11

Plastic as Shadow: The Toxicity of Objects in the Anthropocene

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Nothing I have witnessed, from lava to crustacean, assailed me liked the caked debris haunting that small plastic soap hammock in the smaller of the bathrooms. Nausea is not a sufficient word.

What would an ocean be without a monster lurking in the dark? It would be like sleep without dreams (Werner Herzog).

The cave is enormous, an upward sloping bowl-shaped amphitheatre. Once passing the rocky water entrance, one enters a boulder field that stretches back one hundred and fifty feet or more. The first large object one sees is a completely rusted fifty-gallon drum forty feet from the water's edge. But it's the fringe of visible objects at the far back of the cave that are of concern, more secretive in the further reaches of the far cave wall. These objects huddle together, hiding in plain view: the thousands of pieces of plastic, comprised of Styrofoam chunks and balls shaped by the sea, water bottles, shoes, five gallon multi-coloured chemical containers, a second fifty-gallon drum and other oddities.

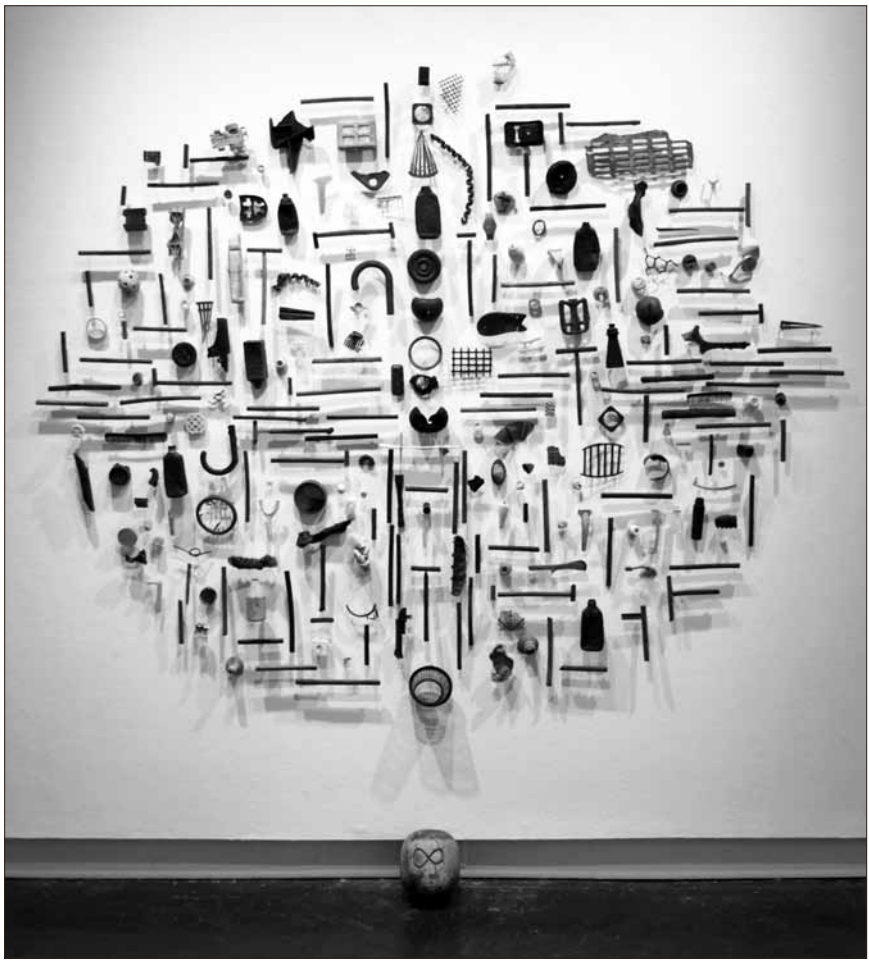
Just a handful of steps in from the waves crashing on the rocks, you notice that the strewn boulders and rocks are covered with a thick layer of ochre dust, in some places up to six inches deep. This dust is dry to the bone and extremely fine; its presence is mysterious when you consider that the furious storms of winter had waves large and powerful enough to send fifty-gallon drums hundreds of feet uphill to the back of the cave. As you scramble over the rocks, you notice that not all things are rocks at all, the masking effect of the uniform dust layer hides myriad other plastic objects and Styrofoam shapes strewn across the entire floor of the cave. As soon as you dislodge a hidden object, the dust falls away to reveal gleaming white Styrofoam or the garish party colours of plastic detritus.

This cave opens on the southern fringe of the island of Kefalonia, largest of the Ionian isles in Greece, the current site of my project called *Drifters.* In 2006, after discovering the mountainous piles of plastic debris the ocean was depositing on the remote shores of Hawai'i, I began collecting this plastic as my primary material and conceived of the *Drifters Project*. I am interested in the collision between the natural forces that change and transform the traces of human culture, and this clash of titans is uniquely being enacted through ocean-borne plastic. Since my initial discovery, I have made scores of interventions, cleaning beaches and making collections from all over the world, removing thousands of pounds of material from the natural environment and re-situating it in a fresh cultural context for examination. My collection missions initially were done solo, as part of my process, but now I am working with and training community groups such as sea turtle rescue volunteers and student recycling groups as well.[1]

Ocean plastic is a material that can unleash unpredictable dynamics. I am interested in it in particular, as opposed to all garbage in general, because of what it reveals about us as a global economy and what it reveals about the ocean as a type of cultural space, as well as a giant dynamic engine of life and change. As a product of human consumer culture that exhibits visibly the attempts of nature to reabsorb and regurgitate this invader, ocean plastic has profound stories to tell.

The *Drifters Project* centralizes the artist as culture worker/activist/researcher and employs forensics as an aesthetic mode of inquiry. In approaching the sites as a forensic scientist, I am identifying the evidence of this crime against nature, the plastic in all its pernicious ubiquity. Before touching or moving anything, I take photographs of sites as I find them, examining and documenting the deposition as it lay, seemingly already installed as if by an artist. I have a system of identifying the date and location of the collection as part of the study of its transport. Then begins the collecting. Sometimes I make constructions and installations on site if I can, and other times I physically carry the stuff away and recombine it in larger works later, preferring to keep it in a transitive form as installation. All of the work can be dismantled and reconfigured but nearly impossibly recycled. The objects are presented as specimens on steel pins recombined into large installations or constructions (Figure 11.1), and as highly detailed photographic portraits.

Plastic objects are the cultural archaeology of our time. They are spun and exchanged on the global lubrication of currency and then transported on the conveyor belt of the ocean. These objects form a portrait of global late-capitalist consumer society, mirroring our desires, wishes, hubris and ingenuity. These are objects with unintended consequences that become transformed as they leave the quotidian world at the end of their useful life and collide with nature to be mutated, transported and regurgitated



11.1 Pam Longobardi, "Ghosts of Consumption/Archaeology of Culture (for Piet M.)" (2011), found ocean plastic, steel pins, 280 × 190 × 13 cm (110 × 75 × 5 in.). Author's photograph.

out of the shifting oceans. The plastic elements initially seem attractive and innocuous, like toys, some with an eerie familiarity and some totally alien. At first, the plastic seems innocent and fun, but it is not. It is dangerous.

We are remaking the world in plastic, in our own image, a toxic legacy, this surrogate, this imposter. The physical juxtaposition of objects separated by both time and geographic origin are found lying together in sand or piled on lava rock, providing clues to the missives of the sea. Objects produced and discarded from a world apart spatially I discover lying next to each other, imprinted texts identifying their origin: a newish Korean lighter

bearing a wildly popular Japanese anime character advertising a sex club, next to a 1950s gas mask container cover bearing safety instructions written in Russian, alongside an Asian McDonald's giveaway gimmick of red chicken nugget tongs shaped like fowl's feet (Plate 11). In poetic association, a plastic crate fragment broken into a Christian cross near another like the Star of David, are found as neighbours in situ. The two most prevalent words in English on objects from South Point signify the beverage of choice of the immense Asian fishing fleet plying the Pacific: plastic jars lids emblazoned Nestlé containing the instant coffee beverage Nescafé and the British coffee 'whitener' called *Creap*, for "creamy powder."[2] Do two small plastic toys found within inches of one another, an army man and a camel, both now amputees made limbless by the abrasive action of a prolonged Hawaiian lava beach landing, represent two pieces from the "Iraq War Toy Set" or the intermingling of one child's war toy with another's zoo? The irony is that the true nature of this war as a battle over the declining last bits of earthly oil is now physically captured within the toy objects themselves.

The ocean is a vast arena comprised of all life forms therein propelled by the physical dynamics of oceanic hydrology and current flow. It is an engine driving the circulatory water cycle of the planet and is communicating with us through the materials of our own making. As an artist, I am reading the cyphers of a violent last-ditch attempt by a natural body to communicate its declining state of being. It is important to me to bear witness to the changes we are creating to the earth's liquid circulatory system, the chemical twin to our own blood (Barron 2008) with a function no less vital to life (Thompson 2006, 20–21). Blood testing in humans identifies bad habits and illness of the host body and in that way communicates its state of being. A 'blood test' of the world ocean is revealing its ill-health through *our* bad habits: rising temperature and acidity, phosphate-induced algal blooms and the sponge-like accreting action of deformed material plastic that floats the seas of every curve of the planet, concentrating on its surface persistent organic pollutants (US Environmental Protection Agency 2011), contaminants that are changing the very chemistry of the originating source of all life on earth.

> Although natural systems are resilient when subjected to one-time insults, chronic stress causes progressive damage because the constant pressure of even low-grade stress inhibits or frustrates the forces that promote homeostatic recovery. Just as the human body can tolerate the occasional overindulgence without serious harm but succumbs to the accumulated effect of bad habits, so too the steady drip of man-made chemicals into the environment causes ecosystems to sicken and die (Ophuls 2011, 33).

Because it is our blood as well: the ocean is in our blood, and the ocean's blood is on our hands. Our delight in our own cleverness seemingly masks our ability to see the true nature of the oncoming disaster, as oestrogen-

mimic endocrine disruption from plastic chemical leaching has been linked to everything from breast and prostate cancer and early-onset puberty to polycystic ovary syndrome in human bodies (Groopman 2010).

> Plastic debris can be a source of toxic chemicals: Some plastics will release toxic chemicals that have been added to enhance the performance of the plastic. Plastic debris may also be a sink for toxic chemicals: toxic chemicals from the environment sorb to the debris, only to be released later. In either case, wildlife that ingest plastic are at increased risk for toxic effects and may accumulate toxic chemicals in their bodies to the extent that the pollutants desorb or leach from the plastic. If toxic chemicals accumulate in marine species, they may be transferred up the food chain and into human diets. It is this aspect of toxic chemicals and plastic debris that is especially concerning (Engler 2012, 12304–12307).

Back in the cave, you spot a real treasure in front of your feet: a large, perfectly preserved bivalve mollusk fossil. It's completely clean, no dust layer at all. Its presence is as mysterious as the thick dust coating the rest of the floor. Looking up to the ceiling of the cave forty-five feet overhead, you discover all the answers: the entire cave is a comprised of a sedimentary layer of fossil bed that was in some distant past, the bottom of the very sea now lashing at the cave's mouth. The ceiling and walls are studded with fossil shells that once lived there, imbedded in Upper Cretaceous era limestone. And this ceiling is crumbling bit-by-bit, second by second. Mostly what rains down is the fine dust of the decomposing sediment layer, but every now and then, a fossil gets dislodged to land clean and fresh on the surrounding dusty floor. These fossils seem so perfectly symbolic of a mermaid's mirror and the cave a perfect hiding place for the land-bound moments of a siren's life, that we christen it The Mermaid Cave.

The collision of these two drastically distinct timeframes is shocking: one, the seafloor deposition, fossilization, tectonic lifting and decomposition is slow, ancient, continuous and natural; while the other, the thoughtless human accretion of our transformation of ancient sunlight and life-forms that is petroleum into a toxic discard that the sea is now making every effort to disgorge itself of is so rampant, rapid, and unnatural as to be a threat to our very existence. As I realize the stratigraphic erosion process unfolding overhead, with its real possibility of ceiling collapse or rockslide, a heightened sense of danger accompanies the already strong sense of urgency that accompanies me every time I perform a cleaning action: we are running out of time.

Anthropocene

That we are in extreme times is hallmarked by the fact that a recent judgment by the International Commission on Stratigraphy, a worldwide committee

that decides the structure of the Geologic Time Scale, has set 2016 as a goal date for the addition of an entirely new epoch, the Anthropocene.

The Anthropocene era marks the intensification of human-borne geo-engineering, from the trapping of nitrogen through advanced industrial farming techniques of fertilization for mass-scale food production (Zalasiewicz et al. 2010) to the present day externalization of the earth's oily core. Oil drilling goes further and deeper now in more extreme environments to extract the last drops of fossil sunlight that is the lubricant upon which the vast tectonic plates ride. This oil of course has fuelled the massive industrialization and planet-wide transport of the subsequent production, but it also is the raw ingredient of every component of the plastic army now laying siege. The displaced plastic object exists in a nether world, functionless, unwanted and in many ways, invisible, but is in actuality an immense dispersed storehouse of future oil (Kelland 2008). What was speculative in 2008 is reality now: the reported 200 million tonnes of plastic in British landfills is valued at 60 billion pounds ($111 billion US) (Vijayaraghavan 2011).

Anthropocene theorists propose the possibility of new geologic layers that future archaeologists will attribute to the geologic epoch dominated by humans. "Cities will make particularly distinctive fossils. A city on a fast-sinking river delta … could spend millions of years buried and still, when eventually uncovered, reveal through its crushed structures and weird mixtures of materials that it is unlike anything else in the geological record" ("A Man-Made World" 2011). The glass, steel, concrete and mortar of modern cities will eventually, however, disappear as all things made from natural materials gradually decompose into the earth from whence they came. Yet the plastic that insinuates itself pervasively into all of our surroundings will never disappear: it will be all that will remain in a future fossil layer. As of its invention in the early 1900s and proliferation into the myriad forms in which it now exists, early researchers E.G. Couzens and V.E Yarsley wrote in 1941 of the ushering in of 'The Plastics Age' (1956: 289). It is not of this earth in the same way as other materials are, it's a completely new substance, with this chilling truth: *every piece of plastic ever made on earth is still on earth.*

The reductivist thinking of many of the new Anthropocene researchers further problematizes this move. While it is comfortable and convenient to imagine humanity's great powers over nature, this is simply a more aggrandized version of the status quo mentality of human dominance over the natural world. When we reduce nature to something we can control, none of the alarming changes we are all witness to now seem that alarming. As Dr. Erie Ellis says, "In the future, we have to think about nature as something we sustain, its our job to sustain it … Think of nature as something you have to nurture yourself, like your garden" ("A Man-Made World" 2011). But our

self-important capabilities become pale and uninteresting in comparison to the navigation skills of leatherback turtles, the mating dance of a New Guinea lyrebird, or the sonic capabilities of the sperm whale, emitter of the loudest sound on earth.

If we are not just the stewards of nature but also indeed the deciders of the fate of all that is externalized as the non-human world, we can no longer see ourselves as separate and above that 'other.' Are we able to accept that responsibility now that we are a controlling force able to transform weather,[3] shift magnetic poles and destroy or create entire continental masses such as the frozen Arctic or the islands of the World, Dubai's sinking colony of islands? ("The End of the World" 2011). If humans are indeed the externalized ego of nature, perhaps the materialized *dream of nature*, or as Terrence McKenna put it "Human history is a Gaian dream"—can we be both wilful child and protective parent? Do we know enough? This incites the most extreme of hubristic possibilities, that we somehow know better than a system so vast and complex and ancient as to be, for the most part, incomprehensible to humans. The little we have figured out only reveals in reflection the vastness of what we don't know. "Future historians will probably regard our era as an age of collective folly—a time when large numbers of highly intelligent and influential people fervently believed … that society and polity should also be ruled by the same invisible hand that governs a market economy." (Ophuls 2011, 43).

Plastic, more so than any other substance, absorbs and reflects the pure notion of Karl Marx's "commodity fetishism." Before plastic objects are lost at sea, they take on unprecedented supremacy in our daily lives and function as the escaped shadows of Plato's cave: " … today we live in a world of phantoms we take for reality, that by a twist of fate the product of our labour escapes our control and comes to dominate us." (Taussig 2012, 5–6). Toys, brilliantly coloured accessories, tools and devices with surfaces smooth, pebbled or striated to mimic any known substance on earth, these plastic forms are worshipped and envied by nearly all humans on every part of the globe as superior and more desirable than all others. The commodity fetishism of plastic goes dark while the object is in transitional status as trash, but this property is only in latency awaiting re-emergence.

In my project, the process of reabsorption of plastic into commodity fetishism begins at the collection sites. I often find, keep and reuse objects in their original use-value function: impromptu collection can happen spontaneously on any ocean beach because after a few moments of collecting when my hands and pockets are full, I inevitably find a plastic bag or container to transport the material. I have also found usable goggles, glasses, snorkels, hats and other clothing, including the prized Italian fitness tights now spectacularly faded by years under the Ionian Sea. These objects transcend their status as lost or rejected by returning to the social world in

the same form they left it. But most other objects of my collection actually follow a more elaborate and circuitous route of transcending their original status as commodity and become pure fetish, now marked by the ocean's colonization. Marx writes: "To what extent some economists are misled by the Fetishism inherent in commodities, or by the objective appearance of the social characteristics of labour, is shown … by the dull and tedious quarrel over the part played by Nature in the formation of exchange value. Since exchange value is a definite social manner of expressing the amount of labour bestowed upon an object, Nature has no more to do with it, than it has in fixing the course of exchange" (Marx 1915, 93–94). Ocean plastic is a new type of commodity, one that has illuminated nature's role in the creation of capital. A barnacle-encrusted plastic Kanzawa Samurai garden knife handle, a scratch-patina surfaced hair pick of deep jade green, a nearly transparent Great White shark Mylar birthday balloon have all now become supreme fetish commodities as they sit in the social space of high culture. This transformation process from consumer commodity fetish (useful or desirable plastic object) to status-less lost object (ocean plastic) to recovered, re-fetishized commodity *and* portent-wielding toxic symbol (art capital) qualifies this material as a new type of commodity. It is a new supreme commodity because it expresses the 'amount of labour' that *nature* bestows, wrought by ocean forces, and carries readable knowledge of nature's powers of material production, transport and transformation, qualities of beautification; but also, the message of its fragility and limitations.

"At the same time this permeation of the 'natural world' by remnants of the manmade has something comforting about it: these familiar objects were lost but are now found; they colonize the hostile habitat and reflect the dominance of the human ego and its drive toward domestication" (Susik 2012). If plastic functions as a dark material shadow of humanity's repressed fears of horror vacuii and ego dissolution, it surely plays the role of surrogate for human reach exemplified by our endless quest for colonization and world-creation. We have made the most versatile material substitute imaginable that can go anywhere and do or be anything. With the ocean as our accomplice, plastic is now everywhere on earth in a form more pervasive and permanent then our ego fulfilment could have ever dreamed. Yet more pointedly than seeing plastic as a representation of our ego, we have created the near perfect physical form of the *id*. The seeming innocence of desire and appetite has become supersized, overblown so as to detach itself from all connection to reality, and usher the subsequent repression associated with our denial of the ramifications of continued overproduction of the solid pre-waste material.

Michael Taussig writes of Walter Benjamin's discussion of his field notebooks in "Unpacking My Library" as 'genuine' collections, and as such, as a *magic encyclopaedia* with attendant occult properties and divinatory

tendencies. "Because the items in a collection gravitate into one's hands by chance, a collection can be used as an instrument of divination, seeing that chance is the flip side of fate" (Taussig 2012, 5). I see the plastic of my collections also as a magic encyclopaedia. Going to extreme lengths and physical exertion to scour far-flung locations, deep inside of caves within sea caves in Greece, along remote shorelines of Alaska, Hawaii, Costa Rica or Alabama, and free diving subsurface seas from Italy to Taiwan, I act as collector, but also divinator, culling out the magic encyclopaedia that may tell us our fate. These lost objects are not only themselves physically lost, but also have lost status, function, and owners. This is a mortal wound to the status of plastic objects, a transmogrification that turns them into phantom forms from the After World, prophetic objects that call out to re-inhabit the soul of world and show us our fate.

The latent futility of my collection actions is not lost on me. However, my interception of the flow of plastic as it escapes our hands and worms itself into all known spaces of the physical world via the ocean is an activity not unlike wilfully turning to face the monster in a dream, to examine its features in close detail. It is an attempt to re-gather what has been lost, to understand the position of the human within the encompassing world, and to see the future in the omnipresent recent past. By staring into the face of plastic, we see that it can be both supreme commodity fetish *and* siren of grave consequences. It can be both waste material *and* future fossil storehouse of the raw material of oil. Because of its chameleon-like *plasticity*, it can be all of this and more. It is plastic.

It seems the cave itself will be aiding and abetting the future plastic fossil layer. The great mouth of the cave is the gaping maw of the alimentary canal of the earth, into which the furious sea now regurgitates its plastic load. As the ancient dusty soil of the ceiling falls, it covers the jettisoned jetsam for re-exhumation into the bowels of the earth. The cave is swallowing our plastic excrement. "It seems that nature is fundamentally Platonic: what we experience, both with our perceptual apparatus and with our scientific instruments, is but a shadow cast on the wall by a deeper level of reality—a reality that transcends space and time as commonly understood." (Ophuls, 2011, 47). Plastic objects are also shadows, mimics masquerading as beneficent objects while hiding their toxic realities. They are a manifestation of dark matter that has returned to haunt us, a ghost of its former useful self, but with new unfolding oracular powers, made all the more poetic by its lurking presence inside of this Grecian cave. The sea-sculpted Styrofoam became the most ubiquitous element of the Mermaid's cave contents. There were over thirteen hundred pieces in total that we collected. But as diligently as we worked before the waters rose to threaten our escape, there were many more pieces that remained hidden and already partially subsumed, awaiting transformation into future fossils of the Anthropocene (Figure 11.2).

11.2 "Giant Sea Cave Cleaning" (2012), film still. Drifters Project Kefalonia, Phase 2. Directed by Pam Longobardi, cinematography by Sergio Kotsovoulos, edited by Nickos Myrtou, sound and treatments by Craig Dongoski.

Notes

1. My original and ongoing site is Hawai'i, but to date I have worked directly through local sponsorship, small grant support and personal expenditure on beaches and with communities all over the world.
2. In conversation of December 29, 2008 with Captain Charles Moore, discoverer of the North Pacific Garbage Patch and author of *Plastic Ocean*, Avery Books (Penguin USA), 2011.
3. I personally witnessed the cloud seeding activities by the Chinese government for the 2008 Olympic Games. "Rain Out: China Aims to Control Olympics weather," *USA Today* updated 2/29/2008, http://www.usatoday.com/weather/research/2008-02-29-china-weather_N.htm.

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