

Table to Farm: Composting NYC Style

“Like others, we consider rotting and rancid organic matter impure-though the line between rancid and not, edible and spoiled, pure and impure is a matter for cultural and personal debate.”ⁱ – Susan Strasser

On April 21st, 2011, mayor Bloomberg’s office, with PlaNYC, announced it would reinstate leaf composting. Additionally, as of March 5, 2011, GrowNYC launched a pilot composting program, adding Saturday residential food waste collection at seven of their fifty-two city wide Green Markets. An urban green phenomenon is underway, and New York City has found itself at the heart of this growing environmentally conscious movement. From community gardens to farmers markets, the age-old agrarian process of composting has caught the

attention of many urbanites in recent years. New Yorkers are “donating” yesterday’s salad trimmings, egg shells, and carrot tops that will ultimately digest into mountains of usable farm and garden fertilizer, or “black gold,” to some. Though the landscape of New York City is cloaked in concrete, New Yorkers from all five boroughs are composting.

Yet, the ways of composting in New York City is untraditional by modern composting standards. While there are New Yorker’s who physically turn food scraps to soil in their yards (mostly in the outer boroughs), and even fewer in their apartment (with plastic worm bins), by and large the “composters” of food waste in New York City drop off their food scraps at community collection sites. From there, scraps are hauled

away, in city and out of state, to be composted into soil. Although New York City composting is more a form of food waste recycling, than it is traditional composting, it, nevertheless, remains connected to a greater ecological whole, an ecosystem service of sorts, that expresses an inherent link between human and her biological environment.

In *A Sociology of the Unmarked: Redirecting Our Focus*, Wayne Brekhus states that “Markedness occurs along several dimensions of social life..[it] varies from one context to the next...reversals of markedness occur across cultures, across time and space, and even within a given culture.”ⁱⁱ

Historically, food waste composting or recycling, in early urban Western societies, went largely unmarked in every day lives as an ordinary, common, and civil act. But post-industrial society would soon re-mark food waste and categorized it as a visible and problematic issue often

affiliated with heavily populating cities. Once classified as trash in a contemporary era, food waste would become re-marked again as mundane, and conveniently disappear into the background of sanitized society. Now trending in the green-living circles of New York City today, urban food waste collection has re-emerged, and is being publicly re-marked again with new social acceptance.ⁱⁱⁱ

Adopting archival and ethnographic research methods, this paper examines the current re-marking of food-waste recycling, or urban composting, in a contemporary citified environment.

THE SCIENCE AND CULTURE OF COMPOSTING

Composting is the biological reduction of organic waste to humus, the ecological balance of mycorrhizae and bacteria that make up the health of soil.^{iv} Composting is a combination of properly proportioned air, moisture, warmth, energy food (nitrogen) and protein food (carbon).^v

Turning food scraps to soil requires a mixing, or layering, of carbon based food scraps like egg shells, vegetables, fruits, and coffee grounds, with nitrogen based dry materials like fallen leaves, saw dust, and unbleached paper. In urban composting, the process is largely assisted by the Red Wiggler earthworm, or *Eisenia fetida*, that is known to digest its body weight in food scraps into compost castings every twenty-four hours, assisting the decomposition of the soil. When fed air (the oxygen) and turned frequently, this aerobic process will yield a healthy and rich soil amendment. The process can take from three months to a year.^{vi}

The history of compost dates back to stories in the Jewish Talmud, Roman antiquity, and more recently, nineteenth century New York City.^{vii} In *The Rodale book of Composting*, Deborah L. Martina and Grace Gershuny state, “For at least 2000 years, people depended on compost to

sustain croplands to feed themselves. It wasn’t until the nineteenth century, in fact, that we began to substitute chemical fertilizer in the new ‘scientific’ method of Farming.”^{viii}

In the early twentieth century, Sir Albert Howard, regarded as the founder of modern organic farming, advocated for composting as a means to restore the life of soil facing modern environmental adversities like erosion, overproduction, and the introduction of new chemicals for agriculture.^{ix} He claimed that “such losses can be repaired only by maintaining soil fertility by manufacturing humus from vegetable and animal wastes through the composting process.”^x By composting, he claimed, there is no waste; and that the cycle of decomposition is a universal closed loop process inherent to an environmental balance.^{xi}

HISTORY of NEW YORK CITY FOOD WASTE MANAGEMENT

In pre-industrial urban society, like that of early New York City before the 1800's, waste and its management looked remarkably different than it does today. People had little trash to dispose of in comparison to the twenty-first century complexities of trash. Therefore, waste was minimal. Food scraps, biological waste, paper, and discarded functional household items (in disrepair) composed much of the waste stream.

Throughout the 1800's in New York City, poor swill children, as they were known, would go from house to house and collect food rubbish, turn it into fertilizer, and sell it for a profit.^{xii} Such public food waste processing is rooted in the history of New York City. Before swill children and composting worms, there were pigs. Historically, food waste had been tossed out of household windows and onto to the street, and fed to roaming animals like goats, hogs, and wild

dogs.^{xiii} It's estimated that tens of thousands of swine roamed the streets up to the mid nineteenth century.^{xiv} The garbage disposers would act, in part, as the cities waste management, feeding on discarded residential and market food scraps. Fattened up on food waste, they also supplied protein to the urban poor.^{xv} Additionally, their dung (along with horse manure) would commonly be composted on regional farms in close proximity. Up through this time, an environmental connection remained intact amongst an urbanizing society on the brink of industrialization.

In the 1880's, an era of cleanliness and hygiene, known as sanitation reform, began to take precedence in urban civil society in the U.S. This post-Industrial Revolution period made water, sewer, and street reform a priority.^{xvi} Cities were populating exponentially, and so was its waste. As social class distinctions began to evolve, a sense of NIMBYism (Not In My Backyard)

was on the rise against the filth of the city.^{xvii} Progressive reformers, like municipal housekeepers and sanitary activists, like Jane Addams, helped pave the way towards city run garbage collection; and in 1878, New York City instated one garbage contract for the entire city.^{xviii} With this advent the mundane and once publically accepted act of sorting and ridding food waste to animals was no longer acceptable. By 1870, roaming four-legged digesters would be abolished from city streets.^{xix} With the addition of water and waste treatment, New York City was a cleaner civil society. But as Ted Steinberg makes clear in *Down to Earth: Nature's Role in American History*, "As important as sanitary reforms were...they came at a cost. Life in the 'organic city'...was dirty, but it also had a certain social and environmental logic."^{xx}

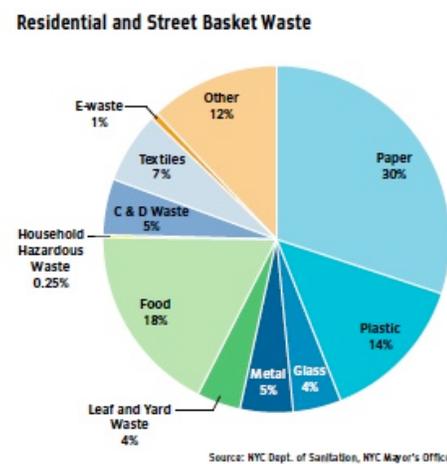
"Industrialization broke the cycle," writes Susan Strasser, speaking indirectly to this logic in

Waste and Want: A Social History of Trash. She states, "Leftovers and scraps that they [urban dwellers] once may have valued became trash instead.... Their meanings had changed; now they were old-fashioned ways, fading as consumer culture developed."^{xxi} Modern packaging for goods did not begin until the early twentieth century, usually in the form of paper for bulk items.^{xxii} In an urbanizing post industrial era, the growing production of consumption of goods made the scale of waste issues much greater than experienced by previous cultures and eras.^{xxiii} Steinberg points out that between 1903 and 1907 waste went up by a third in most American cities.^{xxiv} In this era, modernizing urban society championed lower mortality rates and greater quality and standards of living. But as a bi-product, the ecological connection, inherent to a pre-industrialized city society, would slowly diminish. Urban society disengaged from the

common act of recycling and personally managing food waste. In time, such waste was combined and discarded with new forms of trash, fabricated in a manufacturing age of expanding consumption. In places like New York City, the utility of food waste as a resource would soon be rendered irrelevant, marked as undesirable, and even useless. By the turn of the century, as city populations grew, the common, mundane, and sustainable methods of food waste disposal practically disappeared. The inherent value of food waste exited the urban mindset and diminished into the category of contemporary trash-disgusting yet invisible, in a newly evolved throw away culture. Although waste management harkened a much needed control of the growing and overwhelming urban refuse, food scraps would soon be reduced to a rotting problem in twentieth century landfills, a wasted renewable resource associated with

environmental harm in the decades to come.^{xxv}

CONTEMPORARY URBAN COMPOSTING IN NEW YORK CITY



Fo

od waste =18%^{xxvi}

Each day, New York produces over thirty-three million pounds of garbage, four pounds per New Yorker in a city of over eight million. Of that waste stream, eighteen percent is compostable food scraps.^{xxvii} Every year, restaurants, grocery stores, hospitals, cultural and educational institutions, and various recreation arenas discard approximately 600,000 tons of compostable food.^{xxviii} But,

the evolution of redirecting this food waste to landfill has manifested serious present day consequences. According to the EPA, digesting and composting New York City's annual 7 million tons of food waste and other organic matter, as opposed to sending it to landfill, would avoid 1.8 million tons of greenhouse gas emissions.^{xxix}

There are many moving parts to the unofficial food scrap collection in present day New York City. For the past eighteen years, in conjunction with the New York City Department of Sanitation, the city government has operated the NYC Compost Project, which offers outreach and education around composting (from leafs to food) for city residents, community gardens, non-profit organizations, and businesses in each borough.^{xxx} While there have been small pilot programs testing the efficacy of city run food waste collection, New York City, has never officially organized or instated collection and redirection of food waste.^{xxxi} Around the city, however,

community and city gardens and limited farmers markets now offer collection for residents. City government has long let community-based programs take the lead, while supporting voluntary residential food waste composting in all five boroughs. In these locations, businesses are excluded and must pay a private hauler to pick up their solid organic waste.

LES ECOLOGY

In New York City today, the most successful compost initiative rest on the achievements of German born, Christina Datz-Romero, who started New York City's voluntary community food waste collection in 1990. When she came to the city from Germany in the eighties, she claims that she could hardly believe how much New Yorker's wasted, and that the waste wasn't being recycled or composted. In response, she and her husband founded the Lower East Side Ecology Center in the East

Village, where she now works fulltime as executive director. LES Ecology is staffed by five full time, and four part-time employees, and is partly funded by the NYC Compost Project. In return, LES Ecology performs environmental educational out-reach to community gardens as mentioned above.

Three days a week, LES Ecology manages the urban compost collection of waste at the Union Square Green Market for city residents. Each Monday, Wednesday and Friday, rain or shine, Christina Datz-Romero arrives behind the wheel of a mac-truck and unloads twelve forty-four gallon empty barrels. They will all fill up with food scraps by days end. Bread bits, vegetables trimmings, coffee grounds, fruit peels, and other edible bi-products, from the diversity of New York City's residential kitchens, will be relinquished into the barrels-precious carbon that will soon turn to soil.

In exchange for managing the leaf composting at the East River Park, the city has granted LES Ecology on-cite composting space near the East River on the Lower East Side of Manhattan. However, for the past few years LES Ecology has been operating out of a temporary processing center at the Coleman Square Park, under the Manhattan Bridge.^{xxxii} At nearly ten thousand square feet, the site remains the only large volume plant in the five boroughs. Piles of sawdust and composted soil are organized around ten plastic three cubic feet by three cubic feet bins. These are the in-vessel containers where food scraps from Union Square and the LES Ecology community garden, in combination with city park trimmings, are tipped into and rotated until it is emptied into piles on the asphalt and cured into soil for a remaining three months. For now, LES Ecology can only process two thirds of their collections. The remaining third is

trucked out to Action Carting in Queens. Ultimately, the soil will be sold back to urban farmers and gardeners to support LES Ecology, which, according to Datz-Romero, is presently in great demand. LES Ecology claims to keep hundreds of tons of organic material out of the waste stream, while introducing New Yorkers to the benefits of urban composting.^{xxxiii}

On a typical day, before LES Ecology will set up their collection stand in the Union Square Green Market, composters will have already begun their drop-offs. One by one, New York's committed garbage sorters will march up to the stack with their food scraps. As observed, urban composters come in many forms- from a man in a pin-striped suit and a woman in four inch heels, to an elderly man with bright silver locks on a bike with a basket. Some are first time composters, while others, like Rachel Ingersol, have been urban composting for five years. "I'm just

conscious about my waste and the city's disposal habits. I feel like this is my own part," said Ingersoll, on her way to work at the Permanent Mission of Ireland to the United Nations.^{xxxiv} She explained that she had come from Brooklyn by subway, with her bag of food scraps, to make a drop at the LES Ecology.

"It makes me feel better," said Sara Stroman, a 26-year-old nanny and Manhattanite on her way to shop at the market. "I keep a bag in my freezer and once it's full, I bring it here. I have two roommates and they both don't compost, so sometimes I go through the trash to get the stuff I can put in with my compost."^{xxxv} With no garden or green space to claim their own, composting New Yorker's sacrifice freezer and counter space, fend off vermin, and donate their leftovers to be turned to soil elsewhere.

Molly Heim, another LES Ecology composter, also sorts her waste with an environmental

reasoning. She is a newer composter who drops off her food waste before she shops at the farmers market. Heim said, “I have been trying to examine a lot of areas in my life, and I want to live a pretty simple life and I want my footprint to be pretty small.”^{xxxvi}

In this sense, as aforementioned, New York City food waste composting is unique. It’s not technically composting but rather food-waste recycling, not unlike like plastic and battery recycling. Where traditional composters have gardens, yards, or farms to absorb the benefits, most New Yorkers’ do not have such outdoor space as a primary motivation for composting.^{xxxvii} Where traditional composter are commonly inspired by the direct usage of a personally crafted soil amendment, it seems urban composters are moved by a personal responsibility and concern over their environmental impact.

Christin Datz-Romero has seen the evolution of the composter in New

York City. When asked about the diverse look of the modern composter, Christin Datz-Romero says, “It’s hilarious really. But it’s a good thing, because composting is shedding its image of being some hippy dippy stuff. It’s really nice to see more people embracing it.” She goes onto state that ABC television morning show, “Live with Regis and Kelly,” recently did a segment on composting, “So clearly, composting is mainstream. It has permeated our cultural and social landscape.”^{xxxviii} Once heavily marked as fringe in a post 1960’s era of conservationism, it appears that food waste is reemerging with new found acceptance in today’s post-modern culture of green living.

As for the growing popularity of urban composting, Datz-Romero commented, “The turning point really came in 2006, around the time of the (movie) *Inconvenient Truth*. We basically quadrupled the amount of people that came and dropped off compost. I think people just got so

overwhelmed by all this bad news that they really tried to find small ways to incorporate into their daily lives to be a part of the solution and not part of the problem.” She adds, “And our program is convenient. You separate it in your house, you drop it off, and you run.”^{xxxix} Datz-Romero’s insight speaks volumes to the stereotypical image of the iconic fast paced New Yorker, and it appears such urbanites aren’t too busy to care for environmental issues. People in city settings seem to be consciously re-evaluating their relationship with their waste stream.

Grow NYC

Another emerging player in New York’s urban compost phenomenon is GrowNYC, operator of the Green Markets (otherwise know as farmers markets) throughout the five boroughs. GrowNYC recently designed a pilot composting program with the help of a 2011 grant from City Council Speaker Christine C.

Quinn, and in partnership with New York City Council and Action Carting Environmental Services. GrowNYC took over the food-waste drop-off sites at seven different farmers markets throughout the city, excluding the Union Square space that LES Ecology manages. From March 5, 2011 - June 25, 2011, the Saturday only drop-off program took place at the Green Markets of Inwood, Abingdon Square, Tribeca, Ft. Greene, Brooklyn Borough Hall, Grand Army Plaza, and McCarren Park. From these markets, Action Carting and Environmental Services collected and hauled thousands of tons of food waste out of the city to be composted in Wilmington, Delaware. According Christine Johnson, a GrowNYC compost manager at four of the seven Green Markets, although the compost will not make its way back to the city in the form of soil (unlike LES ecology), the theory is that it’s better to send it away to be composted than to the landfill.

The GrowNYC pilot site at the Tribeca Green Market greatly reflects its neighborhood- chic, yuppie, and high-rent. There, Jenny Hirsch, a thirty-something woman dressed in her Saturday yoga apparel composted for her first time. She arrived with a small paper towel and a handful of waste. “It’s just not something you normally do in the city,” she said. Jenny saw the GrowNYC booth for the first time that morning when she was shopping for her breakfast ingredients at the farmers market. After venturing home with her locavore bounty, she returned to the GrowNYC booth with her leftover compostable scraps: eggshells, coffee grounds, and vegetable trimmings- she was officially an urban composter. “I think it’s supposed to be along the lines of green living.” When asked if she knows the process or what happens to her scraps, she replies, “Nope, but I trust it, better than throwing it out. We’ll do it as long as it’s convenient.”^{x1} Jenny

Hirsch might not realize it, but her insight is very accurate. GrowNYC’s aim is to make it more convenient to keep food scraps out of landfill; and in doing so, their highly publicized, city-wide initiative is also re-marking food waste as an appealing and trending recyclable resource.

Christine Johnson, has witnessed hundreds of urban composters drop of their food scraps. She remarks, “The people who do it get it, people who have decided they are going to do differently than previous generations. In this day and age that almost always includes some sort of environmental awareness. And I think it might just be people trying to do their part.” Johnson reports that since the launch of the pilot program the bags have been filling up exponentially. Each site is growing week by week. In the first five weeks, Tribeca was up from 5 to 13 bags, while Ft. Greene double its collection, weighing in at 55 bags, or 2,300 pounds. Johnson says that people of

all ages and backgrounds are composting. “As they see our presence it makes them more aware. People who would normally go to the farmers market and not compost, now come to the farmers market *and* compost.” That said, Johnson also points out the challenges behind greater social acceptance of urban composting, “The invisibility of garbage makes it impossible for people to understand...people just put it in their trash can, and then it’s gone. They want nothing else to do with it.”^{xli} Here, Johnson speaks to the greater more common social understanding of trash, marked as invisible in a comfortably disposable modern society.

David Hurd, GrowNYC’s Director of the Office of Recycling Outreach & Education, and the leader of the pilot program, is also quick to point out that even though the pilot has collected 21,000 pounds of food-scrap so far, “Initiatives like this are encouraging so people can live a more

sustainable lifestyle, but we don’t delude ourselves. Even if we collected it all, we wouldn’t make a dent. We need a systematic approach to diverting food scraps.”^{xlii} Beyond issues related to waste and social perceptions, Hurd is speaking to the *bureaucratic* and physical limitations of large scale composting in New York City.

In agreement with Hurd is Joe Burke, compost coordinator for New Jersey based Action Carting and Environmental Services, the largest private carter for compostable food waste in the city. He says, “If the government stepped in tomorrow, and mandated that every restaurant in New York City has to recycle organic waste, we wouldn’t have enough facilities to handle the volume.”^{xliii} Of the six thousand New York City businesses the company services, four hundred are contracted for food waste- a number, he says, is on the increase. Burke says his commercial food waste collection weighs in at

tens of thousands of tons each night. This process, he claims, is environmentally and economically inefficient, seeing that Action Carting must haul the food waste to out of state processing facilities. But Burke also went onto explain that commercial food waste composting is in such demand that companies who cannot support the disposal are losing business. Burke says he get calls from business like Goldman Sachs and Swiss Credit, looking for such waste collection, ultimately to help boost their LEED certification.^{xliv} In the end, Burke insists, “The answer is infrastructure. City enforced and approved, along with help in the construction and permitting at Hunts Point and different areas.”^{xlv}

As announced in April of 2011, in *A Green Greater New York*, PlaNYC, has committed to researching composting infrastructure issues in the future. Composting at the Hunts Point distributing center alone would capture an annual 75% of

the 27,400 tons of waste it generates.^{xlvi} Hurd, Burke, and PlaNYC all anticipate a future where New York City-wide compost can be processed at the Hunts Point facility. But on a socio-political level, the greatest challenges for food waste composting revolves around politics, economics and social acceptance. PlaNYC, recognized this and reports, “We must change how we think about our waste-not as a by-product to be disposed, but as a resource that can generate energy, create jobs, and spur economic development”^{xlvii} Ultimately, there is a need for a total cultural remarking of the social construction of food waste in New York City in order to harness funding and political will to back food waste collection and composting in the public sector.

ANALYSIS & CONCLUSION

Historically in Western society, the fluctuating value and meanings

ascribed to food waste refuse has been unmarked, marked, and reversed again. Strasser writes, "...above all sorting is an issue of class: trashmaking both underscores and creates social differences based on economic status."^{xlviii} While it is true that food waste and garbage collection is largely affiliated with poverty, filth, and illness in modern industrialized society, patterns observed in this research on urban composting culture appear to be contradicting this theory otherwise. The very public GrowNYC initiative is marketing urban composting within the context of a hip, green, progressive living that the city has so widely adopted. LES Ecology's highly visible Union Square location sits in the heart of the sustainable farmers market movement. Additionally, GrowNYC Green Markets are known to attract a wide ranging class demographic throughout all five boroughs.^{xlix} Essentially, food waste sorting for

compost is not longer reduced to the poor or the fringe.

Philosopher, Pierre Bourdieu, spoke to class and distinction that can easily be attributed to the culture of garbage described here. He wrote, "Taste classifies, and it classifies the classifier. Social subjects, classified by their classifications, distinguish themselves by the distinctions they make, between the beautiful and the ugly, the distinguished and the vulgar..."¹ In society at large, garbage classifies. But in a post-modern urban context, food waste collecting is beginning to reclassify the classifier. Not unlike carrying around a refillable water bottle, or a reusable shopping bag, urban food composting- the act of sorting and carrying your waste to a drop off site is being newly marked in similar ways. Green living has been heavily marketed (and marked) as fashionable; and with this, food waste composting is becoming classified as such.^{li} Like pre-industrial swill children and trash sorters of the

1800's, New Yorkers from various demographics are engaging with their trash, and in doing so, are blurring the lines between garbage and class theory.

Over all, through research, observation, and personal interviews, it appears urban composting New Yorkers have a one similar objective-to "do my part." As Christina Datz-Romero pointed out, the pressures of environmental degradation is forcing urban life to reevaluate its impact, even if that means interacting with their food waste.^{lii} In the *Justice Nature and the Geography Difference*, David Harvey speaks to the inseparable aspects of city and "nature." He states,

Human beings, like all other organism, are 'active *subjects* transforming nature according to its laws' and are always in the course of adapting to the ecosystems they themselves construct. It is fundamentally mistaken therefore, to speak of the impact of society *on* the ecosystem as if these are two separate systems in interaction with each other.^{liii}

Harvey drives home a modern premise that, even in industrialized city living, we are connected to the greater ecological whole. The culture of urban composting is not only redefining what it means to compost, but is re-marking the urban public attitude towards food waste in a period of modern environmentalism. Therefore, in contemporary society, composting serves at least two key ecological purposes. One, it provides soil amendment to dirt, rich and poor, in gardens, farms, tree wells, and anywhere plant life grows, benefitting the farmer, the gardener, and the soil. The other, composting captures solid food waste that would otherwise collect in a land fill, and redirects it back to the environment, benefiting the reduction of climate disrupting methane gases. Where the act of composting may take on different definitions across social landscapes in various cultural settings, in the end, it serves one larger purpose: closing the loop of production, consumption, and

waste to benefit the earth. Steinberg claims that when the roaming urban pig of the 1800's was finally exiled to the farmyard, it perpetuated a division between the country and the city.^{liv} But Harvey writes, "...There is nothing *unnatural* about New York City and sustaining such an ecosystem even in [sic] transition entails an inevitable compromise with the forms of social organization and social relations."^{lv} While refuse and waste is a human a literal social construction, the urban environment is an extension to the ecosystem humans interact with.

In the last half of the twenty-first century the world's population is projected to be seventy percent urbanized.^{lvi} Within the intimate relationship of social and environmental systems, unprecedented amounts urban food waste will need to be managed. The modern relationship to material consumption is presently a disposable one, based on industrial cultures of

convenience.^{lvii} Whether an object is marked or unmarked is not the most significant issue. Rather, it's how we frame those markings in society and build social constructions around them, thereby demoting and promoting objects according to social structures like class. As examined here, the social marking of food waste, couched in contemporary environmentalism, appears to be reversing. In order to meet present and future needs of taxing human consumption in urban environments, and to benefit the ecological whole, perhaps it will be necessary to mark with permanence the connection between society, consumption, and waste.

NOTES:

ⁱ Susan Strasser, *Waste and Want: A Social History of Trash* (NY,NY: Holt Books, 1999), 4.

ⁱⁱ Wayne Brekhus, "A Sociology of the Unmarked: Redirecting Our Focus," *Sociological Theory* Vol. 16 (1998),37.

ⁱⁱⁱ The City of New York, Michael R. Bloomberg. "A Green Greater New York PlaNYC ." April 2011. 140.

^{iv} Sir Albert Howard, *An Agricultural Testament* (Oxford University Press, 1943), 1; J. Heckman. "A history of organic farming: Transitions from Sir Albert Howard's War in the Soil to USDA National Organic Program," *Renewable Agriculture and Food Systems* 21, 03, 143-150, Cambridge Univ Press (2007): 144

^vDeborah L. Martina and Grace Gershuny, *The Rodale book of composting* (PA: Rodale Books 1992), 150

^{vi} Carey Pulverman (LES Ecology manager) in discussion with the author, April 16th, 2011.

^{vii} Deborah L. Martina and Grace Gershuny, *The Rodale book of composting* (PA: Rodale Books 1992): 2

^{viii} Ibid,130.

^{ix} J. Heckman. "A history of organic farming: Transitions from Sir Albert Howard's War in the Soil to USDA National Organic Program," *Renewable Agriculture and Food Systems* 21, 03, 143-150, (Cambridge Univ Press, 2007), 143-150.

^x Sir Albert Howard, *An Agricultural Testament* (UK: Oxford University Press, 1943), 2.

^{xi} J. Heckman. "A history of organic farming: Transitions from Sir Albert Howard's War in the Soil to USDA National Organic Program," *Renewable Agriculture and Food Systems* 21, 03, 143-150, (Cambridge Univ Press, 2007), 146.

^{xii} Susan Strasser, *Waste and Want: A Social History of Trash* (NY NY: Holt Books, 1999), 4.

^{xiii} Ibid, 29.

^{xiv} Martin V. Melosi, *Garbage in the Cities: Refuse Reform, and the Environment*. (Univ. of Pittsburgh Press, 2005), 5; Susan Strasser, *Waste and Want: A Social History of Trash* (NY NY: Holt Books, 1999), 30.

^{xv} Susan Strasser, *Waste and Want: A Social History of Trash* (NY NY: Holt Books, 1999), x.

^{xvi} Ted Steinberg, *Down to Earth: Nature's Role in American History* (UK: Oxford UP, 2008) 156-157.

^{xvii} Martin V. Melosi, *Garbage in the Cities: Refuse Reform, and the Environment*. (Univ. of Pittsburgh Press, 2005), 99.

^{xviii} Ted Steinberg, *Down to Earth: Nature's Role in American History* (UK: Oxford UP, 2008), 166; Martin V. Melosi, *Garbage in the Cities: Refuse Reform, and the Environment*. (Univ. of Pittsburgh Press, 2005), 99.

^{xix} Ted Steinberg, *Down to Earth: Nature's Role in American History* (UK: Oxford UP, 2008), 159.

^{xx} Ibid,157.

^{xxi} Susan Strasser, *Waste and Want: A Social History of Trash* (NY NY: Holt Books, 1999), 14.

^{xxii} Ibid, 14,66.

^{xxiii} Martin V. Melosi, *Garbage in the Cities: Refuse Reform, and the Environment*. (Univ. of Pittsburgh Press, 2005), 8

^{xxiv} Ted Steinberg, *Down to Earth: Nature's Role in American History* (UK: Oxford UP, 2008), 167.

^{xxv} Ibid, 169.

^{xxvi} The City of New York, Michael R. Bloomberg. "A Green Greater New York PlaNYC," April 2011. 139.

^{xxvii} Ibid, 140.

^{xxviii} Ibid, 141.

^{xxix} Elizabeth Royte, *Garbage Land: On the secret trail of trash*, (NY: Little,Brown, and Co. 2005), 115.

^{xxx} The City of New York, Michael R. Bloomberg. "A Green Greater New York PlaNYC," April 2011. 140.

^{xxxvi} The NYC Department of Sanitation conducted a pilot food waste collection program in 1990. One small neighbourhood in Park Slope sorted their scraps and was collected and sent to Fresh Kills, on Staten Island.

^{xxxvii} LES Ecology has been moved to a temporary location while City Parks restore the East River Park. The process has already taken more than 3 years.

^{xxxviii} Lower East Side Ecology Center, “What is Composting.” *Lower East Side Ecology Center*, Date unknown, http://www.lesecologycenter.org/index.php?option=com_content&view=article&id=39&Itemid=32

^{xxxix} Rachel Ingersoll (Local composter) in discussion with the author, April 13th, 2011

^{xl} Sara Stroman (Local composter) in discussion with the author, April 13th, 2011

^{xli} Molly Heim (Local composter) in discussion with the author, April 13th, 2011

^{xlii} Interviews with home composters reveal that some New Yorker’s will compost in the home and disperse it in tree wells, parks, or donate it. Some will pot plants in their apartments, too.

^{xliiii} Christina Datz-Romero (Director, LES Ecology), in discussion with the author, April 13th

^{xliiiii} Ibid

^{xlv} Jenny Hirsch (Local composter) in discussion with the author, April 9th, 2011

^{xlvi} Christine Johnson (GrowNYC compost manager) in discussion with the author, April 11, 2011

^{xlvii} David Hurd, (GrowNYC, Director of the Office of Recycling Outreach and Education at the Council on the Environment of New York City) in discussion with the author, April 6th

^{xlviii} Joe Burke. (Action Carting and Environmental Service) in discussion with the author, April 21st.

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^{xlix} According to Goldman Sach’s website, “Our recently opened headquarters in New York is LEED

Gold certified, achieved because of its green construction and operationally efficient use of water, energy, light and air.” See:

<http://www2.goldmansachs.com/citizenship/environment/index.html>

^l Joe Burke. (Action Carting and Environmental Service) in discussion with the author, April 21st. 2011

^{li} PlanNYC is advocating for the Hunts Point distributing center as a large-scale compost in hopes of capturing the annual 75% of the 27,400 tons of waste it generates for composting. See: The City of New York, Michael R. Bloomberg. *A Green Greater New York* PlaNYC. April 2011. 141.

^{lii} The City of New York, Michael R. Bloomberg. “A Green Greater New York PlaNYC,” April 2011. 137.

^{liiii} Susan Strasser, *Waste and Want: A Social History of Trash* (NY, NY: Holt Books, 1999), 9.

^{liiiii} GrowNYC organized the acceptance of EBT card (electronic food stamps) in all five boroughs. See: <http://www.grownyc.org/greenmarket/tokens>. Combined with the observed upper class demographic of the Tribeca Green Market, and demographic reports by Christine Johnson on Ft. the Greene Green Market, this diverse range was determined.

^{lv} Pierre Bourdieu. *Distinction: A Social Critique of the Judgment of Taste*. (US: Harvard Univ Pr, 1984), 6.

^{lvi} One such example is the recent Freitag pop up compost installation in New York City on May 7th. Freitag, a Swiss recyclable fashion bag company is known to sell their products for hundreds of dollars. There, the compost advocates were giving away reusable bags branded as daily compost travel bags.

^{lvii} Christina Datz-Romero (Director, LES Ecology), in discussion with the author, April 13th

^{lviii} *David Harvey. Justice Nature and the Geography of Difference*, (Oxford: Wiley-Blackwell, 1996), 186.

^{lviiii} Ted Steinberg, *Down to Earth: Nature’s Role in American History* (UK: Oxford UP, 2008), 159.

^{lv} David Harvey. *Justice Nature and the Geography Difference*, (Oxford: Wiley-Blackwel, 1996), 186.

^{lvi} UN Habitat for a better urban Future, “The World Urban Campaign, Building Partnerships: Better city Better Life,” (Date Unknown),2.

^{lvii} Susan Strasser, *Waste and Want: A Social History of Trash* (NY, NY: Holt Books, 1999), 170.