

Discard Anthropology with Dr. Robin Nagle

Ologies Podcast

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Oh hi, it's the French fry under your seat you won't find for another four months, Alie Ward, and here we are, *[deep breath]* the trashiest episode of *Ologies* ever made. This is another one of those years-in-the-making interviews. You're going to talk about it forever. So, I came across this person's name in relation to garbage and I thought, "I must meet this garbage person, they seem great." They are a clinical professor at New York University's Liberal Studies Department, they teach on the topic of garbage, they have worked intimately with garbage, they did a TED Talk about garbage. They have three anthropology degrees from Columbia University and an undergrad in Anthropology from New York University, and even authored the book, *Picking Up: On the Streets and Behind the Trucks with the Sanitation Workers of New York City*. The perfect fit, rubbish research is their life's work.

So, on a crisp fall day in Manhattan, I navigated the cobblestones to a conference room on the NYU city campus. And I routinely test for COVID for shoots and stuff, I had tested negative the day before, but I'd been in an indoor gallery event that week, so I wanted to keep my mask on for that interview, just in case, because COVID is awful, but masks are easy.

Oh, one other easy thing to do, if you don't mind, is maybe tell a friend about this podcast, *Ologies*. Or you can support by becoming a patron for a dollar a month at Patreon.com/Ologies. Also, rating, subscribing, and leaving reviews helps the show so much and I read every single one, such as this very recent one left by SJCmudHut, who said:

Alie is my new best friend... I really can't help believing she makes this podcast for me and me alone.

SJCmudHut, it is all for you, don't tell everyone else.

Okay, onto the episode. Your brain is about to become a dumpster of facts about what people throw away, where garbage goes, who takes it there, finding treasure in landfills, when an item becomes garbage, what plastic you can actually recycle, burning trash, building on trash, cherishing trash, and more, with professor, scholar, author, garbologist? Discard anthropologist? One of the two. Dr. Robin Nagle.

Robin: My name is Robin Nagle, and my pronouns are any/all.

Aside: Her most commonly used are she/her, so we'll go with that. The title of this episode... ehh, that's more ambiguous.

Alie: Garbagology, not your favorite word, which I'm like, "Leeet's hear it." Because it is one of those words that it... it sounds like a company that makes garbage cans.

Robin: Okay, I'll accept that. *[Alie laughs]* But as a description of what we could call a field of concern, of study, of crisis, of profound environmental relevance, it's too narrow because garbage is only one way of thinking about waste, right?

Alie: Mm-hm, but is there a particular way that you describe your niche in anthropology?

Robin: Yeah, so it's kind of under the umbrella of what we call applied anthropology. My goal in working with the New York City Department of Sanitation is two-fold. One is to help the

public understand what it is to be a sanitation worker in the city, for the city, and why should you care to know that? And the other is to help the workforce recognize ways in which they are valuable on this meta level that sometimes they don't even necessarily acknowledge.

I have said many times, the Sanitation Department is the most important workforce in the City of New York, and I get pushback even from people on the job. I like it when I get pushback from them in particular, because then I launch into my whole rap about public health and the diseases that would make COVID look like a sneeze if garbage were not managed, more or less, very well. I'm not saying it's perfect. We certainly had huge problems during the pandemic because of budget cutbacks and how the operational side of the job was thrown into chaos—Not chaos, but how do you prevent it from being thrown into chaos, right? So, those realities are always out there. But if Sanitation is not on the street every day, New York is not the glittering, global capital we imagine it to be.

Alie: You know, I was thinking about it on the way over here too, the difference between focusing on the garbage, which is dirty, which is something we all fear, versus the sanitation which is the solution. Do you find that the way that we talk about garbage versus sanitation really depends on if we're focusing on the good or the bad?

Robin: I never thought of it that way. I like that distinction and I think you've pinpointed a key element here, which is that garbage equates with fear for fascinating reasons. But sanitation... One of the challenges with the word is we could use sanitation to only be talking about things like sewage. So, when we say sanitation, do we mean garbage, do we mean other forms of waste, do we mean the kinds of protocols that are in place in medical facilities and healthcare? All of that has a sanitation connotation or context.

Same with the word garbage, though. What exactly do we mean by that word? Because it's a multifaceted category of material and depending on how it's defined, that dictates, I'll say, what happens next, and where it goes, and what workforce is responsible for it, and what harms does it cause or do we prevent it from causing, all by the definition.

Aside: So, to say something is discarded, implies that it's useless to the person discarding it, but not inherently valueless. Garbage can mean food waste or useless stuff. But does even waste have an inherent value? We shall discuss.

Robin: It also allows for thinking about forms of land, categories of people, ways of using time. Do we waste time, do we save time, are we discarding time? It's just far more... it's a far broader and thus, perhaps more exciting way to think about both the problem, the analysis, and then some of the potential solutions.

Alie: How long have you been in this field? And why, of all the fields of anthropology did you beeline for this one? Or did you ping-pong around a bit?

Robin: Well, my earlier work in anthropology was about religion but I've always been intrigued by the problem of garbage in particular, and waste in general, and when I had a chance to teach about it, I came up with a syllabus that became a class called, "Garbage in Gotham, the Anthropology of Trash."

Alie: That's amazing.

Robin: And one of the speakers was a sanitation worker I had met, just on the street, who took great care when recycling rolled out in New York City to customize the chrome on his truck and make it look like such a clean vehicle that you could not imagine putting garbage

in the back, because people were still throwing garbage in the back of his truck when it was supposed to be just recyclables and it really pissed him off. So, he decided to address this himself and it got him a lot of really good media. So, he was a guest speaker in my class, which was wonderful.

But the more I learned about the job, the more I realized, especially as an anthropologist, you can't just hear stories and then draw conclusions about what is essentially a subculture; it is its own world. So, then I realized I had to do field work in person, participant observation, the classic anthropology methodology. And then I realized that no matter how detailed that work was, I was not responsible for or even legally allowed to drive a truck, I wasn't on the job. If I said I'd be at a given garage on a given morning and I woke up that morning and I'm like, "Yeah, I don't feel like it," which I will admit, once in a while, that happens. My bad, but once in a while it happens. Well, no consequence to me except that I now have a reputation as being flakey, but no hammer falls.

But if I'm on the job, I have a legal obligation to be in that garage for roll call, the city has a legal obligation to make sure I am qualified to drive the truck, to operate the broom, those kinds of far more detailed trainings and relationships, that's what I needed to do. So, I went through the whole process, I took the test, I got hired. It took about a year from taking the test to actually getting hired because it's a very long, slow, tedious process, in part because the City of New York must make sure, by its own metrics, that you the individual are qualified and capable to do the job they're hiring you to do.

Aside: As we recorded this in Manhattan's Greenwich Village, trucks of all kinds, garbage and delivery, rumbled outside. So, just enjoy the New York ambiance.

Robin: It's been a puzzle kind of an obsession of mine for as long as I can remember.

Alie: Before you got the job to do the research, had you ever driven anything bigger than, like, a U-Haul before?

Robin: So, my high school sweetheart, his dad owned a moving company and so he taught me how to drive a double clutch Mack. But this was only the cab, I never had a trailer behind, but it was a blast. And he also taught me how to... the beginnings of how to operate a bulldozer, which is not the same as an FEL, a front-end loader. Each of these pieces of equipment requires specific skill and time and forms of knowledge. We don't acknowledge the expertise that is required to do those particular kinds of jobs really well. You can use a bulldozer to gauge the f*** out of a landscape when you meant to have a nice, smooth surface. And same with driving a Mack truck, which is why I'm glad we didn't have a trailer when he's teaching me to do the double clutch thing. So cool, that Mack truck. That was... And then, most of the cabs for sanitation trucks are also Mack, but they're all automatic transmission now, there are no more standard transmission trucks, which is probably just as well, but not great for fuel efficiency. But that's a whole other thing.

Alie: But before you are able to drive a garbage truck, do they let you do donuts in, like, a church parking lot [*both laugh*] like when you're 16 and you have to figure out how to drive a car?

Robin: So, no, short answer. Longer answer, when I took the test for the permit for my commercial driver's license, I already had a regular driver's license, because I didn't grow up in New York City. So, we actually did donuts on frozen parking lots in high school, in the wee hours of the morning, with no grown-ups around, being little, bad, misbehaving children.

So, when I took the CDL and went through the training that Sanitation offers, which is very thorough and meticulous, and then the road test and all of that, I was very nervous, but when I arrived for that first day of class, I'm sitting next to a young man, half my age, and he never drove anything before he got a CDL because he was born and raised in New York City where you don't really need a car the way a suburban high schooler or teenager may need a car. In fact, I don't know if this is true, but I have read that the rates of teenage mortality are lowest in New York City, around the country, because they're not driving cars.

Aside: I checked into this, and the state with the highest teen death rate, not New York. The top three were Louisiana, Alaska, and Arkansas. So, be careful on those roads, kiddo! You've got to slow down, pay attention. You know what? A tip from me, designate a driver. My sister was the victim of a drunk driving accident when she was 16. She was airlifted to a hospital, the windshield was shattered *by her face* and luckily for us, she made it out and she is fine. But she was picking glass out of her forehead years later, the guy driving broke a bunch of his legs. So, designate a driver, or volunteer to be one for one of your friends, who will love you all the more knowing that they have a safe ride home, during which they will not get killed or arrested. Just saying. And buckle up. Thank you.

Robin: So, I knew how to do donuts in a parking lot, right, but that doesn't mean you know how to do it with a garbage truck, with a collection truck. That's its own... I will say, you do own the road in a collection truck because no one wants to be near you. They don't know if you're empty or full; they just don't want to be anywhere near you. So, you kind of are the king, [*Several voices, "Your majesty."*] which was fun.

Aside: Robin's 2013 TED Talk is titled, "What I Discovered in New York City Trash," and she explains that a childhood camping trip left a really deep impression, and by that I think I mean it scarred her. But thankfully so, for us:

[clip from Robin's TED Talk]

We got to our campsite, it was a lean-to on a bluff looking over a crystal, beautiful lake, when I discovered a horror. Behind the lean-to was a dump, maybe 40-foot square with rotting apple cores, and balled up aluminum foil, and a dead sneaker. And I was astonished, I was very angry, and I was deeply confused. The campers who were too lazy to take out what they had brought in, who did they think would clean up after them? That question stayed with me, and it simplified a little. Who cleans up after us?

Alie: Now, you mentioned that this was an early obsession for you, but talking about the history of garbage, if we can go back. When does garbage start in humanity? I mean, we have, probably, piles of charred bones and things, dating back to the beginning of humans gathering, there have been garbage piles, right?

Robin: Depends again on your definition of garbage. One of the fun challenges is to decide, when is it "garbage" and when is it evidence, archeological treasure, some kind of tidbit of a story of our own past? I did a lot of work before, just as part of the bigger project with what's called the Human Relations Area Files, HRAFs. So, the Human Relations Area Files are a compendium of ethnographic data, cross referenced around you-name-the-category, kinship, child rearing, economic. And to say economy, that's a huge subject, so underneath that: inheritance rules, ways of organizing what we might call religious belief, and

ceremony, and ritual. So, I spent quite a while looking at how cultures have dealt with waste, how do they define it, and what do they do about it?

And one of the intriguing findings, I think, is that we've kind of never come up with a particularly great way of dealing with it. Some small-scale cultures, when it just got to be too much, they just upped and moved to a different location. Others have buried it over time to the point where they raise their elevation. In fact, some of the older cities of the world this is true, in Rome and some of the other great cities in Europe, and parts of Asia. Some have specific scavenger species they rely on to take care of what we would call waste.

Putting it in a nearby waterway has been fashionable for millennia, and not a problem until of course, well, until many things came to pass. But when we were all smaller scale, it didn't decimate that waterway. We've burned it, we've used it for fuel, we've ignored it, we have mapped it onto different classes so that if you are closer to a given form of waste, through no fault of your own, you are considered, sort of, there's a contagion kind of belief that goes with that and then your status within that culture is diminished.

In other words, we kind of only ever burn, bury, or dump in the water, or give to scavengers. Recycling, we call it recycling but before that word, it was just reusing something until it fell apart, which we used to do more commonly. Now it's coming back almost through this, and I don't mean this in a derogatory way, but this almost boutiquey DIY, like, "Look I unraveled this old sweater and now I'm reknitting with that yarn," which I think is really, really cool. It doesn't scale up, necessarily, and that's a problem if we want to solve the challenge, the problem that is solid waste, broadly defined. Sweater unraveling by itself... Let's put it this way, it's a good first step. [*"You're doing great."*]

Alie: And was there a really big difference in terms of how sanitation was handled pre and post-plastic era?

Robin: Plastics have changed the whole game. We would like to believe that plastics are recyclable, but that's not really true. They degrade each time they go through a recycling process. So, after a few times through, you really only have a slurry that you can't build or do anything with, and it ends up in an incinerator or a landfill anyway.

Plastics also off-gas, always. So, there's always some kind of chemical component that's inside the water of the plastic water, inside the food in the plastic packaging, inside the baby's mouth when they're suckling on some plastic. So, that's another waste product that is invisible to us but that we now carry in our bodies, especially in our fat cells. There is almost no species of being on the planet that does not have some of these, so called, forever chemicals, inside of ourselves. Name the animal, name the insect, those chemicals are present.

Aside: These chemicals, I looked into it, are called Per- and Polyfluorinated alkyl substances, or PFAS, and there are close to 5,000 different types of PFAS. But one thing they have in common is that they don't occur in nature and bacteria can't break them down, and neither can fire, or water. Fun! Why don't you want such a hardy, toxic compound in your system? Oh, just things like changes in liver enzymes, increased risk of high blood pressure or preeclampsia in pregnant people, small decreases in infant birthweights, increased risk of kidney or testicular cancer, increased cholesterol levels, and decreased vaccine response in children, according to the CDC's Agency for Toxic Substances and Disease Registry. Boy.

Maybe we have a solution here. In August of 2020, a study was published called, “Low temperature mineralization of perfluorocarboxylic acids,” by some environmental chemists at Northwestern University, who found that a few types of PFAS can indeed decompose, using some inexpensive and easy-to-obtain reagents, sodium hydroxide and dimethyl sulfoxide, in case you’re taking notes, at about 248-degrees Fahrenheit, which is a relatively low temperature, that won’t even bake a cookie. But the end product is nontoxic and benign. This is amazing! This just came out a few months ago. Did we fix forever chemicals? Not at *all*, not at all. This only works on certain types of PFAS, and environmental scientists still say to stop making and dumping them, like we learned in the Oceanology episode. The first task in cleaning up the ocean is to stop letting so much trash into the ocean in the first place, otherwise, you’re just chasing your toxic tail. Oh, speaking of plastics...

Robin: Plastics also connect to a kind of industrial process and complex of planned obsolescence and trying to convince a larger public that each of us as an individual is responsible for making sure that plastic object goes into the right bin to be recycled, even though the recyclability of it is mostly a myth. But there was a deliberate campaign that started in the 1950s to teach us that we are the individuals responsible, and by extension, municipalities are responsible, [*“The responsibility for sanitary refuse disposal falls upon every citizen.”*] not the manufacturers of those products. That changes everything.

And the other problem with plastics of course, among many others, is their longevity. They don’t biodegrade, or if they do it’s very, very, very slow and meanwhile they are contributing their chemical composition to these larger environments and animals. [*“I just want to say one word to you, just one word.” “Yes sir.” “Are you listening?” “Yes I am.” “Plastics.”*] So yeah, plastics has changed everything.

Alie: Does it change the way that you live your life or what you use? I think we’re all so anxious about it, we don’t know what to do.

Robin: Yeah, that’s a real problem. Especially this complete contradiction. I have been taught that I as an individual am responsible for saving the planet by making sure to recycle my plastics, and glass, and paper, and metal. But I know, partly because I study it, and then other people know this sort of in their gut, “Yeah, I’m not sure... We’ve had recycling for a while now, I don’t see the earth getting better so what’s going on?” So, it creates this cognitive dissonance, it erodes trust in the systems that are telling us to please recycle.

I think that learning the practice of recycling, being religious about it, no pun intended, I think that’s important because it can create a push from the ground up, from those of us as individuals together, to press for, “Are there plastic polymers that could actually be recycled? Are there compostable plastics that could work in municipal compost systems?” Because if something says it’s compostable, okay that’s great, but compostable in what context, through what specific mechanisms of heat and time? And those are built very carefully to account for whatever is the primary material you know you’re going to be dealing with, like yard waste and food scraps. But if you add compostable plastic, that doesn’t necessarily come out the other side as compost but as still breaking down pieces of plastic that need a different system. So, if enough of us are frustrated enough, but we also practice this, we do recycle, that’s a great raw material for what could become an effective political agitation to make plastic recycling real, if that’s chemically possible.

Aside: So, it’s time to get mad as hell, if you’re not already, about a lot of stuff.

Alie: And there are so many triangles with the number in the middle.

Robin: Those don't mean anything.

Alie: What?!

Robin: Let me back up. [*Alie laughs*] They mean, they tell you the primary polymer component of that kind of plastic, but it does not mean it's recyclable. In fact, the only ones that can go through the system a few times are numbers 1 and 2. [*Alie gasps*] the PET and HDPE, high-density polyethylene and... I forget what PET stands for, polyethylene phthalate, something.

Aside: PET, side note, stands for Polyethylene terephthalate and it's the most common thermoplastic polymer resin of the polyester family, if it does say so itself. It's very common. PET is in so much; it's in your clothes, it's in fiberglass, it's in a bunch of manufacturing items. But where you know it best is probably food containers, while squinting at the bottom of them.

Robin: So, the chasing arrow symbol was... A college student won an award when there was a design competition in the '70s to come up with some way of indicating recycling matters. But then it got co-opted and most people believe, if the chasing arrow symbol is on the bottom of a plastic container, it's recyclable. Nah-uh.

Alie: Wow. I've been lied to!

Robin: Yes, you have. Oh, you have. We all have. That's what I talk about propaganda, that's what I mean. It is a deliberate strategy of a conglomeration of corporations who go under the umbrella of, Keep America Beautiful.

Alie: Augh!

Aside: My internal monologue here was like, "Whaaat?" And yes, I looked it up. Keep America Beautiful is a nonprofit, it was founded in 1953 by... the beverage and packaging industry, and Philip Morris, and other tobacco giants. So, by campaigning to have volunteers picking up cigarette butts on their weekends, they could sway legislation away from smoking bans on beaches and in parks. So, Pepsi, Coke, Nestle, McDonald's, Dow Chemical, and other places with deep pockets and high stakes, fund Keep America Beautiful to make sure that the focus stays on litter, and recycling, and *your* personal responsibility, instead of the responsibility of the manufacturers and the distributors of plastics in the first place.

And there's this one infamous 1970, Keep America Beautiful ad, And in it, an Indigenous man wearing a fringed buckskin pantsuit, rows his birch bark canoe down a river that's thick with trash and in the shadow of these billowing factories, so ominous. And he hauls his canoe onto a littered beach and in a close-up, we see a single tear streaming down his face with the message. [*dramatic music. "People started pollution, people can stop it."*] That native actor, Iron Eyes Cody, side note, was actually not at all Indigenous, he was Italian. His birthname was Espera Oscar de Corti, he lied his whole life about it! But the message, "People start pollution, people can stop it," does that include companies? The PSA seems to skirt over the American notion of corporate personhood. But if you don't own a multi-billion-dollar company that sells sugar water in plastic bottles, how much responsibility can a person bear? We can make a difference though, right?

Alie: And so, when you see, you know, three different trash cans, one says "Recyclables," one says, "Composting," and one says, "Landfill," which is a good way to make you think, "Am I

going to be lazy and put it all in the landfill thing?” You’re like, “No that makes me a shitty person! I’m going to sit here and figure out which of these napkins is compostable.” Do those things really make it to those destinations?

Robin: It depends. Where are we talking about? Do we mean New York City? They’re called PSRR, Public Space Recycling Receptacles. They’re collected by different trucks with different destinations.

Alie: Oh! Okay.

Robin: The problem becomes, as you touch on, are those different bins contaminated? So, for compost, does someone throw out the plastic water bottles, or the plastic bag? If it’s contaminated beyond a certain point, you cannot take it to the recycling facility or the compost yard because it really now is just garbage. Same with recyclables; if you put too much food waste in the recycle bin, you gum up the works at the recycling facility. So yes, it’s going to go to the right place, if we put it in the right bin, but then it’s often very confusing. If you have a single-use coffee cup from “name the major barista source of coffee,” it’s a paper exterior, it’s often a plastic-lined interior, and then you have the plastic of a different polymer that is the lid. Where does that go?

Alie: I don’t know.

Robin: It depends on the system that a given collection process is using. Does the municipality take that plastic-lined paper and they do it through paper recycling? Or does that go through plastic recycling? So, there is no national standard. [*deep breath*] Should there be? Maybe. If there isn’t, that partly means that manufacturers can keep making it up as they go along and then you have this plethora of materials that have no clear next step and also are very complex to break down into components that can be recycled.

Aside: So, you can check with your local regulations, but I just checked them in California and plastics with a 1 or 2 on them – it’s called an SPI code for Society of the Plastics Industry – which sounds very fake – but the SPI codes, 1 or 2, chuck in the recycling bin. And I guess plastic bottles with codes 3 through 7 can be returned to recycling centers and you may get a deposit back for them. But recycling cans and clean aluminum foil is definitely possible. Electronic waste should never go into landfills, but recycling centers will take it. Batteries, same thing.

And of course, recycling organic waste by composting is a great idea. Apparently 20% of the US food supply is tossed away. It’s about 96 billion pounds of food waste a year. That, plus yard waste, is a third of what gets thrown into landfills. And I was like, well at least that’s biodegradable, right? Not as much as you think. When it gets tossed in a landfill it makes way more methane gas, which is 23 times more potent than carbon dioxide in terms of greenhouse gasses and global warming. But when you’re composting it, it’s broken down aerobically because it’s interfacing with oxygen more and it produces way less methane than when it gets tossed in a landfill.

And you got a lawn to mow, suburban dwellers? Leave those lawn clippings right on the lawn, you don’t have to rake them up, you don’t have to go put them in a bin. Apparently, it’ll act as fertilizer, your lawn is going to love it. So now, you don’t have to get a bunch of cut grass up your nose throwing it in the green bin, so you’re welcs. But back to Manhattan.

Alie: Now, getting back to you, just going over cobblestone, driving a garbage truck. Is it called a garbage truck?

Robin: Collection truck.

Alie: A collection truck.

Robin: Which, let me just add, I find that the coolest euphemistic, it's quite real and a euphemism. "I'm on collection." "What do you collect? Old clocks? You know like, Barbie dolls? Cabbage Patch dolls?" [*Alie laughs*] Yeah, I'm on collection today, I do collection. But I am collecting garbage, so a collection truck, it's a very accurate-

Alie: That is accurate.

Robin: But it's also... It could mean so much else. I love that it's called that.

Alie: And when you are collecting, how... Were you collecting just the garbage bags on the side of the sidewalk, which by the way, as a Californian, as a west coaster, I'm like, "Oh, you just put the Hefty bag on the sidewalk, it just goes on the sidewalk." There are no cans to drag in, necessarily.

Robin: Depends on the neighborhood.

Alie: Okay. Oh! Okay, I didn't know that. Do those get flung on the truck and sorted later, or where does that go?

Robin: So, when you say sorted, what do you mean?

Alie: Like, let's say that you've got a black plastic bag full of garbage. Does that get opened and cans go one way...?

Aside: Robin was shaking her head no like I had just landed from a distant utopian galaxy.

Alie: No, that just goes landfill.

Robin: Or incinerator. I'm sorry, waste-to-energy facility.

Alie: Waste-to-energy facility. Is that... So yeah, walk me through a little bit when you're a plastic bag on the sidewalk and where does it go when someone like you says, "I'm here to make the city cleaner"?

Robin: It goes in the back of the truck and then depending on what part of the city that truck is in, it will go to a transfer facility, meaning I'm now emptying the truck into a different point of its journey, and then in some cases, that next step is the last step. So, in several different Manhattan districts, all of the household garbage goes to that waste-to-energy facility in Essex, New Jersey.

It's a fascinating plant, I was lucky enough to have a tour last spring and... Incineration is always the big bad guy in the room. However, and I'm going to get killed for saying this, but in terms of what gets off-gassed, and the types of pollutants that are released, and the kinds of hazards that are created, incineration, by some arguments, is a far better choice than a landfill. So, if someone says to you, "All right, you're going to live downstream, downwind from a landfill or an incinerator, pick one." I would pick the incinerator.

Alie: Wow! Okay.

Robin: And it's partly what I've learned doing research on this for years, but then also seeing the kinds of standards that those facilities are held to and the oversight that is imposed on them to make sure those standards are met. It's not perfect, of course, I'm not saying that. But there is no perfect solution yet and yeah, I would choose- Oh man, I'm going to get absolutely slammed.

Alie: But that's also, it's an informed opinion though. It's informed and it's an opinion.

Robin: Quite so, it's my opinion. But so, all right. Some districts it goes straight to that facility. Other districts it goes to a transfer station where it goes out by barge or by rail, and then it ends up in upstate New York or Virginia. There is no longer a location within New York City where we dispose of our own garbage. The last landfill closed in 2001, Fresh Kills on the west central coast of Staten Island. Yeah, so we send it far away. Last I knew, the recyclables, once they are sorted at facilities in Brooklyn, and Queens, and New Jersey, they go to nine different states for the next step of their processing.

Alie: And with plastics, I understand that we sell our recycling overseas, sometimes?

Robin: We sent a lot of our plastics to China and China said to us, "Okay look, we have an agreement about rates of contamination that can only be a very, very small percentage and you all are blowing that percentage over, and over, and over." Our side of the Pacific, we're like, "Yeah, okay sorry. My bad." And we kept doing it. So, China in 2018 finally said, "Enough, no more. We don't take it." And so, it created a ripple across the world of recycling that is still... those ripples are still being felt because they were our primary buyer of plastic waste recyclables, so now where do they go? It could have sent that ripple back up the manufacturing process to be like, "Ah, maybe this is a good time to look at why we create so much plastic waste and figure out how to stop doing that." Hasn't yet had that impact.

Alie: Was this from people who don't fully rinse the mayonnaise jar before tossing it in the recycling?

Robin: I think it was more than that. I think it was actually mixing plastics with really gross, shitty trash in big enough quantities that when you break open the bale of what's supposed to just be plastic and now you find stuff that not only can you not reprocess that, you're now putting those workers in harm's way. And from what I understand, it was more than just, Mrs. McGillicuddy did not rinse her yogurt container.

Alie: Okay, because every time I've got a peanut butter container...

Robin: Those are the worst, right?

Alie: I know! I'm like, "I've got to get some hot water in this."

Robin: And then how much energy are you using to clean it versus how much energy is going to be used to recycle it but really not, you're going to downsize- I feel ya.

Aside: You were not the only person to wonder how clean is clean. And according to the employee-owned San Francisco waste management company, Recology, well done, they say, "Please empty all food residue and liquids from your food containers, from your cans, bottles, jars before tossing them in the recycling container. For example, if there's a small amount of ketchup remaining in the bottle, give it a quick rinse to ensure you don't contaminate other recycled paper or plastic products. To conserve water, you can rinse the containers with sink water after you wash the dishes," just kind of, sploogey, sploogey in there. So, if you have ever thrown away a squeeze bottle with two fingers of stubborn mustard at the bottom and then created a narrative that they probably like, boil off the mustard, we have something in common: we were both wrong. Now, what about recycling in a less melt-it-down-and-reform-it kind of way.

Alie: What about you, on the collection route, did you ever see an antique hutch that you were like, "Well holy shit, I'm going to come back here with a truck later and get that myself."

Robin: Oh yeah. All the time.

Alie: Really?

Robin: Yeah. So, that's a category of garbage called mongo. And mongo is either the thing itself, or the act of deciding to retrieve that thing. My best ever was after a big snowstorm, when the whole workforce of the Department of Sanitation was put on snow removal, meaning they're not picking up the garbage, but we're still making the garbage, we never stop making the garbage. And it piles up, and piles up, and piles up. So finally, the streets are clear enough to put people back on, then it's called "chasing garbage," and I'm on a block behind The Dakota, the fancy apartment building on the Upper West Side, and the garbage pile is as high as my shoulder and it's from one end of this long block to the other. It's raining, and it's cold, and it's late in the day, and the truck is so full it's almost bulging, and we're done, we just can't fit any more in the truck.

And one of my partners, there's one bag, he just tosses one last bag. But he has a sense of, like, where there might be something cool inside of a given bag. So, he opens it up, which you're not supposed to do, but he opens it up and inside, folded as if on someone's closet shelf, are a set of really beautiful clothing. Not fancy, but high-end brands of jeans and shirts, and they all happen to be my size. [*Alie gasps*] So, he says, "Do you want this?" and I'm like, "Hell yes." [*Alie laughs*] So, I take them home, I did take them to the cleaners. And then for years, I had this really great wardrobe addendum that all came from somewhere... I mean, famous people live in The Dakota, I don't know, maybe it was somebody famous' Lucky Brand jeans. Anyway.

Alie: That's a good find!

Robin: It was a great find. I've found some great stuff. But then there are people who... There's a fellow named Nelson Molina, who was on the job for almost 35 years, and he worked for the vast majority of those years, in East Harlem and the Upper East Side. So, his route, that district splits some of the wealthiest zip codes on the planet with housing projects and people who are not wealthy. And he has a very finely tuned sense of when there's something being thrown out that *really* does not deserve to be thrown out. And over his years on the job, he assembled this astonishing collection of tens of thousands of objects that he has on display. It's not open to the public yet, we hope to fold it into what will eventually be the Museum for Sanitation. But between his genius for recognizing when there's something special in the trash and then his curatorial genius of how it's arranged. It's dazzling. [*"My senses go off, I look in the bag and boom, there it is."*]

Aside: That was a clip from the 2015 film, *One Man's Trash*, which was directed and produced by Kelly Adams, and I'll include a Vimeo link on my website. But it's delightful, and charming, and dare I say, inspiring.

Robin: So, that's like mongo madness, mongo majesty, mongo beauty. And the stuff that people threw out... Baptismal certificates, and wedding photos, and really beautifully framed diplomas from, like, Columbia Law and Harvard, things you think, "Woah, these are for life." In fact, one of the diplomas, some journalists were through, and they contacted the woman whose name was on one of these fancy diplomas, who is now living somewhere in Europe, and they're like, "You want it back?" And she's like, "Hell no, I threw it, don't want it. I don't want it"

Alie: What?!

Robin: Nelson's collection is cool for many reasons, but one of them is it really asks you to think about how these things that are treasures were defined as trash by somebody, and why is it so easy to do that? And shouldn't there be other ways of ridding yourself of something you don't want anymore, besides putting it on the curb for a garbage truck? And then what might those systems be?

The challenge is time. If Aunt Gladys dies, and I'm her last living relative, and I've got to clear out her apartment, and it's 50 years of whatever were her treasures, but I don't want them, am I going to spend the weeks and weeks and weeks of finding those new homes? Or I'm just going to put it on the curb, right? Yeah, I'm going to put it on the curb. I mean "I" generically speaking.

So, it just points to the need for different systems, the question about our relationship to time in general, and then gratitude for Nelson's stubbornness in deciding "this Treadle Singer sewing machine with all its parts should not be in the trash," or this film projector that can only show really, really, really old films... And look, there are the really, really old silent movies, right? And he has a whole wall of just, Furbies, and a whole other wall just of PEZ dispensers, so some of it is sort of, lovely silly things. But he has a whole thing of photographs; you can spend a long time looking at the table of photographs. Who are they and why were those thrown out? And who let go of them? And are any of them still alive? Most of them have no identifying information, they're just pictures.

Aside: If you want to feel sad, and scared, and oddly invigorated, look up Swedish Death Cleaning, which is like Marie Kondo-ing your life, but while asking the question "Do I want my bereaved loved ones sobbing into this casserole dish I never used, unsure if they should give it to Goodwill?" So, clean out your stuff so that other people don't have to make decisions for you after you die. It's pretty simple and the stakes seem very high, which is what I need to get motivated to clean out a cabinet.

On that note, a dear friend of mine recently went to an estate sale in LA and left with a box of items that they were going to throw in the trash. They were like, "Go ahead and take it." Seemed like it had some cool stuff in it. Turns out, the house belonged to a local archaeology professor and inside the box were some colorful pottery shards. She asked me if I could find out anything about these pottery shards. And via social media, y'all connected me to an expert in this type of ceramics and the box that my friend acquired from the late professor contained irreplaceable artifacts from a 1986 Central American archaeological dig.

And as my friend looked deeper in the box, she texted me in horror, that there was a Ziploc of human bones from a burial ground in Guatemala. So, this friend tried to save some pottery from a landfill, and now we're literally working with the State Department and the Consulate to repatriate human remains to Central America that should have never been in a box in a closet.

So, spring cleaning, once a year, let's go through all of our shit as if we were about to die. Return your desecrated human remains back to their country of origin before a stranger accidentally buys them at your estate sale. Sell some sweaters on eBay, put a lamp on Mercari, Marketplace, Craigslist, I don't care. Use the Buy Nothing groups on Facebook in your area. Do not accidentally horde archaeological artifacts... ever.

Alie: Has anyone ever teamed up with an economist to figure out how much wealth and resource is in the trash? What's the value of the trash?

Robin: So, value defined by whom, in what context? If I am running a private waste company, that trash is worth a lot of money to me. And if I am doing separation of its components and I can find ways to monetize what is otherwise just this clump of something smelly that we call garbage, there's a lot of wealth in that. The disconnect is, the individual person is letting go of that wealth and then somewhere in its next step, somebody else is deciding, "No, no, there's gold in them there bags."

Alie: Mm-hm, but what is the value and who owns it once it's discarded?

Robin: Right, and who decides what that value is? In terms of who owns it, and we're talking a lot about New York because it's the situation I know best, but once it's on the curb, if it's municipal waste, it belongs to the City of New York, you don't own it anymore; New York City owns it. And there have been legal tugs of wars about that very issue. New York also has two other primary categories of waste though, which is commercial business waste, which is collected only by private waste companies, and then construction and demolition debris, or C&D, which is a which is a third category. The bureaucracy behind these different categories is pretty thick, which is partly about preventing corruption and partly about health and safety.

Alie: And what about parts of cities that are built on garbage?

Robin: Well, *[laughs]* I do a talk... In fact, almost every talk I do about garbage starts with a map of Lower Manhattan, the original shoreline, with this web on top which is the contemporary street grid, and I have a pin on the five places where Peter Stuyvesant told New Amsterdam colonists in 1657, "Here's where you are allowed to throw out your trash." And it's all in the water's edge. And if you look at that, the last pin I show is at a place called Coenties Slip and Pearl Street, and then I show a slide of that exact place with the same pin and it's three blocks in from the water's edge. And *all* of that is various forms of fill, much of which is garbage. While Robert Moses was sort of the informal dictator of New York City and New York state, he determined where every ton of garbage was deposited so that he would make land.

Aside: Robert Moses, what a character, wow. So, he deposited garbage where poor people lived and even designed low underpasses so that people without cars, meaning folks who ride the bus, couldn't access public beaches. He was like, "No car, no beach."

One place where the land was built up is on a place called Barren Island, part of Brooklyn. Exact beach is called Dead Horse Bay, which can't be called Dead Horse Bay because of dead horses in it, right? That's got to be metaphorical. Nope, there was a glue factory where all the pre-automobile dead horses were sent to, and the waters of Dead Horse Bay were littered with chopped up dead horse bones. Dead Horse Bay also smelled a lot like dead horses, but the land was filled up with the city's trash and covered with just a dusting of topsoil that washed away.

And to this day, you can walk along Glass Bottle Beach, kind of like a watery time capsule of trash deposited in early 1953. There are rusted cash registers, tires, warped crusty leather shoes, soda bottles of all kinds, and yes, the occasional horse bone. And I should say, you can't actually walk along the shore as it was closed two years ago after radioactive waste was found in 31 different spots. So, they're working on it. But you can google pictures! So many bottles. People say it sounds like gently clinking champagne flutes of shimmering wind chimes as the bay laps at the glass.

Robin: So, we are literally walking on our own history, our own archaeology all the time. But that's not unique to New York at all, cities all over the world have done this since time immemorial.

Alie: Mm-hm. How does the garbage not just float out to sea?

Robin: Well, sometimes it does. [*Oops.*] Sometimes it does. It depends on how well-built the landfill is, what innovative construction was put in place for it. There are parts of the city where it is just eroding back out into the sea, not many but there is some.

Alie: Augh. I have so many questions from listeners, can I ask you some?

Robin: Of course.

Alie: Oh my gosh.

Aside: But as always, before your questions, we have some money to discard toward a worthy cause, chosen by the ologist. Robin pointed us toward the Sanitation Foundation which is the official nonprofit partner of the New York City Department of Sanitation. Their mission is to keep the city clean while celebrating and supporting the essential sanitation workforce and advancing the city's ambitious zero-waste agenda. They're also making the first-ever New York City Sanitation Museum featuring the treasures and the trash collected and curated by Nelson Molina, who we talked about earlier. So, find out more or donate yourself at SanitationFoudnation.org and that donation was made possible by sponsors of the show.

[*Ad Break*]

Okay, let's dig through your inquiries, they have so much value.

Alie: So many good questions. I'm just going to start straight out with Kyla Kelly's question, who asked: How fucked are we? [*Robin laughs*] Alia Myers says: Okay seriously, how much garbage is there? Kelly Shaver wants to know: How much trash is on Earth? Just how... [*squeals*] How fucked...? [*laughs*]

Robin: So, I think because of plastics, we're seriously fucked.

Alie: Okay, that's what I thought.

Robin: Yeah. In terms of a metric of like, how precisely fucked are we? I wouldn't have... I don't know. I have a child and I am often lying awake at night, seriously worried about the future that that child, that child is 23, that child is no longer tiny, but that child is young enough, maybe they will have a child of their own someday, what... what crisis are we guaranteed to leave them? I can't answer it, but the possibilities are numberless. So yeah, very fucked. Thank you for that question.

Alie: I mean, that's a... that was the answer I thought. Good to hear from an expert. [*laughs*]

Robin: An expert, that's my expert... yes.

Aside: Robin later emailed me to say that though she came off as rather emphatic about it, she wanted to add that being fucked is not the same as being hopeless, and where we're at, if things don't change, is really bad. But that hoping and striving for change and improvement is still the right move, as always. So, don't throw your good intentions in the garbage. Besides, is there even room for them?

Alie: Kristina Weaver wants to know: Is there a real possibility of running out of places to put our garbage? The movie *Wall-E* comes to mind when they say this. Have you seen *Wall-E*?

Robin: Five times. [*Alie laughs*] I love *Wall-E*. [*“Waaa, Waaall-E. Wall-E, Wall-E.”*] It’s one of my favorite movies. No, we are not running out of places. In part because more current landfill technology uses a cellular system whereby you are encouraging the decomposition of what’s in there, so it happens faster than if you just bury it and walk away. So, there’s like a quadrangle of cells and when the last cell is as decomposed as it can be, it’s much less quantity and so you can reuse it. Also, there are vast stretches of— I mean, if we wanted to, we could fill all those lovely, the plains of the Midwest, and the rural areas. If we want to keep landfilling, we will not run out of space for a very, very, very long time. It’s going to cost arms, and legs, and heads, and toes to get it where we want it to go, right, by whatever transportation we choose. But if we want to do that, we’re not going to run out of space anytime soon.

Alie: Mm-hm. Is it more about not producing so much?

Robin: Municipal solid waste, in the United States, and that’s the technical term for what most people think of when they hear the word garbage; like, what’s in your kitchen wastebasket or on the curb in the litter basket. That accounts for, at the very, very most, 3% of the nation’s waste stream.

So, I talked earlier about propaganda. There is a lot of attention to what’s at the curb and where it goes, and the harms it causes, all of which are real. But off stage, with far less public attention, are the far more harmful, much larger quantities of waste from a host of industrial, and agricultural, and mining, and medical systems, among other big categories. So yes, we should make less. But again, this question of scale, it has to scale up beyond us as people, individuals, and individual cities. Again, I’m not therefore saying we shouldn’t recycle, we shouldn’t generate less waste in our own lives because that *is* the start.

We don’t smoke in almost any public venue anymore. That happened because of a confluence of influence from scientists, health experts, and just plain old people who were tired of getting their air polluted anywhere they went, as well as the devastating health consequences of smoking cigarettes, right? So, it wasn’t because the government woke up one day and said, “Oh my, we should stop people from smoking because it would be good for them.” That’s not what happened, it happened from the ground up. One of my dreams is that plastic water bottles will be similarly scarce in the world, from a similar kind of push, because if we really believe that, then the change *is* within our power, together with each other. It has to be a coalition, it can’t just be me, myself, and I.

Aside: And for anyone wondering when plastic water bottles started choking the planet, you can look no further than the marketing success of Perrier water in the 1970s because reports linking diet sodas to health risks started rising. So, this Fraunch mineral water became very popular through marketing to the yuppie community. And then Nestle bought Perrier in 1992. Pepsi entered the arena launching Aquafina in 1995, and then Coke hopped in the bottled water waters in 1999 when they launched Dasani. Did you know that Aquafina and Dasani are Pepsi and Coke? Did you know that?

Did you also know the huge secret? Most of that water, even if it purports to be from Yosemite Springs or whatnot, it’s actually just tap water; it’s just municipal water, filtered, bottled, and it costs more than gasoline per gallon... We’ve been had. But patrons Susie Shipman and Ella Grace both asked if we’ll ever go back to a less wasteful and maybe plastic-free existence?

Robin: There's a brilliant book called *Waste and Want*, by a historian named Susan Strasser. She delves deep into how disposability became our preferred choice over reuse. For example, you're on a train, you go to the restroom, it used to be a towel that rolled, which I remember from when I was young.

Alie: I remember those too, yeah.

Robin: Now, I think people might be horrified to go into the Amtrak restroom and not have a paper towel to use. Same with, there used to be public drinking options around the city with cups on chains attached to the fountain so you could just dip the cup and drink from the cup. I don't think we would do that anymore. And there are good reasons why we would hesitate to do it, but the alternative of a discardable single use, that creates a host of nightmares that are sort of on the other side of it.

So, the other thing about the rise of single-use plastics, you're selling more. Plastics, they are manufactured and sold, and the more single-use utensils we use with our takeout food or the more wrap we have around our throwaway Dixie cup, whatever it is, somebody is making money on that. So partly, it's follow the dollar.

Alie: That's a really interesting point.

Robin: There are still city water fountains all over the place and I drink from them without any hesitation. And New York City water is famously wonderful and healthy, and pure, et cetera so... yeah.

Alie: I at least love seeing more places in airports where you can refill a water bottle. Especially since, in an airport, the consumerism there comes with a \$9 price tag to get a glass of water. [*Robin laughs*] Kelli Brockington and Ella had great questions. Ella wants to know: What's the difference between garbage and rubbish? And Kelli asked: Garbage, versus trash, versus litter. Please define. Are those different definitions?

Robin: Not really anymore, I would say. But there used to be, there used to be distinctions. I think now, the thesaurus would give you rubbish, or garbage, or trash as synonymous. Litter is different; litter is sort of, [*sighs*] waste out of place. Like, you know it's not supposed to be at the curb or on the street, it's supposed to be in a litter basket, or a garbage bag, or a truck, or a landfill. It's not supposed to be loose. There's a fantastic novel by one of my all-time favorite authors, China Miéville, and the book is called *Un Lun Dun*. One of the key characters is feral trash. [*Alie laughs*] And I think of litter as feral trash.

Alie: And it's funny because once you put it in a litter basket, it's no longer litter.

Robin: Correct. But trash in general, and litter in particular, has a way of escaping its confinements.

Aside: And Robin says that in the 1890s, New York had more clear distinctions between garbage, which usually denoted food waste, rubbish or trash which was other items, and excelsior, which sounds like a model of SUV like, the Lincoln Excelsior, but it really just means wood shavings and sawdust. And of course, American English favors garbage or trash. Brits call it rubbish, and their garbage cans are dustbins, after the coal ashes that they collected. But anyway, yes, nice names, gross stuff.

Alie: Rubbish sounds cuter.

Robin: Rubbish sounds more sophisticated.

Alie: It does. It sounds less smelly than garbage.

Robin: It certainly does. Yeah, garbage sounds gross but rubbish...

Alie: *[laughs]* A lot of folks, I'll list them in an aside...

Aside: Joe Mueller, Brie, Brie Stewart, Miriya, Danae DeJournett, Justin Saucedo, and Pauline Depierre...

Alie: ... want to know about people. Are people going to the dump? Is that a disposition method? How often do people turn up in dumps?

Robin: What people and what dumps, and what do you mean by dumps?

Alie: Like, how often are there dead bodies or body parts?

Robin: Oh, you mean— Oh that. I thought you meant how often are people just going to the dump because you know, "It's Friday night, got nothing to do, let's go to the dump." Which in fact, people do. *["We have fun... I took you to the dump, I let you shoot my gun at some rats."]* Because some smaller towns, some smaller dumps, they put aside things that might be useful. There's a fantastic one I go to sometimes in Vermont that has a whole little building full of stuff that people don't want anymore but somebody else might want it and it's always fun to rummage around through that non-rubbish.

In terms of bodies going to dumps, of course, I mean, that happens. It's... There have been, sort of, myth-level stories about human bodies who have been buried at Fresh Kills Landfill in New York City. Of course, there are cartoonish stories about mobsters getting rid of their enemies in the landfills of the meadowlands and other parts and landfills in this part of the world. Almost certainly there are, but I don't have firm stories about it.

Alie: But that's not why Fresh Kills is called Fresh Kills?

Robin: No. *[Alie laughs]* Fresh Kills the name comes from, the roots are in Dutch. Kills, like Catskill, Peekskill, it means near a creek or stream, so it has nothing to do with death.

Alie: Okay. But you've never seen like a hand sticking out of something have you?

Robin: I have not but there are sanitation workers I've worked with who have.

Alie: *[Gasps]* What's the protocol?

Robin: All kinds of city agencies; police, county court, the medical examiner's office, Department of Health. There's a whole... I don't know what the protocols are, but it activates a whole lot of response.

Alie: Yeah, augh. Are rugs...? *[Robin laughs]* Do rugs get a bad rap for a reason?

Robin: Yeah, sometimes. Yes. Also, there was a story from a few years ago that a crew was working a block, and someone had discarded a couch. And as they put it into the back of the truck, thousands of dollars' worth of cocaine fell out of it. *[laughs]*

Alie: *[Big gasp]* Oopsie!

Robin: Oh yeah, big oopsie.

Alie: Is there a protocol for that or is it just like, put that on eBay, see what you can get?

Robin: *[laughs]* Yeah, no, they would have been fired and jailed if they had done that.

Alie: That's a good point. I guess not worth that. Did you hear the story about the guy who threw away a disc drive full of Bitcoin?

Robin: I did hear that.

Alie: Has he reached out to you to be like, “Can you help me out here?” [laughs]

Robin: Was he even in New York?

Alie: No, I think he was in Essex or something, I think he was British.

Aside: So, James Howells, a Welsh computer engineer, accidentally tossed some bitcoin into a landfill in 2013 and has spent nearly a decade and potentially millions of dollars developing AI trash scanning schemes, and robot dogs to help him locate this disc drive with his bitcoins. How many bitcoins? 8,000, which are worth about \$145 million, even with Bitcoin dropping to less than a third of its top price this year. Has he got a chance?

Alie: No, it’s gone, isn’t it?

Robin: Well... probably. I mean, it exists in the world. If it’s in a landfill, it exists in the world. If the records were kept well enough to go back and have a pretty good guess of exactly where it was buried, and he was willing to probably pay a hefty amount of money to get them to excavate– Here’s the other thing though, how far down is it and what infrastructure has been put in place on top of it? Because if it’s a landfill built today there are leachate, and methane, and other volatile organic compound retrieval and treatment methods. So, it’s not just a hump of earth with garbage inside, it’s a very complex, very carefully engineered geography. And if his Bitcoin thing is down many layers and they would have to disrupt the system that then is part of the entire complex... I don’t know that there’s enough money in the world to convince anybody to do that.

Alie: Right. The sad thing is I think it was like half a billion dollars on a disc drive of Bitcoin. But the sad thing is just Bitcoin’s tanked in the last 6 months so it’s like, every day that he’s not getting it is just... I just, I want him to do that *Eternal Sunshine* and just be able to take that part of his brain that knows he threw away Bitcoin and just take it out of his brain and just let him live, you know what I mean?

But that brings up a good question though, Bradley Ladwig, first-time question-asker, long-time listener says that: I’ve heard that new landfills are using enzymes to speed up decomposition and using methane capture to generate electricity. Are those methods being widely utilized yet?

Robin: In a contemporary landfill, yes.

Alie: Oh! Okay, that’s great! The methane capture, does that go right back into the natural gas pipeline?

Robin: So, I don’t know the physics or the chemistry of this, but it’s part of gasses that are, at least in this part of the world, sold back to the national grid and then are used to help heat the homes in the area.

Aside: Just a side note on this. So, natural gas and landfill gas, or LFG, aren’t the same thing. Just because when microbes are chomping, and burping, and doing their thing, they’re also making CO₂. So, LFG, or landfill gas, straight out of the pipe, raw, might be 50/50 methane and CO₂ with some other volatile compounds mixed in, give or take. So, vertical and horizontal pipes are buried in the landfill, and they collect the gas and then it gets cooled and processed before being sold for other purposes, as natural gas. But landfills are farting, and we capture it, we cherish it, and then we burn it for money.

Speaking of gross, Shelby Reardon asked: How dirty is trash? And E-Veh-Lease Sanchez requested info on the worst thing Robin has ever found in the garbage. She wasn't the only one.

Alie: Amy Narimatsu wants to know: What's the nastiest thing you've ever seen?

Robin: I find a large conglomeration of maggots at the bottom, let's say, of a plastic or metal garbage can to be really... like absolutely wigs me out. And that's not fair to the maggots. [Alie laughs] They're just little beings in the world and we create the conditions for them to exist. And in fact, this is really gross but if you have a wound, like a deep flesh wound and it's not healing but you drop a maggot in there, that maggot will eat all the dead, infected flesh, and you will have a very healthy wound that then will heal. So, maggots actually could have a role in healthcare and have had in the past, but yeah. So, I... maggots for me.

Alie: They're just babies!

Robin: They're just little beings trying to exist in the world. I feel that very strongly.

Alie: Just infants, they're just fly infants. [laughs]

Robin: Even if they were grown-up flies, I'm less wiggled out by them but don't they have a right to live? And hell, we made the conditions that make them prosper!

Alie: We invited them to the party.

Robin: We did! We threw the party and we're like, "Perfect for you maggots, come on over." Same with rats. New York City among other cities, but because we use plastic garbage bags, we have created what a colleague of mine calls Ratopia.

Alie: [gasps] Okay... Why? How?

Robin: Because we have food waste in those bags all over the city, especially at night because rats tend to be nocturnal. So, we put, from restaurants especially but food waste from houses as well, we put them out, the bags. Bags! I don't care how minty the flavoring of the bag is, it just means the rat will have breath that smelled like he just brushed his teeth. [Alie laughs] It will not dissuade them from eating into and getting food from those bags. So, as long as we are reliant on plastic bags at the curb at night, we are feeding rats.

Alie: Augh. Well, two things about that. There's an episode I did with Dr. Bobby Corrigan.

Robin: He's my man!

Alie: I love him!

Robin: Bobby is the best! He's the one that has the term Ratopia. I didn't know you did one with Bobby, I missed that. Oh, fantastic!

Alie: Yes! Yes, Urban Rodentology.

Robin: Yeah, yeah!

Alie: Oh, I love him. I love him.

Robin: Bobby's the best. Bobby... yeah, no Bobby is the best.

Alie: Absolute best in the world at what he does. And there are a ton of people, Grace Robisheaux, C_to_the_K, Allison Babberl, Allie Brown, Super_Sara, Nico Peruzzi, and Diana M all had questions about trash bags. Grace wants to know: Are there biodegradable

garbage bags? C_to_the_K wants to know, are you Team Scented Bags? C_to_the_K says, "I am not into tropical garbage." Are there better ways to collect our trash?

Robin: Collect or leave on the curb?

Alie: Leave, I guess either.

Aside: Let's get into it.

Robin: Those are two really big questions. So, in terms of better ways to collect it. Certainly. If we are reliant on individual trucks which, at maximum capacity, in New York, the standard truck is spec'd for about 12.5 tons, in certain conditions, you can squeeze as much as 14, 15 tons on that truck. But if you think about that we generate about 10,000 tons *a day*... But then, how do we, you don't want 8.8 million people driving somewhere with their garbage to drop off their little household waste... The infrastructure and air quality stress form that would be absurd.

There are a couple of pilot programs right now that are containerizing garbage in the middle of a block, like they do in many cities in Europe where I, a householder, can carry my bag, put it in the right container, it locks behind me, rats can't get it, and then the truck comes, I don't know at what intervals, to get that material. You're still dealing with a truck. We have designed the system sort of by default but because we designed it, we can redesign it. We could decide to do it differently.

In terms of better ways to leave it for collection, if we want to use that collection system still, and instead of leaving it on the curb, first of all, plastic bags are a disaster. [*"I thought so."*] If we did compost more rigorously, if we separated our food waste and put them into what New York uses, what they call the Brown Bin system, those brown bins are almost completely impermeable to pests. I think a really, really stubborn rat that came back to the same one night, after night, after night *might* be able to get through. But they were designed to be super sturdy. People say, "I don't want to compost because I'll get rats because of my food waste all in one place." No, you're putting your food waste in a far more secure container and leaving the rest of your garbage that the rats don't want. You will have fewer pests if you compost. The public has yet to understand that on a broad scale.

Plastic bags were introduced for good reasons between 1969 and 1971 in New York and they do, they're easier in many ways for the householder. I want to say they cause fewer injuries for the worker but that's not necessarily true, it's a different type of injury than what metal cans created. But the convenience of it, you don't have to store the bags when they're empty. There are all kinds of ways that they're convenient, but they create a host of problems like rats.

Alie: What did people use before plastic bags?

Robin: Metal garbage cans.

Alie: That was it? Like just Oscar the Grouch, straight up.

Robin: Yeah.

Alie: I guess I remember my dad dragging that to the curb. Those were everywhere in New York before then?

Robin: Yeah. And if the lid was off a little bit and it rained, it filled with rainwater, and this was also when a lot of buildings heated with coal, so you often had coal ash in the cans. The

cans get rusted, the cans get dented, those rusty edges then cut workers and then they get Gangrene, no...

Alie: Tetanus?

Robin: Lockjaw, tetanus yeah. So, the cans were not great either. They're also heavy as hell, as the plastic cans we call them, plastic containers can be, receptacles. And then you have the weight issue of, how do you lift it? The cans were not great. But bags are not great either.

Aside: Okay but patrons, KJ, first-time question-asker Stephanie Trout Berman, Christina Kasauskas, Connie E Carringer, Nicole Kleinman, Samuel Harvey, Barb Chang, Ira Gray, Marin Proffit wanted to know about hazardous items and the dangers lurking on curbs.

Alie: How often do those cuts or sticks with sharp things like...

Robin: So needles, I don't know how often needle sticks happen but they happen. Sanitation and refuse work, according to the bureau of labor statistics, is far, far, far more dangerous than being a cop or a firefighter and it's *always* in the Top 10 Most Dangerous jobs list, which comes out every two years. That category, sanitation and refuse work, is always somewhere in the top 10. It moves maybe from 4 to 7, or from 7 to 5, but it's always there.

The three sources of harm are the trash itself because, especially with plastic bags, it punctures the bag, it punctures the workers. The truck, the mechanics of the truck. When you put a bag in the back of the truck, it's called the blade, the hopper comes down and scoops it up to compress it into the body of the truck but that exerts immense pressure, and often what is caught by the blade of the hopper, catapults back out at you. So, you never want to be behind a truck when the hopper is cycling. So, that's another source of harm, the truck. Also, mechanics of the truck fail sometimes and hurt people.

And then traffic. Motorists are impatient to get around a truck, understandably, but often without remembering there are human beings who are working with that vehicle and they're somewhere nearby. And if you go around them, take care that you're not going to hurt them, hit them, kill them. So, those are the sources of the harm and it's ubiquitous. You will not get through a 22-year career without injury, you just won't. Even if it's something seemingly mundane like your discs erupt or your rotator cuffs in your shoulder... and I say seemingly mundane, those are crippling. So, even if it's that, you wear the work on your body for the rest of your life.

Alie: And I'm going to guess that sanitation workers don't get free Starbucks like cops and firefighters.

Robin: There's all kinds of... There are sporting goods stores where if you're a cop or a firefighter, you automatically get 10% off. There are, yes, free doughnuts, the famous doughnuts for cops. You don't get that as sanitation... Yeah, it's definitely the stepchild agency of those three.

Alie: Is there something that you feel like sanitation workers should get at the holidays? Should you be baking cookies and leaving them somewhere that says, "This is not garbage this is for you."

Robin: Yeah. Go to your local garage with holiday cookies, have enough for everybody and understand there's more than one shift, but yeah. Or talk to the garbage superintendent and find out what deli the guys like most and order a big old, one of those 6-foot-long sandwiches. You can't give them beer because of rule changes but, you know, sodas and anything... Especially if you do it through the garage. If a sanitation worker is on the route

and you offer him even a cup of coffee, technically it's illegal and technically they could get in really big trouble for it, even if it's something humble like that. So, if they don't know you and you offer them a cup of coffee, they're probably going to say no. But if you go through the garage and you're like, "My 2nd grade class wants to adopt your garage," or my community organization, or my family, we just want to acknowledge you somehow... Yeah, heck yeah.

Alie: Mm-hm. Oh, that's so good to know.

Aside: So, cookies, sandwiches, do it. Now, some patrons, Isabel Slaymaker, Margo Rosenbaum, Kylie M Smith, Eric Johnson, and Suzy Kroeger wanted to *know*: How smelly?

Alie: A lot of people, final question from listeners, want to know, like Deli Dames wants to know: Do people who work directly with garbage and sanitation, does it change their sense of smell? I know that you said that when you were working with it, you stopped noticing it. But is there anything that sanitation workers do for themselves to end the day and get back to home, or anything that the municipalities are doing about smell because it's something that it's a stigma?

Robin: I have never asked them if it has changed their sense of smell. That's a lovely question and I don't know the answer. I will say, many sanitation workers would never, ever wear their uniform home. They will shower and change back into street clothes, and some garages actually pitched in to buy washer/dryer for the garage, so they never take their uniform home, they wash it on site. So, they're never bringing it into the family laundry system. I know some workers, that's their choice. I know others who are completely nonchalant about, "Yeah, whatever, I washed this last week, what's the big deal?"

Alie: [*laughs*] I mean, I guess a lot of people wear shoes all over the city and then wear the shoes inside their house without taking them off! So, you know, who knows?

Robin: That has come to wig me out as much as somebody picking their nose and eating the boogers, [*Alie laughs*] like just... When I see shoes inside, I just, I'm like, [*cringing voice*] no, you don't have to do that.

Alie: Take it from someone who literally is a sanitation anthropologist. [*laughs*] If that grosses you out, you know, take the shoes off at the door.

Robin: Apparently also, if you want to cut your risk of getting sick from anything, COVID, the flu, anything, there are two things you should do as soon as you walk in the door of your home. One is, wash your hands. The other is, take off your shoes. Those two things together, apparently, are absolutely excellent protection. It's not a failsafe, but you are far less likely to get sick if you do those two things.

Alie: I remember hearing that hemlines got shorter because of Tuberculosis because people were just dragging long skirts through *loogies* and bringing them back into their house. So like, I just think about that when I think about taking my shoes off.

Robin: That is a cool factoid.

Alie: Blergh. Now, there's got to be something that sucks about studying garbage, other than the term garbagology. What is the thing that is the hardest about the job or the toughest thing about the field in general?

Robin: This is a consistent source of dismay for me. When acknowledging essential workers, city uniform forces, people whose work is fundamental to our daily well-being, the people who collect our garbage and who sweep our streets are almost never mentioned, and it breaks my heart. And I include here not just municipal workers but people working for the private companies as well, whose jobs are often far, far more difficult than what the municipal workers have to face. And yet, we don't acknowledge them.

So, even just saying thank you when you see somebody working the truck, it's a small gesture, but what if everybody did it? What if that was understood like, "Oh! There's the sanitation guy! I'm going to say thank you." What if that was just expected, and normal, and common? That would be fantastic. Because that would then also trickle up, as it were, to helping when there are more formal acknowledgements, making sure that those folks get the recognition they deserve.

One recent example, September 11th just passed, the 21st anniversary. Sanitation was absolutely pivotal in the city's response, but rarely gets mentioned when there are formal acknowledgements. No one on the job died on the job because of that tragedy. But since that tragedy, 112 people have died of very weird cancers, almost all of which are directly attributable to the exposures they got through working Ground Zero. There's a young woman who works for Sanitation, she has a background in film, who is doing a documentary to try and get that story more attention, but it's still generally not well known, at all. So, my source of dismay, and I realize I'm kind of going on and on about this, but they deserve more public awareness, and praise, and thanks, and gratitude. They need to be front and center in our attention.

Alie: And I'm also going to guess the moniker of garbage man is not what you use anymore.

Robin: Sanitation worker.

Alie: Yeah, and I imagine that must be a label that they hear a lot.

Robin: There was a headline in the *Staten Island Advance*, something about a garbage man and I wrote to them immediately. And I didn't say it in language as strong as I felt, you know, you want to be polite. But they changed the headline.

Alie: Good.

Robin: It's one small thing.

Alie: I love that you're an advocate for that and that you've been in the actual job, and in the uniform, and in the truck.

Robin: I'm very proud of that.

Alie: Yeah, you should be. What is your favorite thing about what you do in general, about studying this, about being an anthropologist, about working in sanitation, about the friends you've made? Anything.

Robin: Sometimes I look around at the university where I work, and I wonder if my job in NYU matters. Yes, I teach, and maybe I have influence on my students, and yeah, I write some although not as much as I should. That's good.

But when I'm working with sanitation people, their work absolutely matters to the well-being of the city every single day, profoundly so. It's so important it's like the oxygen in the air. We get to completely overlook it and take it for granted and just assume it's going to be

there, but if it weren't, we would be in deep shit. Connecting to people whose jobs are so profoundly essential, in the deepest possible way, that is deeply satisfying.

Also, that they've let me in. Because who the hell am I? But over time they've let me in and that's an honor. I also really enjoy watching their friendships. They form bonds of camaraderie that often last far longer than the job itself, and I don't see counterparts of that within NYU, and maybe that's because I'm sort of an introvert in this world and maybe that's on me, but I really enjoy watching the bonds that they form in the trenches on the war on grime. [laughs] I still have trouble telling that story without choking up, in fact in that moment in the TED Talk, I had a moment of, "I can't cry at a TED Talk."

Alie: So, thank your sanitation workers.

Robin: Yeah.

Alie: Thank you so much for doing this.

Robin: Thanks for your interest. And thank all your readers for their great questions!

Alie: Oh! Such good questions. I literally could talk about garbage forever. [laughs]

Robin: Indeed. As one could.

So, ask smart people garbage questions because we're here to find out, and look, they love answering them. Go watch Robin's TED Talk, go google composting if you feel inspired, clean out a closet, get a reusable water bottle if you don't have one, and vote. For more on Dr. Robin Nagle, you can see the links in the show notes and enjoy her book, *Picking Up: On the Streets and Behind the Trucks with the Sanitation Workers of New York City*, which we'll also link in the show notes. There will be links to so much that we discussed on my website.

We are @Ologies on Twitter and Instagram and I'm @AlieWard on both. *Smologies* episodes are kid-friendly, shortened versions of classics, and they are scrubbed of filth. They're in our feed or all collected at AlieWard.com/Smologies, I think we've got like, 17 *Smologies* episodes up already. Thank you to Mercedes Maitland and Zeke Rodrigues Thomas for editing those. Thank you to Erin Talbert for adminning the *Ologies* Podcast Facebook group with assists from Boni Dutch and Shannon Feltus. Emily White of The Wordary makes professional transcripts and Caleb Patton bleeps them. Susan Hale handles merch and so much else. Noel Dilworth does all our scheduling, Kelly R. Dwyer helps with the website, and she can design yours too. Nick Thorburn wrote the theme music, and our lead editor is treasure, Jarrett Sleeper of Mindjam media.

If you stick around until the very end, you know I tell you a secret. This week, there's two. Number one, if you listened to Vampirology, you'll know what I'm talking about but, "Art thou a spirit of health or a goblin damned?" merch is on the way. It's droppin' this week, I'm very excited about it. And second secret is I keep getting this song called "Crush" by Ethel Cain stuck in my head because there's this one lyric that just is on a loop and the song is about some piece of shit guy but the lyric I get stuck in my head goes, "His older brother bagged the valedictorian/ His mother, steady, screaming he should be more like him." And just, what a rhyme, valedictorian, more like him. And I enjoy it. Okay goblins, [inhales deeply] exciting. Berbye.

Transcribed by Aveline Malek at TheWordary.com

Links to things we discussed:

Visit Robin Nagle's [website](#)

Follow Robin on [Instagram](#) and [Twitter](#)

Read Robin's book [Picking Up](#), an ethnography of New York City's Department of Sanitation

A donation was made to the [Sanitation Foundation](#)

[Teen death rates in urban vs. rural](#)

[Video: "Community Problem" trash film from the 1950s](#)

["Is this the end of recycling?"](#)

[Treasures in the Trash =: Nelson Molina Collection](#)

["Office of Invisibility" art project](#)

[Painting collection trucks](#)

[New York asking folks to take trash out between certain hours](#)

[Let's go to the dump and shoot rats](#)

[New York City bodies and dumping grounds](#)

[Roy De Meo: gangster who disposed of 200 bodies in a dump](#)

[Keep America Beautiful wikipedia](#)

[Artist in Residency at the New York Department of Sanitation](#)

[Americans throw away \\$62 million in coins every year](#)

[Video: Robin's student's film, "One Man's Trash" directed and produced by Kelly Adams](#)

[Video: "Treasures in the Trash" on YouTube](#)

["COMMUNITY PROBLEM" 1950s TRASH COLLECTION & WASTE MANAGEMENT VINTAGE FILM by CATERPILLAR INC. 52404](#)

[Barren Island's Treasure Trove in the New Yorker](#)

[New York's 'Glass Bottle Beach' Closed After Survey Finds Radioactive Waste](#)

[Edward Humes Garbology book](#)

[Spinning the Bottle: California's landmark recycling system is in crisis](#)

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