

### **PART 3. THE WAY BACK**

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## **INTRODUCTION: 102 TONS (OR: BECOMING CHINA'S TRASH COMPACTOR)**

ON MAY 24, 2010, RESCUE WORKERS DONNED IMPERMEABLE hazardous materials suits, then burrowed into the creaking, dangerous confines of a ruined South Side Chicago home, searching for the elderly couple trapped inside.

More than an hour later, as curious neighbors gathered and a television news crew arrived to film the emergency rescue operations, Jesse Gaston, a seventy-six-year-old chemist, and his wife, Thelma, a retired schoolteacher, walked unsteadily into the hazy afternoon light, dehydrated and hungry but still among the living.

The Gastons had been trapped by trash—their own trash.

The debris had accumulated for years until every surface of the house was covered by layers of old newspapers, empty plastic jars, pieces of broken furniture, worn-out coolers, splintered garden rakes, thousands of soda bottles, cans of every size, clothing old and new, broken lamps, dusty catalogs, mountains of junk mail and garbage bags filled with the detritus of daily life. All of this, and much more, had been kept for reasons no one could coherently explain, not even the Gastons, until the junk and trash reached the level of the highest kitchen cupboards, the ones that held the good china. A broken refrigerator lay in the kitchen, half buried and resting on its side, as if buoyed up by the sea of bottles, cans, cartons and sacks engulfing it. No room in the house could be called usable or even safely navigable; the stairs were blocked, the furniture buried, the garage packed floor to ceiling. The disordered accumulation looked as if it had been swept in by a tidal wave.

The Gastons simply grew unable to part with their trash. This hoarding compulsion gripped them gradually, a slow evolution, a piece at a time, then a bag here and there, then whole boxes of trash until, finally, the Gaston home became a one-way depository, the garbage version of the Eagles' famous "Hotel California": stuff checked in, but it could never leave. They hoarded until goods and trash consumed their home and almost their lives. Neighbors, alarmed by the fact that the couple hadn't been seen in three weeks—not to mention the increasingly persistent stench emanating from the home—had called police and firefighters. The rescuers eventually determined that Thelma had become trapped by falling debris somewhere in the bowels of the house, and Jesse, trying to reach her, had been pinned by piles of trash that toppled around him, too.

Although most of us tend to view this sort of extreme hoarding

as an aberration, it's a surprisingly common occurrence. Variations of the Gaston household are found around the country more or less on a daily basis, although most often after the hoarder's demise, and seldom with the fanfare of news coverage. Somewhere between 3 and 6 million Americans are thought to be compulsive junk hoarders with living spaces that, to varying degrees, resemble the Gastons'. The phenomenon offers enough freak-show fascination to have spawned a cable television series: the A&E Network's *Hoarders*, which entertains viewers by taking them inside different hoarders' homes every week. The show's website offers a handy interactive quiz to help viewers determine if they, too, are addicted to hoarding or merely "just messy."

This phenomenon has not yet achieved true immortality as a distinct mental illness—the bible of psychiatry, the *Diagnostic and Statistical Manual of Mental Disorders*, categorizes extreme hoarding as merely one of many forms of the catch-all obsessive-compulsive disorder—although some experts are lobbying to have it classified as its own, unique ailment: disposophobia. The proposed malady is alternatively known as Collyer Brothers syndrome, named for one of the earliest and most dramatic manifestations of media-immortalized trash hoarding. Homer and Langley Collyer, rich and reclusive, rebelled early in the twentieth century against the still-evolving practice of mandatory municipal garbage collection in New York City. They turned their multistory brownstone into a crammed and putrefying museum of trash, featuring endless piles and rows of newspapers, bottles, boxes, broken gadgetry (Langley Collyer fancied himself an inventor) and a partially buried Model T Ford hidden on the second floor beneath layers of debris. The brothers were found dead in their home in 1947—Langley had been crushed by a collapsing tunnel of trash, and his invalid older

brother, Homer, helpless without Langley's care, died later of thirst and starvation. Authorities eventually removed about 130 tons of trash from the brothers' home.

As morbidly compelling as such extreme hoarding may be (healthy ratings for cable television's looky-loo show earned it a multiple-season renewal deal, along with spawning a rival program, TLC's *Hoarding: Buried Alive*), the most revealing aspect of disposophobia is society's tone-deaf response to the phenomenon. The focus of therapists, "organization coaches," family, friends and TV show hosts is always on persuading disposophobics to do as "normal" people do: take the trash to the curb so it can be hauled away. A little counseling here, a little psychoactive drug therapy there, throw in a cleanup crew, a dump truck and some liberal doses of Mr. Clean and, poof, problem solved. But little if any thought is given to the refuse itself, or to the rather scarier question of how any person, hoarder or not, can possibly generate so much trash so quickly.

Of course, there's a reason for this blind spot: namely, the amount of junk, trash and waste that hoarders generate is perfectly, horrifyingly normal. It's just that most of us hoard it in landfills instead of living rooms, so we never see the truly epic quantities of stuff that we all discard. But make no mistake: The two or three years it took the Gastons to fill their house with five to six tons of trash is typical for an American couple. The Collyer brothers were outliers in their own time, but they would fit in the normal range circa 2011 quite nicely: Their lifetime trash production seventy years ago matches almost to the pound the prodigious modern American equivalent. The rest of us are just better at hiding it—mostly from ourselves.

This turns out to be something various government, industry

and university surveys attempt to track quite carefully: Americans make more trash than anyone else on the planet, throwing away about 7.1 pounds per person per day, 365 days a year.<sup>1</sup>

Across a lifetime that rate means, on average, we are each on track to generate 102 tons of trash.

Each of our bodies may occupy only one cemetery plot when we're done with this world, but a single person's 102-ton trash legacy will require the equivalent of 1,100 graves. Much of that refuse will outlast any grave marker, pharaoh's pyramid or modern skyscraper: One of the few relics of our civilization guaranteed to be recognizable twenty thousand years from now is the potato chip bag. (And no, those new biodegradable plastic bottles and bags intended to save the day so far haven't saved much of anything. Turns out manufacturers failed to check whether their lab-tested degradability is compatible with the real-world network of local composters and recyclers across the nation. Mostly, they're not.<sup>2</sup>)

And so the trash trail only grows: The Environmental Protection Agency estimates that, between 1980 and 2000, the average American's daily trash load increased by a third. The difference between now and 1960 is even greater, at least double the per capita trash output. Americans have "won" the world trash derby without really trying, making at least 50 percent more garbage per person than other Western economies with similar standards of living (Germany, Austria and Denmark, among others), and between two and three times the trash output of the Japanese. America's production of waste exceeds past projections of previous generations who tried to estimate how wasteful their twenty-first-century counterparts would be. The futurist marketers behind the 1964 World's Fair in New York felt they were being fairly conservative when they built scale models of the gleaming future cityscapes we were supposed

to be living in by now (hover cars and moving sidewalks, anyone?) in which problems of energy and waste had been solved by technology rather than exacerbated by it. Garbage was so old school; we were supposed to have scienced away that ancient problem ages ago.

What no one considered back then (and few acknowledge now) is waste's oddest, most powerful quality: We're addicted to it.

It turns out our contemporary economy, not to mention the current incarnation of the American Dream, is inextricably linked to an endless, accelerating accumulation of trash. The purchases that drive the markets, the products that prove the dream, all come packaged in instant trash (the boxes, wrappers, bags, ties, bottles, caps and plastic bubbles that contain products). And what's inside that packaging is destined to break, become obsolete, get used up or become unfashionable in a few years, months or even days—in other words, rapidly becoming trash, too. When the tide of garbage bound for the landfill grows from year to year, America's leaders rejoice because, despite the economic and environmental cost of waste, it signals the welcome reality that more people and businesses are buying more stuff. This is why countries with booming economies—China being the prime example—are frantically digging new landfills to ring their growing cities.

Garbage has become one of the most accurate measures of prosperity in twenty-first-century America and the world.

The opposite holds true as well. When the lines of garbage trucks headed to America's landfills grow shorter, as they did in 2008 and the years that followed, it makes for a surer sign that our disposable economy is headed for recession than a plunging Dow Jones Industrial Average or a falling dollar. No stockbroker could out-predict the landfill dozer and compactor operators, who saw the

bubble bursting ahead of everyone. Presidents used to fret that Americans did not save enough. Now they worry when we do not shop enough, the modern cure for recession and economic crisis, epitomized by President George W. Bush's call to Americans in the wake of the 9/11 attack to go out and spend more money for the good of the country. This prevailing viewpoint that favors spending rather than saving our way to prosperity, whatever its merits, creates a powerful societal and economic undertow that fuels America's garbage addiction.

It's an ailment that did not exist in anything like its current form for 99.9 percent of human history. Today's hoarders perform a kind of public service, letting us see what our true legacy looks like. Otherwise those 102 tons remain virtually invisible, too big to see. We chuck pieces of it in the can every day, push it out to the curb every week and then forget about it as if it's gone. But that clever vanishing trick hides the fact that nothing people do has more impact than their waste. It's connected to everything: energy, food, pollution, water, health, politics, climate, economies. Trash is nothing less than the ultimate lens on our lives, our priorities, our failings, our secrets and our hubris.

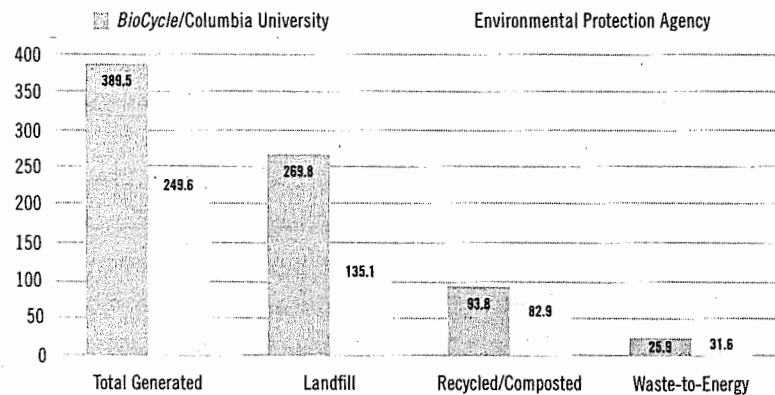
One out of every six big trucks in the U.S. is a garbage truck. Their yearly loads would fill a line of trucks stretching halfway to the moon. The creation of products and packaging that end up in those trucks contributes 44 percent of the greenhouse gas emissions that drive global warming, more than any other carbon-spewing category.<sup>3</sup> Garbage costs are staggering: New York City alone spent \$2.2 billion on sanitation in 2011. More than \$300 million of that was just for transporting its citizens' trash by train and truck—12,000 tons a day—to out-of-state landfills, some as far as three hundred miles away. How much is 12,000 tons a day? That's like throwing away

sixty-two Boeing 747 jumbo jets daily, or driving 8,730 new Honda Civics into a landfill each morning. Imagine an armada of the U.S. Army's mighty M-1 Abrams main battle tanks lined up bumper to bumper for more than a mile. That's 12,000 tons—one city's trash, one very costly day.

Now multiply all that about thirty-six times to gauge the nation's daily garbage spend and flow. In a year, Americans throw out a collective 389.5 million tons of rubbish—what the feds call "municipal solid waste,"<sup>4</sup> the stuff we personally throw away. This annual load of trash is roughly equivalent to the collective weight of the entire U.S. adult population—eighteen times over.<sup>5</sup>

This staggering number is not easy to find, because like any addict, America is living in an official state of garbage denial. The

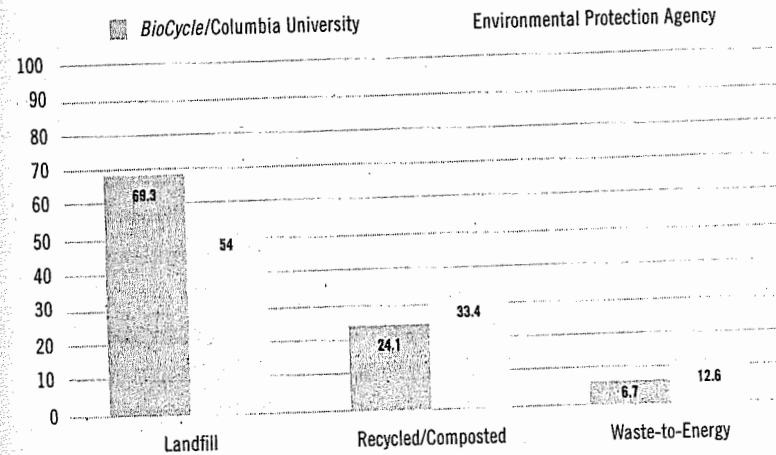
*How Much Trash We Make, by Millions of Tons:  
The "Real" vs. the "Official" Numbers, 2008*



*Millions of tons of municipal solid waste, by destination, comparing the BioCycle/Columbia University physical count of trash tonnage vs. the Environmental Protection Agency's theoretical "materials flow analysis." The EPA is reassessing its methods. Data for 2008 is displayed, the last year covered by both measures.*

*Sources: "Municipal Solid Waste in the U.S.," EPA, 2009; "The State of Garbage in America," BioCycle, October 2010<sup>6</sup>*

*Where Our Trash Goes: The "Real" vs. the "Official" Numbers*



*Percentage breakdown of municipal solid waste, comparing the BioCycle/Columbia University physical count of trash tonnage vs. the Environmental Protection Agency's theoretical "materials flow analysis." Percentages displayed are for the year 2008, the most recent available for both measures. The EPA is reassessing its methods.*

*Sources: "Municipal Solid Waste in the U.S.," EPA, 2009; "The State of Garbage in America," BioCycle, October 2010<sup>7</sup>*

statistical bible of municipal waste put out annually by the Environmental Protection Agency—accepted for decades as the garbage gold standard by policy makers and media alike—scandalously underestimates America's trash by relying on byzantine simulations and equations rather than actual counts of trash going to landfills. More than 140 million tons of garbage come up unaccounted for in the process. It turns out that obscure but far more accurate scientific surveys made jointly by Columbia University and the journal *BioCycle* reveal that we're sending twice as much waste to landfills as the EPA's calculations let on, and recycling proportionately far less than the rosy official stats suggest. The EPA reports a third of our trash gets recycled or composted, but the real-world figures

indicate that this diversion rate is less than a fourth of our total trash—a milestone that the supposed gold standard incorrectly asserts we surpassed a decade ago.<sup>8</sup>

It's tough to overcome an addiction when you can't even admit how big a problem you've got.

And that 102 tons is just what Americans personally toss in the garbage can and haul to the curb—the trash in our direct control. Counting all the waste transported, extracted, burned, pumped, emitted and flushed into the sewage system by and on behalf of each American man, woman and child, as well as what's tossed out by U.S. industry in order to make the products Americans consume, the total waste figure for the nation reaches 10 billion tons a year. This raises the per capita garbage calculation considerably. By such an all-waste accounting, every person in America stands atop more than 35 tons of waste a year—or a staggering average lifetime legacy of 2,700 tons. No wonder America, with 5 percent of the world's population, accounts for nearly 25 percent of the world's waste.

Then there's the wallet issue. Trash is such a big part of daily life that American communities spend more on waste management than on fire protection, parks and recreation, libraries or schoolbooks. If it were a product, trash would surpass everything else we manufacture. And guess what? It *has* become a product—America's leading export.

That's the secret behind the story of Zhang Yin, another sort of hoarder, one who is admired rather than pitied. In 2006, she became at age forty-nine China's first woman billionaire. In 2011, she was both China's top female manufacturer and America's biggest exporter to China (of either gender). Her export: America's garbage. In both East and West, she is the queen of trash.

Zhang is also the personification of the American Dream in

the twenty-first century, a Horatio Alger for a disposable economy. Fleeing the Tiananmen Square massacre and democracy movement crackdown of 1989, she left China for the Los Angeles suburb of Pomona, where she started running a scrap-paper company out of her apartment. The entire workforce at first consisted of Zhang and her new husband, a Taiwanese immigrant trained as a dental surgeon. They would drive around the Los Angeles Basin in an old Dodge van, visiting landfills and their sorting and recycling stations, begging for scrap paper. Learning English as she built the business, Zhang cut a series of deals to secure a steady source of the waste paper at a bargain price. There was no shortage of material. Then, as now, paper waste was one of the main components of trash dumped at landfills. American businesses considered much of the material worthless.

China, on the other hand, had a chronic paper and pulp shortage, having deforested huge swaths of the country during the drive to industrialize in the late fifties and early sixties—"the Great Leap Forward," as it was called. In the nineties, as manufacturing ramped up and China joined the global economy in earnest, there was enormous demand for cardboard to package and box the goods that China had begun to produce. The scrap paper Zhang amassed was just what the Chinese factories needed—they'd recycle all she could send them. Because cargo ships were coming to America from China full and returning mostly empty, Zhang was able to negotiate bargain-basement shipping costs to her native land.

Soon she had deals with recyclers and brokers all over Los Angeles, New York and Chicago to fill the voracious demand. "Chinese manufacturers were desperate for scrap paper," she recalled years later. "I'm an entrepreneur . . . All I did was help fulfill a need."

That's probably a bit too modest. The daughter of a Red Army officer imprisoned during China's Cultural Revolution, she managed to see an opportunity that American entrepreneurs had missed. She filled China's paper needs so thoroughly that, beginning in the year 2000 and every year since, her company, America Chung Nam, has been the top U.S. exporter to China in number of cargo containers shipped—and the largest scrap-paper company in the world, an empire of trash built from scratch. She used the earnings—and America's scrap—to launch what is now China's largest cardboard manufacturer, Nine Dragons Paper; by 2010, she was worth \$4.4 billion.

Zhang is a big part of a simple but rarely acknowledged fact about America's place in the twenty-first-century global economy: Trash has become one of the most prized products made in the USA. Not computers. Not cars. Not planes or missiles or any other manufactured product. It's our mountains of waste paper and soiled cardboard and crushed beer cans and junked electronics that the rest of the world covets.

In 2010, China's number one export to the U.S. was computer equipment—about \$50 billion worth.<sup>9</sup> America's two highest volume exports to China were paper waste and scrap metal, a little more than \$8 billion worth of bundled old newspaper, crushed cardboard, rusty steel and mashed beverage cans sold at rock-bottom prices. Zhang's America Chung Nam exported more than three hundred thousand cargo containers of scrap paper to China in 2010. Overall, the fastest-growing category of goods exported to China is "Scrap and Trash," increasing 916 percent between 2000 and 2008.<sup>10</sup> Chinese manufacturers promptly develop new and aggressively priced consumer products made from this waste, which they then sell back to American consumers at great profit, so we can trash it all again

in a year or two and send it back once more for pennies on the dollar. Waste, it seems, is becoming one of our greatest contributions to the global economy.

Somehow, without ballot or poll or any explicit decision by presidents or legislators or voters to do so, America, a country that once built things for the rest of the world, has transformed itself into China's trash compactor.

This sobering economic reality is mirrored by a telling observation from, of all sources, America's astronaut corps: There are only two man-made structures large enough to be identifiable without magnification from earth orbit. First, there's the mighty Great Wall of China in the East, symbol of a past power risen again. And in the West, there's a newer thing, the grimly named Fresh Kills, recognizable above all other things American.

Fresh Kills is the world's largest town dump, the recently shuttered repository for a half century's accumulation of New York City garbage.

ANY ATTEMPT to understand the 102-ton legacy—and what can (or should) be done about it—has to begin with answers to three very basic (yet rarely posed) questions. As it happens, these are the same three questions extreme hoarders such as the Gastons must confront if they wish to change their trash-laden circumstances:

First there's the most obvious of inquiries: What is the nature and cost of that 102-ton monument of waste?

Next comes the soul-searching question: How is it possible for people to create so much waste without intending to do so, or even realizing they are doing it?

Finally, there's the "what next?" question: Is there a way back from the 102-ton legacy, and what would that do for us . . . or to us?

Problem, investigation, solution: It's the classic three-act construction that the human brain has been hardwired to prefer—and as good an organizing principle as any for a book about trash. Three sections, three broad questions, each equally important, but it's the third piece of the story, the quest for a way back, that is key. That's the question that allows the 102-ton story to become a voyage of discovery, offering the possibility that all those tons of garbage might be a choice rather than an inevitability—and an opportunity as well as a bane. That's the question that offers the possibility of a happy ending to the story of trash.

Oddly enough, it's the hoarders, once again, who can help show us the way back. The Gastons understood far better than their neighbors that our prevailing definition of waste is all wrong. They saw that putting something in the trash is not really a matter of disposing of waste, of something with no value. Trash to them is the physical manifestation of *wastefulness*. The hoarders' response to this essential insight—that trash is really treasure squandered—is twisted and unhealthy, but their instinct to place value on garbage is sound and sane. Of course, the more constructive response would be not to hoard, but to find ways to avoid the wasteful accumulation in the first place. That's the great challenge, the holy grail that has so far eluded mankind, dating all the way back to the first town dump and anti-littering law in ancient Greece. The upside of this picture: There is a small but growing number of businesspeople, environmentalists, communities and families who see in our trash the biggest untapped opportunity of the century.

These trash optimists range from the city of Portland, which may be the least wasteful city in America, to TerraCycle, the business champion of "upcycling" (the reuse/repurpose opposite of recycling), to the trash artists of San Francisco and the trash czar at

Harvard University who each year turns the stuff students abandon in the dorms into one of the biggest and most successful yard sales in America. And there's the Johnson family, who proved they could live an outwardly normal year and yet produce only a mason jar full of trash.

Bea Johnson, a Marin County, California, artist who set her family of four on this quest, wonders what would have happened if the massive infrastructure America has constructed to deal with trash had been predicated all along on avoiding waste and recapturing its value, rather than transporting, burying and occasionally recycling its epic quantities. Would America still be evolving into China's trash compactor? Would there even be a 102-ton legacy? "What would life look like then?" she muses. "What would it mean for the economy, for the entire world?"

Johnson (you'll read more about her trash epiphany later) is the opposite of a hoarder—she's all about avoiding the accumulation of things, particularly disposable things, and living the uncluttered life. Or as she calls it, the unwasteful life. She says people, even friends, question her sanity, but the Johnson family has discovered that generating less waste translates into more money, less debt, more leisure time, less stress. When they give gifts, they don't give things—they give experiences. No wrapping paper required. She says they've never been happier.

"When you stop wasting, everything changes," she says. "There is a way back. And if it can work for a family, it can work for a country. It could be the answer we've all been waiting for."



### AN AMERICAN ANNUAL WASTE SAMPLER

- 5.7 million tons of carpet sent to landfills—all of it could be recycled, but mostly it's not
- 19 billion pounds of polystyrene peanuts (Styrofoam) dumped—never degrades, impossible to recycle
- 35 billion plastic bottles
- 40 billion plastic knives, forks and spoons
- 4.5 million tons of office paper
- Enough aluminum to rebuild the entire commercial air fleet four times over
- Enough steel to level and restore Manhattan
- Enough wood to heat 50 million homes for twenty years
- Enough plastic film to shrink-wrap Texas
- Plastic waste is so plentiful and so carelessly treated that 92 percent of Americans have potentially harmful plastic chemicals in their urine
- 10 percent of the world oil supply is used to make and transport disposable plastics
- Growing, shipping and selling food destined to be thrown away uses more energy than is currently produced by offshore oil drilling
- No less than 28 billion pounds of food thrown away, about 25 percent of the American food supply, perhaps more by some estimates

PART

1

## THE BIGGEST THING WE MAKE

**Our willingness to part with something before it is completely worn out is a phenomenon noticeable in no other society in history . . . It must be further nurtured even though it runs contrary to one of the oldest inbred laws of humanity, the law of thrift.**

—J. GORDON LIPPINCOTT, 1947

**A society in which consumption has to be artificially stimulated in order to keep production going is a society founded on trash and waste, and such a society is a house built upon sand.**

—DOROTHY L. SAYERS, 1947

**Who steals my purse steals trash.**

—IAGO, IN SHAKESPEARE'S *Othello*