support diverse forms of life. The following text contributes to this urgent discourse by applying these considerations to individual behaviors. In order to facilitate personal scrutiny of the environmental consequences of one’s material behaviors, it identifies seven archetypes of material interaction: pet, sacred object, hazard, merchandise, specimen, resource, and sensual stimulus. In this essay, each archetype is presented from three vantage points. First, patterns of human engagement with each archetype and their environmental consequences are examined. Second, patterns of disposing materials that are no longer desired or viable are explored. Third, artists’ interpretations of these material patterns are presented. Each artwork utilizes dirt as its medium and theme to facilitate comparing and contrasting archetypes. Artists not only manifest each archetype, they warn against objectionable human/material relationships and demonstrate beneficial alternatives.

ABOUT THE AUTHORS

Research for the submitted paper represents a 10-year period during which Linda Weintraub has been exploring the vanguard intersection between art and environmentalism. In addition to numerous published papers, she is the author of TO LIFE! Eco Art in Pursuit of a Sustainable Planet (2013) published by the University of California Press; it is the first college-level eco-art text book. Weintraub’s previous books on eco-art include the series, Avant-Guardians: Textlets in Art and Ecology (2007). It includes EcoCentric Topics: Pioneering Themes for Eco-Art; Cycle-Logical Art: Recycling Matters for Eco-Art; EnvironMentalities: Twenty-two Approaches to Eco-Art. Weintraub established Artnow Publications in order to apply environmental responsibility to the books’ material production. She served as the Director of the Bard College museum where she curated over 60 exhibitions. Her current book projects include Eco-Materialism: Art-is-an Environmental Health Clinic.

PUBLIC INTEREST STATEMENT

Despite the appearance of exaggeration and presumption, the assertion that this paper is relevant to every living person is easily justified. That is because our physical organisms implicate us in the use, distribution, and disposal of the planet’s substances. We cannot avoid being consumers of resources. Nor can we refrain from being producers of waste. However, we can manage the manner in which we conduct these material interactions. This paper facilitates personal interrogations to determine which of our interactions are sustainable (which means diverting from cultural norms that originate in industrialization and consumerism), and which resemble marauding and squandering (which means conforming to prevailing norms of material interaction). The artists whose works exemplify the seven material archetypes have transformed these general categories into vivid and compelling choices that apply to everyone. The survey that concludes this paper will hopefully lead to tangible behavioral reforms.
1. Introduction

Few eco artists seem to anticipate a return of Paradise on Earth where a congenial climate, abundant vegetation, and perpetual daylight seven times brighter than a sunny day are guaranteed. But that is not the only myth of human destiny that our forefathers provided. The myth these artists might be more inclined to subscribe to are the ancient tales from around the globe that describe disasters wrought by angered deities to punish humans for their arrogance and excesses. The profusion of precedents suggests that civilization is marked by this sordid history. Myths representing the Hebrews, Yoruba, Hindus, Chinese, Skokomish, Lithuanians, Babylonians, and Greeks tell of gods so angered by the warring and wickedness of humans that they sent floods, winds, plagues, famines, and monsters to destroy them.

While human "wickedness" has remained a constant over the centuries, humanity's impact has not. New technologies have continually augmented the harm inflicted by our squabbling and greed. The commanding power of today's tools is intensifying the consequences to such a degree that hardly a form of life, or a system that sustains life on Earth, has escaped fatality. More than ever, humans deserve swift and severe sentences. These penalties may ensue in the absence of gods' curses and mythic retribution. This is because careless material interactions implicate humans in escalating extinctions, erosion, deforestation, desertification, climate change, soil degradation, water contamination, to name a few of our punishable offenses. Environmentalists and eco artists are making valiant attempts to salvage our species' reputation. Instead of abdicating to dread and doom, they are devising hopeful redesigns of human practices to preserve habitats that remain vigorous and remediate those that have become debilitated. Their efforts suggest that the destiny of life on Earth may not yet be ordained.

The outcome of this epic drama hinges upon the seven archetypes of materials presented in this essay. These broad material categories diverge from animal/vegetable/mineral conventions. Instead, each represents a particular form of human interaction with the material environment. Because of the power contemporary humans wield over the physical environment, these archetypes assert three key determinants of future prospects for planet Earth: mental attitudes; the behaviors incited by these attitudes; and the tangible consequences of these behaviors upon the physical environment. These material archetypes include pet, sacred object, hazard, merchandise, specimen, resource, and sensual stimulus. As archetypes, the attitudes, behaviors, and consequences associated with each category can apply to any entity—living and dead, inert and biological, grown and manufactured, desirable and unwanted.

In this essay, each archetype is presented from three vantage points. First, patterns of human engagement with each archetype and their environmental consequences are examined. Second, patterns of disposal are explored once the relationship with that material archetype is no longer viable. Third, artists' interpretations of these material patterns are presented. Each artwork utilizes dirt as its medium and theme in order to facilitate comparing and contrasting of the archetypes. Furthermore, because dirt is global and essential, it represents manifold entries in the catalog of Earth materials. The contemporary artists who have explored this rich vein of imaginative opportunity present dirt in terms of compost, hallowed ground, contaminated soil, fertile growing medium, underground rubble, treasure repository, and indicator of place. Their creative imaginations visualize and narrate objectionable and preferred human/material relationships.
2. Pet

2.1. Cultural engagement
Imagine the state of the physical environment if the relationship humans have with pets was applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. Pet owners are protective care-givers. They are attentive to their pet’s needs. They enjoy maintaining their pet’s physical and mental well-being, and strive to prolong this relationship as long as possible. Such attention is sustained even though it means routinely conducting unpleasant tasks, sharing personal resources, accepting inconvenience, and offering self-sacrifice. The time required to perform these duties is factored into each day without complaint. If pet interactions became the model for humanity’s material relationships, caretaking would replace careless disregard and generate deep personal satisfaction.

2.2. Cultural disengagement
Pets are attended to with care and consideration when they are alive, and also when they die. Imagine if all our material possessions were treated with comparable end-of-life rituals when they cease being useful. Certainly, objects treated like pets would not be discarded as litter or dumped in trash destined for a landfill. They might, however, be laid to rest in the ceremonial manner of human burials. Ironically, the environmental benefits evaporate when pet owners lavish their deceased pet with elaborate burial paraphernalia available in the marketplace. They commit the excesses of the typical consumer when they purchase such “pet-aftercare” supplies as cremation urns, luxury coffins, grave markers, and “life gems” created from a lock of the pet’s hair.

2.3. Eco-art engagement
We delight when a pet enters our lives. We weep when a pet sickens or dies. If soil was granted the status of a pet, joy would accompany its preservation and augmentation, and grief would accompany its depletion or contamination. Furthermore, care would be lavished upon pet soil to restore its health and protect it from dangers.
Amy Youngs treats soil as a pet by nurturing the worms that break down organic materials and transform them into an enhanced fertile growing medium. She created a work of art that is aptly titled Digestive Table because it includes a place for her and for her worms to dine together in the midst of the soil they created together. Youngs cultivates the cross-species conviviality that humans normally experience with cats, dogs, and parakeets, but not with worms.

Youngs’ worms don’t greet her at the door; or take walks with her in the park; or sleep at the foot of her bed. Although worms offer little in the way of companionship, they are amiable pets. Worms require little care-giving; they are inexpensive to maintain; they never need grooming, or veterinary attention, or behavioral training; they make no noise so they don’t bother the neighbors. Youngs highlights a benefit offered by few other pets—worms are service providers. They transform rotting organic matter into rich productive soil by processing their owners’ leftovers. In the process they produce sweet-smelling excrement that is so enriching for soil, it is coveted as “compost” and it is described as “black gold.”

Youngs acknowledges that setting an example of expanded care-giving to worms is complicated by “their power to repulse us” (Youngs, 2015). “There is a lot of cultural work to do if we are to develop symbiotic relationships with them” (Youngs, 2015). This artwork activates three strategies to promote the adoption of pet worms to manufacture a sweet growing medium. The advantages of the reciprocal material interactions she designed accrue to their human care-givers, to the worms, and to the environment.

One worm-appreciation-scheme ensures the fundamental requirement for personal bonding—familiarity. This is particularly challenging because worms require underground habitats that are not congenial to humans. Nonetheless, the Digestive Table enables these divergent species to dine together as a social unit. It accommodates the human custom of eating with a fork or spoon while seated in a well-lit environment by providing a table and stool. It also provides for the worms’ habit of munching as they crawl through food scraps by creating these conditions in a bag that is attached to the underside of the table.

Youngs then inserted a communication channel between these divergent territories by installing an infrared camera inside the worm bag. The images were then transmitted to an LCD screen that was inserted into the top of the table, enabling Youngs to observe the worms’ virtuoso waste-disposal performances as they ate together.

A second repulsion-reducing strategy involved adding an active care-giving regimen to the diner’s passive viewing of images on an LCD screen. Youngs accomplished this by inserting a cavity into the
top of the table that functioned as a waste-disposal receptacle for pizza crusts, apple cores, and used tea bags. All her leftovers immediately provided the menu for the worms’ next meal. This built-in receptacle converted a tedious chore of waste management into the pleasurable act of feeding a pet.

Youngs then made this symbiotic relationship reciprocal by ensuring that the worms also supplemented the human’s diet. This nourishing exchange occurred at the table base which was outfitted to receive the nutrient-rich soil the worms had previously crafted. The soil exited the bottom of the bag, enabling it to serve as the growing medium for the ingredients of a tasty salad.

By welcoming the worms into her home, Young completed the conditions for an intimate relationship. Cohabiting is a privilege only granted to animals that are pets. She fulfilled this relationship by providing the worms with food, bedding, warmth, and moisture. In exchange, they managed her food scraps and produced salad greens. Youngs explains how her down-to-earth engagement offers special pet bonuses, “I live and work with domesticated technological and biological beings that sustain me esthetically, gastronomically, intellectually, and emotionally. Emitting waste, I seek cohabitation with creatures that make use of it. I like to be reminded that my human existence depends on interdependence” (Youngs, 2015).

The following invitation encapsulates the environmental policies that her pet-protocols promote, “I hope you will join me in prototyping a future that appreciates our shared world with other living things. We start with the worm, and we work together to create new culture and new ecosystems” (Youngs, 2015).


3. Sacred object

3.1. Cultural engagement

Imagine the state of the physical environment if the relationship humans have with sacred objects applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. It would be assumed that such materials are invested with almighty powers or guided by the constant interventions of a deity, spirit, or ancestor. A particular object that attains this status is known as a fetish. Such an object is believed to possess magical power to protect its owner, or harm its owner’s enemy. As such, fetish objects are approached with fear and reverence and treated with extravagant care.

Many indigenous cultures assign fetish status to each and every component of the material environment. Within these cultures, animals, plants, rocks, rivers, mountains, thunder, wind, sun, rain, and shadows are all imbued with supernatural powers. As such, even the routine material interactions carry consequences of a godly blessing or punishment. Anthropologists refer to the consecration of all material entities as “animism.” Environmentalists call it “deep ecology.” In art, this attitude
is known as “sublime.” In all three contexts, the materiality coalesces with spirituality. Every encounter is conducted with the solemnity of rituals and the grace of sacraments. In industrialized societies, this tradition persists when a site, such as the land where the World Trade Towers stood in Manhattan, is designated as hallowed. Likewise, an object like the bat Babe Ruth used to hit his 60th home run is enshrined in the Baseball Hall of Fame. These consecrated entities are kept immaculately clean and polished. By endowing such contemporary commodities as plastic bags, cell phones, and sneakers with the attributes of a fetish or divinity, careless material interactions would be replaced with reverential attentiveness.

3.2. Cultural disengagement
Extraordinary care does not end when a holy person dies or a hallowed object is no longer used. The death of a saint, for example, may be honored with the burning of incense to purify the air and chanting to evoke the spirit world. Consecrated spaces, such as a shrine, mausoleum, or reliquary, may be constructed to protect the saint’s remains and preserve his or her special powers. Native American masks provide another example of reverential actions undertaken with a spent spiritual object. The masks used during Navajo religious and healing ceremonies are regarded as living beings. Because they are imbued with great power after they are used, they are treated to formal burial rites. Treating materials as sacred objects would entail attending to their impact on the lives of the living after they are discarded. Owners would make certain that their unwanted items are not neglected; they do not fester; they will not pollute.

3.3. Art engagement
A landmark 1977 work by Walter de Maria, entitled New York Earth Room, was deemed so significant from its inception that the DIA Art Foundation not only funded its production, it also agreed to fund its perpetual exhibition, maintenance, and protection. The work is permanently installed in Manhattan. Visiting resembles a religious pilgrimage. Like a shrine, the Earth Room is elevated above the bustle of the urban street on the second floor of a loft building. One enters, climbs stairs, navigates a dark hallway, and only then beholds a 3,600 square feet space completely filled to its outer walls with soil. It is quintessential soil—dark brown, crumbly, moist, dense, and sweetly aromatic. This soil is not for planting. It is too pure and too refined to be associated with such an earthly function. It belongs to consecrated realms where humans dare not tread. In fact, entry is blocked by a knee-high Plexiglas barrier, the same height as the soil. The view is unimpeded, but access is forbidden. Reverential distance is thereby mandated.
The soil in the Earth Room is also elevated in value because it is so rare. Within the paved expanse of a modern city, beholding soil is far less common than beholding jewels. De Maria’s dirt sheds all its derogatory connotations with smut and moral degradation. The work induces veneration, not distaste. De Maria created a shrine to soil’s glory. This soil exists to be worshipped, like the ashes of a saint or the relics of a martyr.

The back story that is often told about this work of art was not confirmed by de Maria before his death in 2013, but it is instructive. It is said that he rejected all 280,000 lbs of dirt from a Pennsylvania farm after it was delivered to Manhattan. This soil was unacceptable because it sprouted! Sprouts belong to earthly functions. They conflict with the pristine purity of a sacred substance. Thus, each micro-organism, insect, weed, mold spore, and mushroom that could germinate had to be eradicated. Thus, the entire load was removed, fumigated, sterilized, and then reinstalled. Only barren soil could emulate the appearance of divinity.

What are the ecological implications of the Earth Room? Is this a constructive model for human interactions with the material world? The answer is complicated. On the one hand, environmental abuse is avoided by the “don’t touch” policy that accompanies sacred items. Likewise, material neglect is countered by the reverence bestowed upon a sacred substance. Nonetheless, such worshipful demeanors do not guarantee environmental advantage because they also inhibit stewardship, remediation, and restoration.

Video 2. A Loft Filled with Dirt, the Man Who’s Cared for it for 19 Years.

4. Hazard

4.1. Cultural engagement
Imagine the state of the physical environment if the relationship humans have with hazards was applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. This thought is not as bizarre as you might think. Consider how many life enhancements are currently being categorized as dangers—sunshine is blocked, water is filtered, dirt is sterilized, bacteria are destroyed. These offensive tactics are the product of human ingenuity, enhanced by engineering, physics, and chemistry. Entire industries have developed to supply humanity’s arsenal of weapons to thwart perceived dangers. They represent one of two defense mechanisms humans share with animals and, as recently reported, plants. They represent “fight” responses because they attack adversaries.

“Flight” is the second type of biological response against careless or dangerous material interactions. Over the course of civilization, humans have supplemented this instinctual defense mechanism by constructing “taboos.” A taboo is a vehement prohibition against an action, either because it is too sacred or too demonic. Violating a taboo carries the threat of supernatural punishment. They serve the community by formalizing the means to avoid danger and maintain stability. Perhaps contemporary society and the environment would be less endangered and more stabilized if new taboos were established against careless or dangerous material interactions. If this were so, prohibitions against littering, wasting energy, and spilling motor oil would carry grave consequences, and therefore be avoided. The catalog of current means to avoid hazards includes inoculations that protect us from infectious diseases, radar installations that detect enemy invasions, and weather satellites that anticipate storms.
Such advancements, however, are compromised by the introduction of unnatural hazards that humans have inadvertently concocted. Humans are equally adept at fabricating dangers and protections as they are at protecting themselves from them. Acid rain, PCB pollution, cyber attacks, airplane collisions, space and ocean debris, radioactive waste, dam collapse, and noise pollution did not concern our ancestors. The human activities responsible for producing these current hazards occur on three scales: large-scale installations such as petroleum processing facilities, chemical plants, and industrial agriculture; mid-sized infractions that occur in auto garages, dry cleaners, and construction companies; and small offenses enacted in individual households that utilize cleaners, paints, and motor oil.

4.2. Cultural disengagement

Government regulations govern the handling and disposal of hazardous sludge, solvents, dioxins, radioactive uranium tailings, refrigerants, glues, pharmaceuticals, pesticides, paints, batteries, chemicals, etc. Indeed, so many toxic substances now encumber the material environment that a Resource Conservation and Recovery Act was passed to regulate their disposal; the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration created a Code of Federal Regulations; the Environmental Protection Agency imposed Hazardous Waste Recycling Regulations; and the U.S. Department of Transportation requires hazardous materials training for all “hazmat employees.”

There are several destinations for discarded dangerous substances, and none resemble the disposition of a pet or a sacred object. Landfills are engineered sites where non-liquid hazardous waste is deposited and covered. Surface Impoundments are natural and man-made depressions where liquid hazardous wastes are stored or treated. Waste piles are non-containerized piles of solid waste. Land treatment units apply hazardous waste directly on the soil surface where microbes and plants transform hazardous constituents. Injection wells place hazardous fluid deep underground in porous rock formations. Underground caves are natural geologic repositories. A less common tactic involves de-toxifying the substances so they can be re-used.

4.3. Eco-art engagement

According to the Center for Disease Control, lead poisoning is the most common and most devastating environmental disease affecting young children (Ryan & Zhang, n.d.). In addition to causing

![Figure 4. Mel Chin, Funded Dollar Bill Project, 2006-ongoing. Armored Truck. Source: http://blog.art21.org/2008/03/03/mel-chin-the-funded-dollar-bill-project/#.VoQv8vk0zRl.](image-url)
innumerable health problems, lead poisoning inhibits mental development and incites aggressive behavior. New Orleans’ record of lead contamination is particularly sordid because humid climate and severe weather necessitate frequent repainting of buildings. Although lead paint was banned 40 years ago, it is still peeling in the oldest and poorest neighborhoods where there is high incidence of learning disabilities and crime (Schleifstein, 2011).

A common approach for remediating lead-laden soils involves removing the contaminated soil to an off-site location where it is disposed of, buried, or diluted (Ryan & Zhang, n.d.). This method is difficult to implement because the expense is exorbitant. One alternative was proposed by Karen Gartley, the Director of the University of Delaware Soil Testing Program and a distinguished member of the American Society of Agronomy, Soil Science Society of America. She advised “flight” (avoidance) instead of “fight” (remediation). In a published paper entitled “Managing Lead Contaminated Soils” (Gartley, 2002), Gartley proposed three ways to avoid contact: install barriers around lead concentrated soils; locate vegetable gardens and play areas on soils that are low in lead; and practice hygiene after handling soil.

The artist Mel Chin proposed eradicating the problem, not merely managing it. His “fight” response activates the remedial approach devised in collaboration with toxicologist Howard Mielke and research scientist Dr. Andrew Hunt. Their strategy involves chemically transforming lead so that it can no longer be absorbed by the body. This innovative scheme is referred to as “Treat. Lock. Cover.” Treatment is economical because it utilizes phosphate which is abundant in New Orleans because of its fishing industry, and because the tainted soil remains on site. Nonetheless, Chin’s collaborators estimated that city-wide clean-up would cost approximately $300,000,000! Instead of abandoning the goal as ludicrously beyond the capability of a single artist, Chin developed a sequence of actions that are designed to culminate in an appeal to the U.S. Congress to allocate the $300,000,000 to eliminate lead contamination throughout the city of New Orleans.

In order to pursue this ambitious scheme, Chin channeled his talents as an artist, visionary, pragmatist, entrepreneur, healer, and activist and launched Operation Paydirt in 2006. He enlisted consultants, researchers, site managers, publicists, funding officers, web designers, environmental scientists, landscape architects, and educators to supplement his skills and knowledge. However, Chin’s primary collaborators were school children. Children are essential to this remedial strategy because they are the most common casualties of lead poisoning, and because they are the least able to petition in their own defense. Chin volunteered to serve as their ambassador. He comments, “I thought that if a child’s mind, future and imagination were going to be compromised by this well documented agent called lead, it was important to have their voice out there, out front. They need to be the ones to deliver the message. I decided to design a project that would be a catalyst for that to happen” (Brookhardt, 2009). Thus, he established the Funded Dollar Bill Project to fulfill Operation Paydirt’s mission.
The project recruits children from across the nation to create a work of art by completing templates that take the form of an actual US $100 bill. Chin altered them by removing Benjamin Franklin’s face from the front and Independence Hall from the back to make room for children to personalize bills with their own drawings and symbols. Chin carefully calculated this cooperative effort. If $100 bills are drawn by three million children across the country, they would produce the symbolic equivalent to the $300,000,000 needed to remediate New Orleans’ soils.

Chin summoned the age-old art strategy by utilizing symbols to convey that the value of the children’s artworks matched this hefty price tag. For example, while he could have used a common pickup truck, the vehicle he sent to collect Funded Dollar Bills from across the country was a classic 1977 armored Brinks truck with bulletproof glass. The driver was outfitted in a security uniform. Furthermore, Chin stored the children’s currency in a space protected by an enormous, thousand-pound, circular bank vault mounted on huge silver hinges designed for high-security protection. This visible sign that something of great value was stored inside was attached to a rundown row house in one of the city’s poorest neighborhoods. Chin’s assertion of value was in earnest. He explains, “What’s valuable is another generation not being raised in conditions that compromise the capacities of a child at birth” (Brookhardt, 2009).

The project’s dramatic climax will occur when the Funded Dollar Brinks truck pulls up in front of Congress in Washington, DC to deliver approximately seven thousand pounds of cash that was hand-drawn by three million children across North America. The guards will request an exchange of $300,000,000 of children’s art currency for $300,000,000 of US Treasury bills to pay for the health and safety of the children of New Orleans. Chin explains, Operation Paydirt is about the delivery of so many things—of the imagination of children and the delivery of their art to request an even exchange, of money and services from Congress, and of the delivery of a solution to a terrible toxic problem. And it’s also about the delivery of a city that can help deliver other cities from a similar fate” (Brookhardt, 2009).


5. Specimen

5.1. Cultural engagement

Imagine the state of the physical environment if the relationship humans have with specimens was applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. Unlike the pets that are appreciated for their unique characteristics, specimens represent the standard characteristics of an entire set of entities. The more “typical” they are the better for contributing to scientific testing, research, display, diagnostic examination, and evaluation.

Interactions with specimens may involve rocks, plants, blood, bones, or living matter. Detailed observations characterize the interactions in every instance. Despite the availability of technologies such as high-resolution photography and tissue sampling for DNA analysis, the field collection of mineral, animal, and plant specimens remains today, as it has in the past, an essential component of scientific documentation and analysis. Specimens play a particularly important role in ecological research because they register changes in complex biological, geological, climatic, and social conditions. Such
research facilitates informed decisions about species management and conservation. Specimens also contribute to scientific knowledge when they are assembled and indexed into systematic collections. Thus, human interactions with specimens involve objective collection, dissection, identification, and categorization. Applying the clinically detached scrutiny of specimens to all materials would suppress the emotional impulses that influence many material interactions. For example, emotionally driven desires and aversions drive many consumer decisions, outweighing objective analysis of the environmental impacts associated with these commodities. The detachment of specimen-related behaviors could shift decisions regarding our wardrobes, diets, electronic devices, and preferred modes of transportation from commerce to ecology, and from pleasure to sustainability.

5.2. **Cultural disengagement**

Two complementary processes are activated by engagements with biological and mineral specimens—collection and fixation. Collection can occur anywhere between the surface of the moon, deep sea vents on the bottom of the oceans, and within the cells of tissues. Fixation occurs to maintain a structure as long as possible and as faithfully as possible to enable future study. Numerous procedures have been developed to thwart the natural forces of decomposition. A stable environment usually suffices for non-biological specimens. But biological specimens require additional strategies. Such specimens are most valued after they die. Thus, they are neither buried nor discarded. Instead, the entire specimen may be “pickled” by using a liquid preservative; or dehydrated by removing the body’s moisture; or frozen to stop enzymatic decay. Alternatively, enduring parts of the body, such as the skin and skeleton, can be separated from the parts that are prone to decompose. If fixation is applied to tissues or DNA, the specimens’ final resting place would be a vial or Petri dish. In all these ways, the relevance of objects that are treated like specimens would be projected into the future and they would be maintained for as long as physically possible.

5.3. **Eco-art engagement**

The “specimens” that the artist Alexandra Regan Toland collected to create “Rubble Mapping” (2010) (Totland, 2010) consisted of dirt that was specifically selected because it provided a tangible
repository of a city’s history. Working with Prof Dr. Gerd Wessolek of the Department of Soil Protection in Berlin, she collected sand, stones, roots, worms, and microbes from beneath the city’s pavement to discover its biological and geological history. Cultural history was on their agenda as well. Thus, the specimen collection included artifacts and substances that reveal human settlement, development, agriculture, and war. Toland comments, “Peel back the pavement and what do we find? Dirt, sand, stones, debris, roots, worms, turds—in short urban soil” (Future Farmers, 2010).

Modern Berlin provided an ideal site to conduct such an exploration because it was rebuilt on top of the remains of the 75 million cubic meters of rubble and debris left by the allied bombings in World War II in the 1940s (Future Farmers, 2010). Beyond curiosity, discerning this history became an urgent ecological necessity and a political platform in Berlin because sulfates from buried mortar were leaching into the city’s groundwater system and contaminating the water. Toland explains that “a steady release of sulfur trickles from the crumbling mortar, ashes, and coal buried in mountainous memorials that still dot the landscape of Berlin and cities across Europe” (Future Farmers, 2010). She goes on to explain, “Historical tragedy and political amnesia aside, the nature of rubble has a fundamental effect on the physical, chemical, and biological properties of the soil, contributing to the amount and availability of nutrients and heavy metals as well as the water quality” (Future Farmers, 2010). In 2014, the German parliament confirmed these concerns by passing a Federal Soil Protection Act to preserve soil’s natural functions regarding fertility and filtration. It also protected soil’s cultural function as an archive of the city’s history.

Toland conveyed this rich history by creating a map of the city. It covered the floor of a large gallery at the Altes Museum. Rubble that had been dug up was scattered over the entire surface. It included bits of brick, mortar, metals, ceramics, glass, slate, marble, etc. The city’s waterways, of course, were left exposed, but they too contributed to the artist’s environmental focus because she painted them a lurid yellow, the color of sulfur. This acrid element was augmented by long yellow curtains that covered the windows. The installation not only documented the insidious seepage of sulfur throughout the city’s underground territories, it actually evoked sulfur’s acidic nature and foul smell.

The rigorous methodology of specimen collection that the artist undertook was indicated in the exhibition by nine tall glass test tubes. Each was placed on the floor map at a location where the greatest rubble deposition had accumulated. Some sites were in popular city parks. Others were clustered in surrounding forests that had been used as dumping sites. Each column was filled with proportional quantities of the specific rubble discovered at these sites. Soils were laced with decomposed leaf litter, rotting food waste, excrement, spilled motor oil, cigarette stubs, and plastic packaging, as well as rubble from bricks, beams, mortar, and glass that had broken down, decomposed, or become pulverized by pressure from pedestrians and motor vehicles. Twenty-five million cubic feet of rubble (Future Farmers, 2010) served as a major underground monument to Berlin’s past.
By presenting specimens of urban soil, the art installation provided visually persuasive evidence that the destructive legacy of war continues long after peace treaties are signed. Toland not only conveyed this continuing history visually, she stacked a desk, installed in the exhibition space, with books, notes, maps, calculations, and other documents providing data from published studies of the relationship between rubble soils, sulfate leaching, post World War II reconstruction, rubble management, and other research examining rubble soils.

Ironically, while specimen preservation is usually desirable, in this instance preservation is causing of this historic artifact is producing current contamination.

6. Resource

6.1. Cultural engagement

Imagine the state of the physical environment if the relationship humans have with resources was applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. A resource is any object, any substance, any person, or any quality that is perceived to be useful, including human services and knowledge. All are assets. Resources that are comprised of matter may be “natural” or engineered, renewable or non-renewable, abundant or rare. The current and future states of the environment are fundamentally a product of the way humans produce, distribute, and dispose of resources.

There is nothing inherently immoral or wasteful in the consumption of resources. Life depends upon acquiring supplies in order to grow, survive, and reproduce. Animals require food, water, oxygen, and territory. Plants depend upon sunshine, nutrients, water, and a place to grow. In contrast, anthropocentric resources are not confined to biological needs and systems. Although human consumption can be prudent, necessary, and responsible, many of the resources humans consume are contrived by markets, promoted by marketing, and facilitated by finance. Together they arouse desires for non-essential comfort, leisure, excitement, and convenience. If the resource archetype of material relationships ceased being wasteful and polluting, and was replaced with prudent forms of use and allocation, a new social paradigm could be established that would promote conservation and eliminate the need for remediation.

6.2. Cultural disengagement

By definition, a resource is useful, the opposite of waste. Of course, there are wasted resources, as when oil spills from tankers, or foods spoil, or trains wreck, or chickens contract the avian flu. Then, the material archetype shifts from “resource” to “hazard.”

6.3. Eco-art engagement

The artist Jon Cohrs evokes the frenzied American Gold Rush of the 1800s. Fueled by the dream of exclaiming “pay dirt!” thousands set out across the country to prospect for gold. Mel Chin also applied...
the term when he produced Operation Pay Dirt to convey that children’s health is precious, like gold. Cohrs’ reference to this euphoric era in US history offers an ironic commentary on contemporary values and lifestyles. In a performance art project titled The Urban Prospector, Cohrs hunts for valuable resources in urban soils—not lost coins, but residues of oil spills! This form of treasure hunting is not as bizarre as it may first seem. Oil was so valuable in 2009 when he choreographed this work that nations worldwide were clamoring for discoveries. Cohrs’ quirky quest for the dark, tarry pollutant can be diagrammed as a triangle connecting the three states of oil: resource, dependency, and jeopardy. He conveys this message by referring to the harmful leakages of oil as “reserves,” not oil “spills.”

Cohrs carries out his task as an “Urban Prospector” with a device he made by modifying a mass-produced hand-held metal detector. His version detects the spilled oil that lurks in many city soils. First he outfitted the tool with a combustible gas sensor. Then he removed the metal sensor and replaced it with a “petro” sensor designed to detect total petroleum hydrocarbons (TPH). The analog data emitted by the sensor are then analyzed by a microchip connected to a computer. The device can be built to detect this valuable resource for less than 100 dollars. The film of the artist sweeping the terrain with his detector would be tedious, except that each instant carries the anticipation that he will discover a deposit of spilled oil and exclaim, “Pay Dirt!”

Such active prospecting is carried out within areas that are so laden with spilled oil that the environmental hazard they pose extends the entire length of the food chain, inflicting their penalty upon micro organisms and apex predator species. Some of the sites have been designated “superfund sites” by the Environmental Protection Agency, yet Cohrs does not wear a slicker suit, safety goggles, hard hat, and respirator when he prospects in these urban soils. Instead, he assumes a casual appearance by wearing jeans, cotton shirt, and sunglasses. His attire transforms the unsavory job of toxic waste clean-up into one that seems lucrative and pleasurable.

One might dispute the lust for oil that Cohrs both ridicules and exploits; but the magnitude of the spilled oil “reserve” that he tapped in this project is not debatable. Cohrs conducted his prospecting performance in his neighborhood in Brooklyn, New York where the “Greenpoint Oil Spill” had been leaking into the soil for over 50 years. Estimates of the oil and petroleum leakage from crude oil processing facilities in the area range from 17 million gallons to 30 million gallons. This is twice the size of the Exxon Valdez disaster (Riverkeeper, 2016). The wasted resource lay beneath the surface out of sight, but it was never out of the site. The spill essentially destroyed the local aquifer (Riverkeeper, 2016). Previous attempts to clean it, contain it, or deal with it have been rudimentary. Cohrs introduced an alternative approach by announcing that the contaminating goo was a lucrative resource that merits the effort of collection.

By posting instructions for do-it-yourself urban prospecting devices online, Cohrs encourages others to join his prospecting efforts. Furthermore, he shares the locations of dangerous hot spots that he presents as “rich deposits.” Cohrs plans to develop web-based mapping software so amateur prospectors can use their mobile devices to post their findings in real time. He hopes to ignite a frenzy of activity, like that of the Gold Rush in 1849. The competition he encourages through these generous acts of information sharing may diminish his personal chances of striking it rich, but it offers a witty incentive for citizens to participate in soil remediation efforts. The field is currently monopolized by professionals and corporations because sophisticated tools have been needed for detection. The prospecting tool Cohrs devised scales these efforts down to the level of nineteenth-century gold prospectors, and offers them an allure comparable to discovering nuggets of gold in stream beds.

Cohrs’ ludicrous proposition coincided with skyrocketing crude oil prices. He notes, “Given the current high cost of oil, these urban spills or potential gold mines are waiting to be tapped.” He gave consumers who were feeling victimized by high oil prices an opportunity to imagine becoming producers. All it required was a sensor that “showed them the money” lying just beneath the surface. Cohrs’ scheme does not presume to offer a practical strategy. It is an art performance that succeeds by awakening consciousness, even though it does not extend to extraction of the oil once it is
discovered. This work reveals that his get-rich-quick scheme is actually a get-smart-quick strategy, promoting the conservation benefits of acquiring oil and petroleum by tapping spills and leaks instead of tapping new reserves. Furthermore, his performance alerted the public to this invisible and insidious menace that lies just beneath the surface of the earth. Thus, prospecting for an environmental blight is a parody of cultural values and individual greed; an appeal for small-scale remediation; and a plea for environmental restoration.

Video 4. Jon Cohrs’ modified metal detectors find oil in Brooklyn.

7. Merchandise

7.1. Cultural engagement
Imagine the state of the physical environment if the relationship humans have with merchandise was applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. Indeed, the imagination is not required for this example because merchandise is the dominant mode of material interactions for most people today. Contemporary lives depend, almost exclusively, upon the purchase of goods that are mass produced, packaged, marketed, and sold. This sequence accounts for provisions of food, shelter, and fuel, as well as transportation, defense, hygiene, health, and entertainment.

It was only about 200 years ago that the production of multiple identical units began to usurp the uniqueness of hand-crafted goods. The takeover was propelled by the engines of industry, the efficiencies of mass production, the availability of fossil fuels, and the continual development of new products. It was bolstered by the communication capacities of electronics and the organizational capacities of international corporations. The myriad diverse examples of “merchandise” presented to consumers tend to share three primary characteristics. They are predictable, cheap, and replaceable. The accounting of these unprecedented assets runs in two directions. One column tabulates the ease of acquiring, using, and discarding the commodities we purchase. The entries on the other column, however, offer a sobering reckoning of the toll merchandise-dependent lifestyles inflict upon ecosystem functions, social stability, and wildlife diversity. Evidence is mounting that the short-term advantages to humans that merchandise affords are endangering the long-term prospects of the planet.

7.2. Cultural disengagement
Strategies for responsible handling of merchandise that is no longer desired include gifting, bartering, refurbishing, repairing, recycling, and upcycling. Although these end-of-use scenarios are well known, they are not frequently practiced. According to the Environmental Protection Agency, Americans generated about 254 million tons of trash in 2013. We recycled or composted only 87 million tons of this material (EPA, 2016). These trash statistics account for durable goods (e.g. tires, furniture), nondurable goods (e.g. newspapers, plastic plates/cups), containers and packaging (e.g. milk cartons, plastic wrap), and other wastes (e.g. yard waste, food) (CFSS, 2015). The totals have increased by about 65% since 1980. Typically unwanted merchandise comes to rest, without
ceremony or environmental consideration, in storage bins, landfills, incinerators, gutters, and alleyways. Not infrequently, this end-phase of ownership occurs when an item is still functioning. Premature discards are indications that a consumer has indulged to upgrades, has succumbed to boredom, or been lured by the appeals of advertisers.

7.3. Eco-art engagement
Joe Scanlan created a work of art that activates the components of merchandising that occur prior to shopping/buying/using/disposing. It presents the material interactions that precede the sale of the merchandise: resourcing/processing/packaging/pricing/distributing. Scanlan satirizes the system that guides the economic distribution of industrially produced goods by using the same principles to guide the creation of works of art (Scanlan, 2012).

Scanlan’s opinion about this system is not complimentary. His searing indictments of the prevailing market system and commerce include “capitalism’s ruthless success” and “the cruddy workings of commerce” (Scanlan, 2004). Despite these denunciations, Scanlan incorporates these structures into a project titled “Pay Dirt,” coincidentally enlisting the same Gold Rush term used by Mel Chin and John Cohrs. However, he enters the market on his own terms, defying the common lament regarding the infiltration of market practices into the refined arena of fine art. Scanlan explains, “The conventional view of artistic change (the avant-garde) is: What can I say that is unique? My view … is: What can I do that is profitable?” (Scanlan, 2008).

Scanlan devoted himself to achieving this market-driven goal by developing an exceptional soil. His product was crafted, refined, and cultivated with all the attention worthy of an artistic masterpiece. Accomplishing this feat required six years of experimentation, rigorous research, and product development with agricultural chemists at bio-technic labs. He declared that his concoction exceeded previous measures of soil excellence. This was not the dubious claim in a marketing campaign. Patent No. 6,488,732 is proof of its superiority. The primary feature that made Scanlan’s dirt patent-worthy is the fact that 99.85% of its ingredients originate in postconsumer waste. The official text on the patent describes this special soil as “a material composed primarily of dirt, along with other commercial and industrial dirts, in which the materials are uniformly pulverized, skillfully measured and combined to form homogeneous particulate dirt. The composition is alternately turned and rested in a windrow or like apparatus for several months until natural aerobic thermo-
philic fermentation causes the dirt to have an overall pH level of 5.0 to 3.0 for the purpose of making the minerals latent in the dirt composition soluble.”

Scanlan does not agree that the term “saleable commodities” (Scanlan, 2004) is insulting when it is used to describe works of art. Such critiques, he maintains, are debilitating to artists, as they are to any citizen of a “capitalist democracy whose name recognition is essential to the reception and purchase of their work” (Scanlan, 2004). He goes on to explain, “Unfortunately, from 1968 until your reading of this sentence it has been very, very hard to change the subject from an irrelevant class
struggle that condemns artists to a state of purity or poverty or both, to an appreciation of agile, realist, freelance artists plying their skills in a project-based, network economy” (Scanlan, 2004).

Scanlan denies that yielding to the economic reality of surviving as an artist necessarily compromises the integrity of the work of art. Indeed, he integrates the mandates of the market into his creative contemplations. Pay Dirt, for example, fulfills the following assertion, “Many critical artists (myself included) would agree. They understand that they could never exist outside or above the market but that their only viable option is to try to shape the kind of market they want to inhabit ...” (Scanlan, 2004).

The market itself was shaped by Scanlan as if it was a sculptural medium. For example, he created two versions of dirt to maximize sales—an inexpensive version for the budget-minded and a luxury version for the wealthier clients. IKON EARTH is the popular brand. It is offered in six liter bags, each priced at $20/bag. The promotional material claims that “IKON EARTH contains optimum amounts of all the nutrients your garden and potted plants need to thrive. Nitrogen for robust growth. Potassium for water uptake. Phosphorus for bountiful fruiting and flowering. Calcium for root development. Magnesium for photosynthesis. Sulfur for promoting new growth. A high cation exchange rate for maximum absorption of nutrients. All released in the slow, organic way plants like best, without the use of synthetic polymers or nutrient-retardants” (Scanlan, 2004).

BLACK COUNTRY ROCK is the luxury soil. It costs $49. It, too, is packaged in six-liter containers. Furthermore, it is made from the same formula as IKON EARTH. Indeed, although one was affordable and the other was expensive, Scanlan announced that the two versions of his synthetic potting soils were equally “conducive to healthy plant life and therefore usable as dirt” (The Serving Library, 1973).
Scanlan explains that the expensive soil is reserved for an extremely exclusive demographic that is not merely exclusive because it is wealthy. Instead, the consumers of Black Country Rock soils are exclusive because they are “Bowie fans who garden” (Scanlan, 2004). This mockery of normal market constructions is rooted in rock music history. “Black Country Rock” is a song written in 1970 by the rock superstar, David Bowie. His lead guitarist at the time was Mick Ronson. Ronson had a previous career as the municipal gardener of the town of Hull that is located in the industrialized region in the north of England, which is known as “the black country” because of the soot that fills the air. Very few people could decipher this convoluted narrative, and even fewer would appreciate that Scanlan’s super-fertile soils was inspired by contaminated soil. Scanlan pokes fun at the pretensions of luxury goods buyers. Furthermore, his mischievous distortion of the market applies “conspicuous consumption” to dirt.

Scanlan admits that his product offers little esthetic appeal. He describes his soil as “quite inert and unspectacular to the naked eye. It is dirt, like and unlike every other kind of dirt, whether commercially or naturally formed” (Scanlan, 2004). Perhaps that is why he designed attractive three-color packaging, a tactic many manufacturers employ to attract customers. Those willing to pay twice what was needed to acquire the same soil might have a deeper respect for the “artistic” components of Scanlan’s design. Or perhaps, purchasers of the luxury version value this soil as a work of art. As such, they would honor the artist’s virtuosity in producing it and they would recognize the esthetic properties it shares with historic masterpieces: proportion (the relationship between the size, shape, and position of the soil’s particles) and harmony (the congruity among its ingredients). Or perhaps they perceive the beauty in Scanlan’s soil, not because of how it appears, but because of how it functions in terms of water-retention, pH, electrical conductivity, etc. As in other market contexts, high-pricing soil is a strategy for elevating stature.

Scanlan included manufacturing protocols in his parody of economic norms in an exhibition at the Ikon Gallery in Birmingham, England in 2003. Birmingham is located in the heart of England’s “black country,” the region that inspired Scanlan to name his luxury soil, Black Country Rock. He transformed the art gallery into a mini-processing plant that produced the special dirt. Scanlan explains the ironic twist he bestowed upon a familiar production strategy, “The idea was to collect precise categories of postconsumer data—i.e. garbage—from the shopkeepers of Birmingham, pass it through the Ikon Gallery as if the museum were a kind of refinery, and then sell it back to the people of Birmingham as an exclusive local brand. The price was £7.99 for a six-liter bag, pretty expensive for potting soil but pretty cheap for a work of art—especially one that, if properly exhibited, could produce gladiolus or Brussels sprouts.” In other words, the residents of Birmingham could buy back their own garbage at a high price!

Scanlan does not merely engage in acts of commerce; he parodies economic norms by differentiating his art commerce from non-art commerce. Indeed, the artist seems less motivated by earning economic profit than in delivering social commentary. He explains, “…Pay Dirt is unique to me and therefore useful as a kind of soapbox on which to stand and proclaim my proud participation in—but distinction within—the global economy. I’m very proud of this dirt and I enjoy making it. It is a vital, healthy product that promotes nourishment and beauty wherever it goes. So, as both a product and a philosophy, I want Pay Dirt to be infectious. I want it to get under people’s nails” (Scanlan, 2004).

8. Sensory stimuli

8.1. Cultural engagement

No imagining is necessary to consider the state of the physical environment if the relationship humans have with sensory stimuli was applied to bees, forests, reefs, streams, cell phones, shoes, cars, plastic containers, soils, and so forth. That is because the accumulated history of Western art provides the evidence. Paintings, for example, constitute a catalog of the sensory components inherent to sight. Some observable esthetic elements include shape/hue/tonality/size/space/symmetry/shine/transparency/light/pattern/geometry. Sculptors, because they engage with the physical
properties of matter, amend the painters’ list of sensory inputs by adding weight/tensile strength/flexibility/absorption/temperature/solidity/liquidity/softness/hardness/elasticity/brittleness/viscosity/durability/fragility/reactivity. Filmmakers, musicians, and performance artists add kinetic and temporal elements like tempo/sequence/duration/rhythm/meter to their stock of sensual stimuli.

The sensual stimulation from three types of material conditions is located at a distance from our bodies. We have no physical contact with the entities that generate sights, smells, and sounds. In contrast, the space between the stimulus and the body’s receptor organs collapses when we touch and taste. There was a time when these five sensory organs conducted all human interactions with the material world. They, alone, identified opportunities and warned of dangers. Before human interactions with the physical environment became mediated by mechanical and electronic devices, the body’s own apparatus was responsible for predicting the weather (changes in the atmosphere were observed and smelled); analyzing the balance of the soil (it was tasted); reading the temperature of an ill patient (the forehead was felt); knowing the time (shadows were observed); monitoring the heat in an oven (the color of the flame was noted). Survival depended upon such intimate knowledge of the physical environment. While contemporary technologies calibrate such conditions and calculate their states with great accuracy, they simultaneously obliterate the sensual opportunities humans once enjoyed by connecting to the physical world.

8.2. Cultural disengagement

In addition to stimulating eyes, hands, ears, mouth, and nose, these formal attributes activate a menu of mental states. Lightning is exhilarating. Morning dew is soothing. Screeching brakes are irritating. The objects that stimulate pleasant sensations are typically treated with respect; they are nurtured and protected so that the enjoyment can be prolonged. In contrast, sensory experiences of disgust or irritation are typically suppressed or avoided.

Differentiating between delight and disgust is often a cultural construct. An object that is rusted offers as much sensual stimulation as shiny metal, but it is not considered to be visually appealing. Likewise bruises, shattered glass, and muddy shoes may afford unexpected opportunities for sensual pleasure if they are isolated from cultural values and viewed, exclusively, as arrays of color, texture, and shape. Culturally, delight-generating objects are stylish luxuries, while manure and rotten food evoke disgust. Environmentalists promote a cultural inversion whereby the former would seem disgusting because it taxes the environment, while the latter would be appealing because it produces fertile soil.

Video 5. Laura Parker, Taste of Place Dirt Tasting, by artist activist Laura Parker 2006.

Artists can consciously arrange the elements of this visual construction kit to evoke specific moods and states of mind. Whether they are creating representational or abstract works of art, they can induce terror/euphoria/despair/and many other emotional states. An extensive number of contemporary artists are creating works that literally “ground” esthetic experiences by culling the spectrum of visual sensations that soil provides. Most produce drawings or paintings using earth pigments or
powders. Their works are enhanced by a gorgeous array of tones and textures that emerge from the inherent interactions between the organic and mineral components of soil.

Instead of using earth as an art medium, Laura Parker began her esthetic exploration of soil by presenting it as an art object. In a work entitled “Palette” (2001), she displayed 20 samples of soil in clear containers. The earth colors ranged from black to golden. Likewise, “Clod” (2000) is a sculpture that takes the form of a chunk of earth 6″ × 8″ × 12″. The dirt is not altered by the artist. It represents itself.

In 2006, Parker extended her sensual exploration of dirt beyond its visual qualities to include smell and taste. *Taste of Place* is an art installation that resembled a wine tasting, except the tastings it offered involved food, not wine. The work borrowed a practice that is common among wine connoisseurs who cultivate the ability to detect, in a wine’s taste and aroma, evidence of the grapes’ growing conditions. This correlation, known as “terroir,” often focuses on soil’s role in shaping the unique qualities of a wine. Soil has more of an effect upon plants than animals because they cannot pick themselves up and move to drier, warmer, or more protected areas. Thus, they must adapt to change internally. Adjustments to a particular combination of inert minerals, living microbes, weather, and elevation become evident in their chemistry and structure. These changes ultimately register in the esthetic qualities of the wine made from grapes grown there.

Laura Parker’s effort to extend wine connoisseurship to soil connoisseurship did not involve soil tasting. It focused on soil-smelling, which provides approximately seventy percent of what we perceive as taste (Newton’s Apple, n.d.). The process begins when Parker gathers soils from a region’s organic farms and ranches. Then she pours it into elegant stemmed wine glasses and adds water to augment the release of aromas. Parker explains to visitors who are offered a whiff, “First the scent of the soil will be stimulated by adding a small amount of water and stirring to release the earth’s aromas as if from a fresh rain. Then you will smell, identify the scents you recognize, and note their properties. You will then be served food grown in the same soil you have just smelled. See if you can taste in the food the same properties you smelled in the soil” (Edible Geography, 2009).

Besides greens, collard greens, squash, and radishes, Parker has held tasting of meat from pigs, cheese from goats, and eggs from chickens that grazed on a particular farm. All these forms of produce were then compared to the farm’s soil. In each instance, Parker reports, “it was harmony” (Parker, 2009). Parker describes the aroma of one soil as “a bit less exotic in aroma, but more varietal, with olive and mineral notes, and a bit weightier finish” (Edible Geography, 2009). It is contrasted with another farm’s soil in which an “underlying presence of cream opens up to hints of citrus and spice” (Edible Geography, 2009).
Sensory stimulation provides the vehicle by which *Taste of Place* connects landscape and food, a relationship that is being obliterated by the replacement of family farms by globalized and industrialized agriculture. These “advancements” in food production obliterate local characteristics by lac- ing land with high-octane chemical infusions that ensure uniformity of the products they market. These technologies boost productivity, but reduce the variety of flavors offered by our foods. The current resurgence of farmers markets and CSA’s is reversing the estrangement from the processes and settings of our food’s origin, and returning “terroir” to our eating pleasures.

9. Conclusion
There is nothing theoretical about the preceding discussion. Please do not file it away as abstract cultural commentary. This essay is intended to yield a tangible outcome by encouraging readers to scrutinize the environmental impact of their material behaviors. The following chart has been prepared to facilitate this process. Material archetypes are presented on one axis. Material possessions are listed on the other. Each mark discloses a behavioral and emotional relationship with something you own. A single object may elicit more than one archetype. The completed chart is your material self-portrait. It is hoped that self-interrogation will generate self-disclosures, which will lead to self-reflection, and will ultimately produce self-reform. All living species will be grateful for your selfless efforts on their behalf.

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Notes
1. New York Earth Room specs are 250 cubic yards of earth; 3,600 square feet of floor space; 22 inch depth of material; total weight of sculpture: 280,000 lbs. The New York Earth Room, 1977, is the third Earth Room sculpture executed by the artist, the first being in Munich, Germany in 1968. The second was installed at the Hessisches Landesmuseum in Darmstadt, Germany in 1974. The first two works no longer exist.
2. The Urban Prospectors, has been presented at Ars Electronica, Linz Austria, September 2010; Amplified, Swedish Embassy—Berlin DE, January 2010; RIXC, Riga, Latvia, October 2009; Futuresonic Festival Manchester, UK, May, 2009.
3. TPH means the detectors operate in air, water, and soil. They can detect any semi-volatile hydrocarbons and related compounds.
4. Scanlan collected precise categories of postconsumer garbage from shopkeepers of Birmingham, England. They deposited in the Ikon Gallery where it was "refined" into a fertile medium.

5. 8,268 farmers' markets were operating in 2014. See: http://www.npr.org/sections/thats-mer-look/2015/02/05/364058943/are-farmer-market-sales-peaking-that-might-be-good-for-farmers.


References


Bibliography

This extensive bibliography explores "neo materialism" and represents the intellectual context within which the author's analysis belongs.


