



Junkyard Planet: Travels in the Billion-Dollar Trash Trade

Adam Minter

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When you drop your Diet Coke can or yesterday's newspaper in the recycling bin, where does it go? Probably halfway around the world, to people and places that clean up what you don't want and turn it into something you can't wait to buy. In *Junkyard Planet*, Adam Minter—veteran journalist and son of an American junkyard owner—travels deeply into a vast, often hidden, multibillion-dollar industry that's transforming our economy and environment.

Minter takes us from back-alley Chinese computer recycling operations to high-tech facilities capable of processing a jumbo jet's worth of recyclable trash every day. Along the way, we meet an unforgettable cast of characters who've figured out how to build fortunes from what we throw away: Leonard Fritz, a young boy "grubbing" in Detroit's city dumps in the 1930s; Johnson Zeng, a former plastics engineer roaming America in search of scrap; and Homer Lai, an unassuming barber turned scrap titan in Qingyuan, China. *Junkyard Planet* reveals how "going green" usually means making money—and why that's often the most sustainable choice, even when the recycling methods aren't pretty.

With unmatched access to and insight on the junk trade, and the explanatory gifts and an eye for detail worthy of a John McPhee or William Langewiesche, Minter traces the export of America's recyclables and the massive profits that China and other rising nations earn from it. What emerges is an engaging, colorful, and sometimes troubling tale of consumption, innovation, and the ascent of a developing world that recognizes value where Americans don't. *Junkyard Planet* reveals that we might need to learn a smarter way to take out the trash.

Junkyard Planet: Travels in the Billion-Dollar Trash Trade Details

Date : Published November 12th 2013 by Bloomsbury Press

ISBN : 9781608197910

Author : Adam Minter

Format : Hardcover 304 pages

Genre : Nonfiction, Business, Environment, Economics, Science, Audiobook

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From Reader Review Junkyard Planet: Travels in the Billion-Dollar Trash Trade for online ebook

Sherry says

Who would have thought?? I signed up for this Goodreads giveaway because my county is embroiled in a controversy about a landfill trying to go in just 3 miles from our county seat. Bake sales, garage sales and other money raising events are going on to try to stop it. The lawsuits and accusations (some of them criminal) are flying.

The big issue is just when the local commissioners and judges knew the landfill giants were trying to buy land in our county. And the suspicious accusations that the two richest officials involved steered the land search from near their farm/investment lands on the other side of the county to a place that is within 3 miles from town and about 5 miles from a university. AND it over an aquifer.

At first I was disappointed the book was not about landfills in particular but about recycling and all the global controversy surrounding that issue.

But by the time I finished the 3rd chapter I was hooked. Of course, it didn't hurt that a whole chapter described the Waste Managements new plant in nearby Houston. I had read a little about that but certainly didn't understand the extent of it's complex operation.

My eyes were opened up by this book. The back cover explained it perfectly. You will never look at all the packaging, and products surrounding your daily life in exactly the same way again. It has prompted me to call our local county operated recycling operation to find out how I can drop off all my "stuff". I already recycle paper because that is easy. There are paper recycle bins behind most of our schools and at church. However, other things like plastic and cans are a little trouble to dispose of. and I don't know of anyone anywhere near here who buys those items. I just want to get them in the recycling arena and out of the landfills. After reading your book I'm gung-ho about doing that.

Thanks, Mr Minter and Christine for donating this book so I could read it. I am going to pass it along to good friends whose property is directly across the farm-to-market road from where the landfill has bought land. They are very involved in the fight and I am sure will get a lot out of the book also.

Anyone who cares about our planet should read this.

Susan says

Adam Minter presents a fascinating look into the junk business, primarily scrap metal, and how all the waste in the US has made millions for people in China. I loved the personal story he tells throughout the book. His family was in the scrap metal business in Minnesota for several generations, and while he could have followed in his father's and grandmother's footsteps, Minter chose to write about the subject. His scrap metal assignments in China led to a decade-long sojourn in Shanghai. My other favorite part of the book was when he followed two Chinese men who are instrumental in the scrap metal business in southern China. One is based in Vancouver, but travels across the US in search of scrap metal. His business associate back in China receives e-mails in the middle of the night with photos of the scrap from the US. It was amazing to learn how

many Chinese entrepreneurs do the same thing, and how much money it brings in! I like Minter's philosophy. Recycling is not the answer; buying few pieces of crap is.

Siobhan says

As environmentalists, we're conditioned to have a certain negative reaction to the idea that our recyclables are exported and processed under hazardous conditions. In his book, Minter's goal is to show us that no matter the methods, risks, and hazards involved, recycling is still better than the alternative of mining for fresh raw materials (though more time is spent on economic factors, health and environmental aspects are also covered.) He succeeds by giving us an insider's perspective into the Chinese and American recycling industries, going into detail about the processes that specific types of electronic waste undergo to be either refurbished into usable products or recycled into raw materials. He does not dispute that the health and environmental consequences of many recycling operations in China and many third world countries are horrendous, but by the end it's clear that there are currently few alternatives available for those who want to engage in the typical Western consumer lifestyle and attempt to keep our consciences clear by segregating our recyclables from waste destined for the landfill (though Minter also covers that much of what we assume is recycled may be landfilled anyway due to contamination and the fluctuating market for the end product.) His ultimate message is this: that the only way to solve this waste crisis is to reduce our consumption by favoring quality over quantity, using products until the end of their lifespan instead of upgrading to the latest models, and to favor repair, reuse and refurbishing of our existing possessions. Recycling is a worthwhile (if imperfect) process, but it is not the answer to our culture of over consumption.

A must read for any self-identified environmentalist; highly recommended for any citizen of a first-world nation. 4 1/2 stars (my only complaint is the lack of references or a bibliography for further information -- something I was definitely interested in after this read!)

Kevinthorson says

Started reading this after reading on of this book's chapters as a standalone article in a magazine. The chapter was really interesting as was 1 or 2 other chapters in this book. Individually, those chapters were great. Unfortunately there were several hundred other pages of junk that added very little.

Just a fraction of the book was spent on plastic and almost none on paper or other types of scrap/waste. His experience is clearly in scrap metal in China, but I would have appreciated either a more holistic view or a much shorter book.

Oriyah Nitkin says

Despite my giving this book four stars, of all the books I've read in the past few years, I would recommend this one most widely. Specifically, I think EVERYONE should read this book. Why? Because it's fascinating and important.

As someone who considers herself environmentally minded, this book was an eye opener, introducing me to the logistics and limitations of recycling and other methods of waste disposal. And when I say "eye-opener",

I mean WIIIDE open. I learned some things that never occurred to me (although maybe they should have). By explaining what goes on behind the scenes when things we no longer want leave our possessions, Minter offers readers a chance to make informed decisions regarding what we own, what we want to acquire, and what we'd like to get rid of. I want to shout from the rooftops, "Wow! THIS BOOK!"

The 4 star rating is due to the couple of times that the book sort-of lagged, and that Minter, a Jew, intermarried. I can't fully enjoy that aspect of his story, so...a downgrade.

For those who are reading a digital copy of this book, it would be worthwhile to know that there are pictures at the end that bring the story to life. My guess is that they are interdispersed throughout the hard-copy of this book, or at least that you can see from the change in paper texture, that they exist, and therefore can flip over and take a look at them as you go. I wish I'd known.

Caroline says

I found this to be a wonderfully readable book about global recycling - concentrating mostly on the trade between America and China to explain the machinations of the industry. 'Wonderfully readable' in this instance is of special importance. No one is going to bother to read anything of length about this industry unless it is pretty gripping.... and amazingly - the author cracks it. Born into a family running a scrapyard in the States, and for six years a journalist for the periodicals "*Scrap*" and "*Recycling International*" the author is steeped in the world of recycling. He manages to convey his enthusiasm and concerns for the good and the bad and the ugly, of this dirty but money-making business.

The main messages I got from the book?

- Our planet is under enormous pressure from the amount of garbage we produce, and only a fraction of it is recycled.

The amount of trash generated in America in 1960 was 81.1 millions tons. Only 5.6 million tons of that was recycled.

The amount of trash generated in America in 2010 was 249.9 million tons. Only 81.1 million tons of that was recycled.

- Psychology tests have shown that the more we feel we can recycle, the more we waste. In reality the recycling life of products other than metals is limited. For instance in America plastic can only have one round of recycling, before having to be "down-cycled" into un-recyclable products like plastic lumber for backyard decks.

- There is another reason for recycling as little plastic as possible. It is a very polluting process and dangerous for the workers involved.

As a result of the above limitations.....

- 1) The best way to recycle? Don't recycle. Just keep on using things for as long as possible.
- 2) It is preferable to buy something recycled or refurbished rather than original, e.g., nearly all the main computer manufacturers sell refurbished computers.
- 3) We need to campaign to pressurise manufacturers to design goods that are easily refurbished and recycled. (I personally feel quite passionate about this. Working in a shop I see so many examples of packaging that

make recycling time-consuming and difficult. Grrrrr!)

I thought this book was an excellent read for anyone wanting to know what happens to the stuff that we jettison every day. I'm sure it will influence some changes in my purchasing habits for the better.

And here are some notes for my own information....(view spoiler)

(hide spoiler)]

Bianca says

When it comes to environmental sustainability in America the three tenants taught in school are: reduce, reuse, recycle. The last of the three is the most visible and most used option because the culture we live in does not really move toward reducing or reusing. We are a single-use society that loves new things.

As someone who has worked in sustainability I appreciate Adam Minter's Junkyard Planet for laying out the journey of scrap metal. In some ways you could say he plots an ethnography of an object. We follow metal from the yards of America to the sheds and scrappers of Asia and then back to the brokers who make the

shipment deals and flit around in the world of metal supply and demand. There is also a fantastic briefing on recycling in America (or "grubbing").

What is so vitally important, and what I think Minter does a good job of highlighting, is that there are high levels of materials that must be managed in some way. While some of the stripping practices are not the most eco-friendly (or just plain safe) there is some solace in knowing that the items are not merely being piled in a landfill. (Some solace, not a lot.)

He circles in on the more important issue of consumption. Recycling is the last of the steps toward waste reduction, because in the end that recycling bin is still going to produce some waste. What is more crucial is changing buying habits. The author ends the book with the message that we should "demand" companies be responsible for making products that embrace the three "r"s, especially when it comes to repairability and reusability.

I think anyone who works in sustainability can always benefit from understanding the cycles around certain waste streams.

Brooks says

My first real job was working for IBM and refurbishing computers - I did that up to 2001. Even then, I struggled with how we could make money refurbishing computers in high wage countries. I found this book fascinating. Not only was it a good overview of the industry, it also showed how an industry and commodity markets work in global trade better than anything I have read previously. It also has the vignette and story style of Rose George book, but in an area that I really wanted to know more.

Globalization – scrapping and recycling follow the local labor wages. In the early 1900s, recycling was big business in the USA. America imported scrap from Europe to feed our industrial growth – old railroad stock sent to America. Scrap rags for our paper mills. Initially this was Eastern European immigrants and Jews. The author's family ran a scrap yard in the Midwest. Now, it is too expensive in WE, NA, and Japan to sort most waste and it is sold in bulk to Asia. In the late 1990s, Taiwan plants move to China and then to the interior areas. Malaysia plants relocate to Indonesia.

Why is China leading in import of waste and not India? Because, there all the empty shipping containers returning to China and China needs materials. If India had a stronger export market and demand for raw materials, the scrap would flow there. The scrap for India comes from the middle east – in the empty shipping containers of Mangoes and other food from India. While wages are a big driver, demand, and shipping cost are also key drivers of this industry.

Breaking motors – Motors are filled with copper wire. Back breaking labor to break it apart, but in China, middle-age women do it. Hammers, chisels, pliers. High skilled job. At one time, Henry Ford set up a reverse assembly line to take apart his cars. Never could do it profitably (even in the 1920s) – too much labor involved.

Reduce, reuse, recycle – Main point of the book is if you hate the environmental issues of waste, just "buy less crap". Because economics is going to do the rest. As people become richer, re-use becomes less possible (people want new - even lower middle-class in Africa won't buy a mobile phone that does not have 3G!). After product re-use, is component re-use. No one wants that old mobile phone, but if you get enough

processors together, you can sell to a toy manufacturer. Then there is the recycle – metal, plastic, paper.

Commodity Markets – Overlaying the whole industry is the global commodity markets. It moves dramatically. The rise of Asia is just one example. But the global recession in 2008, had markets drop 40%+. Huge swings. But commodity markets are not all demand side - changes in technology (either for mining of new materials or recycling can radically change the market). One example, an American in 1930s was sorting mill scrap (the fillings off iron production) for re-use. It was awful work - \$1.25 per ton sorted. Then a metallurgist found a new use for that scrap and could make a fortune selling his product. The price of mill scrap went up 100 fold. And people started mining landfills for the material.

American Cars – Outside of Henry Fords dissembly line, cars were recycled profitably in the USA until the early 1960s – Labor costs went up and American's did want to break motors for a living. The only way to remove all the non-metal parts was to burn the car – which then caused too much air pollution. Even bigger was that steel mills needed higher quality control – 1% of copper significantly weakens steel. So, it was no longer profitable to recycle cars and no one would take them. In 1969, 70,000 cars were abandon in NYC. Over 20 million across the country.

Innovation – Long article on the development of the car shredder. Based the number of cars that could no longer be recycled profitably lead to this innovation. Recyclers were already shredding tin cans to help remove the linings. So, just a bigger shredder for cars? The first unit in 1958 was 1200' long and used surplus motors from navy ships. Once it was know in the industry, others perfected it. Now, those that copied that original concept are trying to keep the Chinese from stealing their designs. But the car shredder solved the issue of 40 million abandoned cars dumped in the USA. And the Asia demand for steel in the late 1990s, finally had the USA caught up with that 30 year backlog. The Author toured one USA company, Omnisource. They have a car shredder. Car shredding really only recycles the steel content. But what do to with the rest? There is still valuable cooper and zinc and tin in the remainder. They are able to sort this. It even can reclaim the loose change in the car - \$1.67 per car - \$20 million for the 14 million cars scrapped every year.

China – There is one city in China that is the e-waste capital, Guiyu. And there is another that is the plastic recycling capital, Wen'an. Both are dirty, polluted places. China is working to clean up but also realizes it needs these places to feed their industries. One very interesting item in the book is how the author comes back to places to see improvement. As Chinese cities get richer, they improve their most polluting industries or the industries move to the poorer areas of China. As Western environmental groups push on the Chinese and other developing countries, the locals really don't care about ewaste. Their bigger issues are with getting food and putting their kids through school - ewaste is a first world concern.

It is an incredible dance between wages, commodity demand, technologies, and environmental concerns that drive this industry. But it really is just economics - supply and demand - that the author brings to together in stories of his many friends in the global scrap market.

Riku Sayuj says

Making The Worst of a Bad Situation

“The typical pictures of poverty mask the fact that the very poor represent resilient entrepreneurs and value-conscious consumers.”

~ C. K. Prahalad

Minter presents a well researched but also a sometimes too polished and overly journalistic account of ‘travels in the billion-dollar trash trade.’ Even though this sub-title seems to promise a world-wide whirlwind tour following the trash’s trail, we soon realize that the majority of this drama is going to play out on two sides of the trash spectrum: The USA and China. This limits the scope of the book somewhat but also allows Minter to really get into the nitty-grittys of the scrap industry

As the author is at great pains to display, the story he wants to tell is also personal, and is told through a viewpoint from within an industry that he loves and has grown up with. This is supposed to allow him to highlight the good and the bad aspects as well as the morally grey areas that is bound to be there when we deal with an industry that encompasses millionaires as well as the poorest of the poor. However, this perspective also means that the author is always leaning towards a pro-industry stance and avoiding environmentalist language, which makes the book less effective overall.

POINT

The author’s clear aim is to show that under present circumstances, the hidden world of globalized recycling and reclamation is the most logical (and greenest) endpoint in a long chain that begins with the harvest in your home recycling bin.

Minter tries to do away with moral questions and wants us to treat the trash industry as we would any other industry — it provides one capitalist guarantee: *If what you toss into your recycling bin can be used in some way, the international scrap recycling business will manage to deliver it to the person or company who can do so most profitably.*

Usually, but not always, that profitable option is going to be the most sustainable one. In an age of conspicuous consumption, the global recycling business has taken on the burden of cleaning up what you don’t want, and turning it into something you can’t wait to buy.

The Justification

The underlying argument that Minter uses to justify his stance is that what is happening is good since China is only doing today what the USA was doing earlier: In the early nineteenth century, American demand was sky-rocketing and European mature markets were producing loads of trash. So America’s enterprising papermakers—and its entrepreneurial rag traders—made a very contemporary choice: they looked abroad to the more wasteful economies of Victorian Europe for their raw materials.

How can we possibly deny China the opportunity to take a similar growth path? — That is the moral question the author poses.

Ignoring the other side of that moral question — But is that what we want? Can we afford one more “Saudi Arabia of Trash”?

The next important question and inherent justification is: **Why China?**

After all, there were always places where labor is cheaper than in China, and environmental standards even lower. Indeed, if labor prices and environmental standards are to be the sole determinants for where scrap (or waste) goes, Sudan—with labor rates well under \$1 per day—would be the world's top scrap-metal importer.

So why isn't it?

The most important reason is that Sudan doesn't have many factories where scrap aluminum can be transformed into new aluminum and then remelted into new car radiators. Without such end markets—or the possibility of such end markets—there's absolutely no reason for a Sudanese to import \$60,000 containers of scrap metal. In fact, the lack of such buyers means that the relatively small quantity of scrap produced in Sudan is actually exported, with much of it going to India and China.

The point is that it takes a consumerist society to even be able to absorb the trash of a much more consumerist society.

This makes us pose the next obvious question: Can we keep creating new consumerist super-countries like China today, and the USA earlier, to keep absorbing the ever-growing trash of the ever-growing economies?

COUNTERPOINT

The story minter tells focuses mostly on individuals and it is telling to notice the individuals he decides to focus on. Most of those characters, like Raymond Li, are people who *share a talent for spotting value in what others throw away. It's a talent being applied to recycling the rare and valuable elements buried inside the smartphones, computers, and other high-tech devices that middle-class people throw away like candy wrappers. More often than not, though, the genius is commercial, not technical. Today recycling is as risky and rewarding as any global business, if not more so. Huge, mind-bending, Silicon Valley-scale fortunes have been built by figuring out how to move the scrap newspapers in your recycling bin to the country where they're most in demand.*

This focus on the success stories of the trash trade means that the book too focuses only on the economic development that is associated with this trade, but not on the environmental carnage that is exported by making an economy dependent on trash as raw material. This is precisely what has happened in the parts of China (called "Dead Zones" by residents) that the book highlights. That moral question is swept under the rug under the glitz and glamour of capitalist success of a few individuals who are making big money there.

What differentiates an environmentally concerned book from a 'sustainable-sell' of a book is focus. It is all about where you focus — either you can choose to spotlight on some guy who has "made it" and then gloss over the workers by saying that it was their choice; or, like *The Story of Stuff*, the focus can be on the thousands of people and on examining the tragedy behind why they made that choice.

Someone somewhere is rich in a Dead Zone! A lot of consolation that is.

Making The Best of a Bad Situation: The Constant Refrain

In *Sum: Basically Trash is Huge* and is an integral part of industrialization and an inevitable byproduct of consumerist culture. Deal with it. Don't damn the guys trying to make something out of it.

The tiresomely constant refrain of the book is that the trash trade as it exists today is the best we can make of a bad situation; and it is a refrain that fails to convince, primarily because the author seems to be using it as

small change to be thrown at the environmentalist camp.

For most, the term ‘recycling’ is an environmental imperative, not a business. But without financial incentives, no ethical system is going to transform an old beer can into a new one.

The global recycling business, Minter tells us, no matter how sustainable or green, is 100 percent dependent upon consumers consuming goods made from other goods. This unbreakable bond—between raw material demand, consumption, and recycling—is one of the dominant themes of the pages to follow. The calculus is simple: the only reason you can recycle is because you’ve consumed, and the only reason you can consume certain products is because somebody else recycled. Around the world, we recycle what we buy, and we buy a lot.

If this book succeeds, it won’t necessarily convince you to embrace the oft-gritty reality of the recycling industry, but it will certainly help you understand why junkyards look like they look, and why that’s not such a bad thing. In my experience, the worst, dirtiest recycling is still better than the very best clear-cut forest or the most up-to-date open-pit mine.

*Recycling is better—I won’t write “good”—for the environment. But without economics—without supply and demand of raw materials—recycling is nothing more than a meaningless exercise in glorifying garbage. No doubt it’s better than throwing something into an incinerator, and worse than fixing something that can be refurbished. It’s what you do if you can’t bear to see something landfilled. **Placing a box or a can or a bottle in a recycling bin doesn’t mean you’ve recycled anything, and it doesn’t make you a better, greener person: it just means you’ve outsourced your problem.** Sometimes that outsourcing is near home; and sometimes it’s overseas. But wherever it goes, the global market and demand for raw materials is the ultimate arbiter.*

Fortunately, if that realization leaves you feeling bad, there’s always the alternative: stop buying so much crap in the first place.

In the end, despite its shortcomings, this is a useful book to read. It goes deeper into the mechanisms of the trash trade and the constraints/drivers of the industry than anything else I have read. Keeping the author’s slightly apologetic tone aside, it is an informative and productive read. Now I turn to some of the important takeaways from the book for the general reader.

TAKEAWAYS: On Consumption & Production Choices

1. Reduce, reuse, recycle - in that order:

Despite what some recycling companies will tell you, many goods—such as smartphones—are only partially recyclable, and some—like paper—can only be recycled a finite number of times. In that sense, recycling is just a means to stave off the trash man for a little longer.

If your first priority is the environment, recycling is merely the third-best option in the well-known pyramid that every American schoolchild learns: reduce, reuse, recycle. Alas, most people have very little interest in reducing their consumption or reusing their goods. So recycling, all things considered, is the worst best solution.

2. Understand what Recycling can and cannot do:

Recycling is not a magic process in which everything you throw away turns into something useful. Most of the things that you consume cannot be meaningfully recycled and that means that your feeling of responsible citizenship by throwing it away 'correctly' is just plain ignorance.

Recycling also requires some effort from your side:

You need to segregate waste so that effort can be reduced at the other end. The less you do, the more really poor and really badly paid people will have to do, in unimaginably dangerous conditions.

You need to make sure that your trash is more easily 'processable' - you can read up on this and innovate, but start with simple measures such as removing the paper coverings on your pepsi bottle, emptying a bottle of liquid contents before dumping them, etc.

3. Demand products that are better designed:

a. Start with defining "good design".

What is a 'well designed' product?

Recycling is a difficult and highly technical industry. Especially when dealing with complicated products such as electronics and even daily household products such as toys. When it comes to specific waste material such as e-waste and plastic, it is almost as if the production process and the design of the products is done with the single objective of making recycling that much more difficult.

For example your smartphone might contain precious rare-earth metals, gold, and other components that are valuable but almost impossible to extract due to the way in which they have been utilized and put together, especially so these days in an effort to make it slimmer for your convenience!

Is it fair to use up and throw 'rare-earth metals' using technology that makes it impossible to reclaim them? Do future generation have no need for 'smart' phones? These elements are called 'rare-earth' elements for a reason! By employing them thus, companies are effectively throwing them away the moment they are mined.

b. These difficulties should be addressed at production level. Recycling friendly production norms are badly needed, and should be demanded by customers when they buy products.

Companies can be forced to innovate towards green-extractable production processes, whereby the important components of these products are not lost to humanity forever just because it was used for a few months by a teenager who was too bored to go and hike!

The so called 'awesome design' advertised by companies must be exposed for what they really are — shoddy pieces of engineering. They are not really marvels of design unless they can be recycled - otherwise they are just badly engineered products, designed for inefficiency.

4. Make better choices among available products:

Buy simpler single material products - those are the well designed ones, purely because they can be productively employed even after you are done with them.

The next time you buy something, think how pretty they would look after you are done with them too. If you cannot imagine a good future for what you are about to buy, you are buying a bad future for yourself too.

5. Reiterating: Reduce, reuse, recycle - in that order

Reduce and Reuse first. Recycling should be a distant third option.

All the precautions above are fine, but the author gets it bang on target in one case — Reducing your consumption and reusing your goods. Recycling, all things considered, is the worst best solution, even if it generates billions of dollars of GDP. There is an anecdote that illustrates the perils of ignoring this perfectly and this reviewer wants to leave you with it.

It is about an experiment that was conducted at a men's room in a University:

For fifteen days, the researchers measured the daily number of paper hand towels tossed into the trash bins positioned next to the sinks. Then they repeated the experiment by adding a recycling bin and “signs indicating that certain campus restrooms were participating in a paper hand towel recycling program and that any used hand towels placed in the bin would be recycled.” After 15 days, the researchers ran the data and found that restroom visitors used approximately half a hand towel more when a recycling bin was present than when there was only a trash bin. That may not seem like much, but consider: on an average day, 100 people visited the restroom, meaning that—on average—the recycling bin (and associated signage) likely contributed to the use of an additional 50 paper hand towels per day. Extend that usage out to the 250 business days per year that the restroom is used, and in that one university restroom an additional 12,500 towels would, theoretically, be tossed into the recycling bin, annually!

Isn't recycling supposed to promote conservation and preserve the environment? Why are people using more hand towels if a recycling bin is present? And does this have anything to do with my newfound willingness to buy an iPhone that I don't need to replace my current one? The authors of the study offer a hypothesis: “The increase of consumption found in our study may be partially due to the fact that consumers are well informed that recycling is beneficial to the environment; however, the environmental costs of recycling (e.g., water, energy, etc. used in recycling facilities) are less salient. As such, consumers may focus only on the positive aspects of recycling and see it as a means to assuage negative emotions such as guilt that may be associated with wasting resources and/or as a way to justify increased consumption.”

Elsewhere in the paper, the authors add: “We believe that the recycling option is more likely to function as a ‘get out of jail free card,’ which may instead signal to consumers that it is acceptable to consume as long as they recycle the used product.”

It's important to note that the authors aren't opposed to recycling. They readily acknowledge the environmental benefits of recycling versus digging up or drilling for new resources. But neither do they believe “simply making recycling options as widespread as possible is the best course of action” for the environment. Rather, it's the third best course of action, after reducing consumption and reusing what's been bought already.

Reduce. Reuse. Recycle.

Brooke says

There were some interesting pieces of information in this book, but it was pretty repetitive and dry in parts.

Dennis says

I found the book immeasurably useful for better understanding of contemporary world, its real inner workings, its shortcomings and threats to it as well as some future perspectives.

I like familiarizing with various industries serving our needs, but whose proceedings are largely under our conscious radar. Now it's easier to do, since a number of interesting titles were released on, say, funeral business and global floral trade, - huge and complicated and very responsive – businesses, of whose mechanisms we either unaware or don't want to be aware. Still they are important. And surely the business of getting rid of our waste is of paramount importance. Especially, when it's something more than dumping everything in landfills or seas.

Already several curious books were published on the matter, but I started my research with this title. Make no mistake – this is not an immediate page-turner, yet time and again you'd be rewarded for your perseverance. Moreover, you maybe will find passages that slowed me down far more exciting than I did. They mostly concern author's own reminiscences about his own experience with the business of scrap recycling – his family had a scrap yard. At this stage I think I learned more than necessary about intimate relations of his family. Yet later in the book his background will help him to get better interviewees and go farther in his investigation, just because people learned he used to get his hand dirty and was essentially one of them.

Another good thing that makes the author most suited for the job is his later sufficiently long career as a journalist for two leading global scrap industry magazines. Hence he has tons of relevant data at his fingertips (and book is thoroughly equipped with stats and prices, current and historical) and a personal acquaintance with a big number of key people worldwide, which makes the book very informative and truly worldwide in its scope (my country Russia is not touched, but I forget him this :) - it may be statistically insignificant in this matter).

The book tackles 'afterlife' of major types of our waste - metals, plastics, paper, cars, and electronics&mobiles - in general everything that could be recycled profitably, which is probably the reason why food leftovers and the like are not covered. Then again, they are probably biodegradable by themselves anyway or a materials for a separate investigation.

What I also liked is that his book is not just a mere travel guide to this “underworld”, but also an invitation to think over how we got here, what are the good and bad parts of it, what future scenarios are possible. You may not agree with his musings here and there, but at least they are very pertinent to the narrative, helping it to become more than just an industry snapshot and sequences of scripted interviews with insiders.

Lastly, here's a little yet important quote from the last pages of the book, which argues for a paradigm shift:

"Jesse Catlin and Yitong Wang, authors of an article in the January 2013 issue of Journal of Consumer Psychology, say in the very last sentence of their paper: “Therefore, an important issue would be to identify

ways to nudge consumers toward recycling while also making them aware that recycling is not a perfect solution and that reducing overall consumption is desirable as well.”

"...[I]f the goal is a realistic sustainable future, then it's necessary to take a look at what we can do to lengthen the lives of the products we're going to buy anyway. So my ... answer to the question of how we can boost recycling rates is this: Demand that companies start designing products for repair, reuse, and recycling.

Take, for example, the super-thin MacBook Air, a wonder of modern design packed into an aluminum case that's barely bigger than a handful of documents in a manila envelope. At first glance, it would seem to be a sustainable wonder that uses fewer raw materials to do more. But that's just the gloss; the reality is that the MacBook Air's thin profile means that its components—memory chips, solid state drive, and processor—are packed so tightly in the case that there's no room for upgrades (a point driven home by the unusual screws used to hold the case together, thus making home repair even more difficult). Even worse, from the perspective of recycling, the thin profile (and the tightly packed innards) means that the computer is exceptionally difficult to break down into individual components when it comes time to recycle it. In effect, the MacBook Air is a machine built to be shredded, not repaired, upgraded, and reused."

Melody says

Part memoir, part investigation, this was a fascinating look at the global scrap trade. Where does your recycling go? Read this book and be amazed. Interesting lesson in economics here as well, and why it's sometimes more sensible to ship things overseas than to recycle them closer to home. Market theory and lots of pictures all added up to a very interesting book. But my favorite parts remain Minter's warm memories and stories of his grandmother.

Grampus says

Reduce. Reuse. If the first two are not an option, then recycle. Interesting story of where everything goes-- back to China for the most part. I don't why but recycling fascinates me.

Steve says

Fabulous book. Great background information to add to Annie Leonard's The Story of Stuff. Minter has a delightful perspective and he gives the reader the needed perspective for the immensity of used material we have on planet Earth.

Book says

Junkyard Planet: Travels In the Billion-Dollar Trash Trade by Adam Minter

"Junkyard Planet" is a behind-the-scenes look into the trash business. Adam Minter, a journalist who was brought up in the scrap dealing business, takes the reader on a ride that shows how recycling occurs at a global level. Taking advantage of access given to him, Minter travels interviews and explores this surprising business. This insightful 304 page book includes the following fifteen chapters: 1. Making Soup, 2. Grubbing, 3. Honey, Barley, 4. The Intercontinental, 5. The Backhaul, 6. The Grimy Boomtown Heat, 7. Big Waste Country, 8. Homer, 9. Plastic Land, 10. The Reincarnation Department, 11. The Golden Ingot, 12. The Coin Tower, 13. Hot Metal Flows, 14. Canton, and 15. Ashes to Ashes, Junk to Junk.

Positives:

1. A well written book. Accessible to the masses.
2. Takes an often overlooked subject like recycling and does well with it. "This book aims to explain why the hidden world of globalized recycling and reclamation is the most logical (and greenest) endpoint in a long chain that begins with the harvest in your home recycling bin, or down at the local junkyard."
3. At the heart of the book is how the reuse of an object evolved into a huge international business. "The global recycling industry turns over as much as \$500 billion annually—roughly equal to the GDP of Norway—and employs more people than any other industry on the planet except agriculture."
4. The impact to the environment. "If your first priority is the environment, recycling is merely the third-best option in the well-known pyramid that every American schoolchild learns: reduce, reuse, recycle."
5. A great job of explaining why China plays a prominent global role in recycling. "The story told here explains how China became America's recycling export destination of choice, and why that's mostly a good thing for the environment. After all, China and other developing countries are willing and able to recycle what the American recycling industry won't—or can't—recycle on its own."
6. The book touches on many sectors but focuses on metal. "Unlike newspapers, Coke cans, and computers, automobiles rarely end up in landfills. Instead, they almost always end up in recycling facilities, giving automobiles a nearly 100 percent recycling rate—something that no other product approaches."
7. Basic physics on how to separate recyclables. "The glass, meanwhile, is removed by several processes that take advantage of the obvious fact that glass is heavier than paper."
8. Goes over some of the value of recyclables.
9. Many facts and numbers. "In fact, as of 2008 or so, China generates more trash than the exceedingly wasteful United States—roughly 300 million tons per year, compared to around 250 million tons in the United States. Still, on a per capita basis the Americans have the Chinese beat four to five times over (Americans are richer). For example, Americans consume 653.62 pounds of paper per capita per year, while Chinese consume 98.34 pounds..."
10. Goes over some common terms, jargon and practices in the industry. "The job of the scrap man, as Leonard saw it, was to extract the value out of what everybody else saw as worthless, or couldn't be bothered to extract on their own."
11. Interesting stories of success. "Starting July 2, 1938, it was determined by how much money the steel mills could save by using it in their steelmaking process; it had gone from borderline trash to a crucial raw material. Leonard Fritz not only knew where to get it, he was experienced in how to get it. Those two words—how and where—are what thrust men like Leonard out of the ranks of peddlers and into the rarer company of men who accumulate large volumes of recyclable material, and considerable fortunes."
12. Axioms of the trade. "Thus, in the scrap industry, there's an axiom: it's hard to buy scrap, and easy to

sell it.”

13. Basic history of the trade. “Expanding trade meant bigger problems, including disputes with local trading partners, foreign trading partners, and—most significantly—governments. So in 1914 the first U.S. trade association for the scrap industry, the National Association of Waste Material Dealers (NAWMD) was formed, and three years later—in the midst of World War I—the membership established an Export Committee (later renamed the Foreign Trade Committee).”

14. Financial reality of the trade. “Scrap is gonna go to the place where the labor is cheap. That is correct. But if the labor’s really cheap in India, and its seven cents per pound to ship it to India, and its two cents per pound to ship it to China—you know, unless the price is a whole lot better in India, it’s going to China.”

15. How the scrap business in America differs from China. “The American scrap recycling industry is mostly about recycling, not reuse.” “This hunger for scrap is, in part, a hunger for the chance to develop into middle-class consumers.”

16. The plastic recycling business.

17. Facts about steel. “In 2012 the U.S. scrap industry processed 75.19 million tons of iron and steel, roughly half of which was shredded. And that shredded scrap metal, when remelted, accounted for roughly 30 percent of the new steel manufactured in the United States.”

18. The global reuse of electronics. “Nobody knows the scale of it, or the revenue, but this I know for sure: there isn’t a town, village, or city in China that doesn’t have at least one used electronics market. In bigger cities, entire malls, like the one on Shanghai’s north side, are devoted to the reuse—rather than the recycling—of electronics.”

19. Health hazards of the trade. “The damage done by low-tech developing world electronics recycling is measurable. A 2010 study in Guiyu, China’s biggest and most notorious e-waste recycling zone, revealed that among a cohort of village children under the age of six, 81.8 percent were suffering from lead poisoning.”

20. Much more...

Negatives:

1. Let’s face it, recycling is not the most exciting topic.
2. Probably could have reduced this book by 50-75 pages without losing its essence. A bit repetitive.
3. A little uneven. Minter jumps around a bit and may lose the reader from time to time.
4. Lack of charts and diagrams to complement narrative. This book was screaming for fun facts summarized in a table. I was hoping for a table of most common recycled materials by cost and region. Missed opportunities.
5. Most of the book is limited to the U.S. and China.
6. No formal bibliography or notes.

In summary, this is a pretty solid book about the global scrap metal trade. Minter makes good use of his first-hand knowledge of the business, combined that with his journalism background makes him the perfect person to right such a book. The book however is repetitive and misses some golden opportunities. A book like this screams out for charts and diagrams yet there is none to be found. Negatives aside this is a book worth reading.

Further recommendations: “Garbage Land” by Elizabeth Royte, “Garbology” by Edward Humes, “Waste and Want” by Susan Strasser, “The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger” by Marc Levinson, “Gone Tomorrow: The Hidden Life of Garbage” by Heather Rogers, “Plastic: A Toxic Love Story” by Susan Freinkel, and the “Story of Stuff” by Annie Leonard.
