CATALYST
feminism, theory, technoscience

Carpet Bombings: A Drama of Chemical Injury in Three Acts

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> My life has been filled with carpet…both fleeting and long-term relationships with carpets. I remember, I remember carpets.
> —Jean Halley, "Ranch Style: A History Told in Carpets"

More than half of indoor flooring in the United States is carpet. Americans lay enough new carpet each year to cover 40% of Rhode Island (Building Green, 1994). Commonplace, soft, unnoticeable, and ubiquitous, the commodity itself seems to defy attention—until enough people develop a critical mass of perceptibility (Murphy, 2006). Carpet is captivating because most people, all the days of their lives, are surrounded by it—in schools, universities, homes, cars, and offices. Emulating handwoven Persian rugs as a status symbol of Victorian domesticity, civility, and luxury of the leisure class (Veblen, 1924), wall-to-wall carpet became one of the new markers of domesticity for the upwardly mobile in the postwar era. As symbol of the patriarchal idyll, it began to appear in offices in the 1960s to provide a middle-class aesthetic for executives and to soften the cramped cubicle layouts of the inner secretarial force (Murphy, 2006).

It might be ubiquitous, but is it safe? When "pollution comes home," or enters feminized occupational settings such as schools and universities, environmental psychology and anthropology shows that people tend to discount risks of everyday items (Douglas & Wildavsky, 1983). The popular imagination still ties

Grandia, Liza. (2020). Carpet Bombings: A Drama of Chemical Injury in Three Acts. Catalyst: Feminism, Theory, Technoscience, 6(1), page 1-8.
http://www.catalystjournal.org | ISSN: 2380-3312
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cancer with industrial contamination events in more "public" occupational settings or in "outdoorsy" air or water sources (Altman et al., 2008)—not with something as domestically clichéd as carpet. However, what if, like domestic violence hidden by the private walls of the home, synthetic carpet is unsafe for vulnerable bodies? (Halley, 2005; Snyder, 2019).

Although frequently held culpable in "canary in the mineshaft" narratives of chemical injury, carpet has no single charismatic opponent, no victorious environmental justice hero (Auyero & Swistun, 2009)—just broken bodies coping with the corporeality of slow violence. Although some do eventually become causal experts on their bodies' rebellions (Murphy, 2000), the path to chemical consciousness may be convoluted and coincidental. In an age of corporate gaslighting, how are we to study the toxicity of banal objects? Trained as an anthropologist to assemble patterns through situated observations, I documented my somatic rebellion to carpet for incredulous bosses and decision makers through "chemo-ethnography" (Shapiro & Kirksey, 2017). With myself as intoxicated subject or what Alaimo (2014) might describe as a posthumanist narrative of transcorporeality, I traced my tenuous health to something trespassing from the tufted floors on which I involuntarily tread. Knowing what I now know, my narrative has a certain Shakespearean foreshadowing, along with classic motifs of suffering, contestation, and redemption, but the finale was anything but foretold.

Opening Act

Although I suffered classic sick building symptoms from my very first week as a book-collar worker, I dismissed them as merely signs of tenure-track stress. Soon into second semester came a diagnosis of non-Hodgkin's lymphoma with an aggressive extra-nodal breast tumor where none had been on a mammogram two months before. After brutal chemotherapy and radiation, I returned to work my fourth semester with an inch of awkward curls, but felt continually exhausted and nauseated. With the demanding sixty-plus-hour weeks that professors must sustain, I wondered if the stress of ordinary faculty life was simply too much to handle. Not until the summer when my office trips slowed to more irregular visits did I start to notice the pattern. I only felt bad after being in my office. More night sweats. Bleeding in my inner ears. Lymph nodes swollen into golf balls. A kidney-bean sized lump in my chest. Terror. Emergency PET scans. Watch and repeat in six months. Relentless cognitive fog that seemed more than "chemo-brain." How can I get tenure if I can't remember that Dick Cheney is the vice president? How can I keep my health insurance if I'm not a professor? What could be making me

so ill at work?

With "apologies for the trouble," I asked the provost to relocate me temporarily. Thus began a futile quest for a non-toxic room of my own. Thirteen offices later, I dug into local newspaper archives to see if the whole area might be an old factory site with hazardous waste. More and more faculty and staff began reporting feeling ill in our building. Just miles from the birth of the Boston Women's Health Collective, our bodies were once again battlegrounds (Alaimo, 2014). Our collective citizen science inventory of symptoms included dizziness, nausea, fuzzy thinking, sleepiness, sore neck/stiff joins, headaches, burning skin, irritated or twitching eyes, sore throat, diarrhea and bloating, insomnia, depression, irritability, hives, eczema and ridiculous dandruff, thirstiness, burning lips, difficulty concentrating, and *a sense of needing to escape.* (Relieved, at last, to have collegial affirmation for my limbic distress, my notes from a faculty meeting have a margin exclamation, "Yes! Fight or flight!") Somnolence followed this adrenal overdrive, and, incredibly, I took frequent naps on the carpet.
Gable University's physical plant manager "Vincent" suggested that I might just be allergic to the houseplants that I had brought to my office to help clear the fumes. Another day he cornered me to ask if I smoked (no). And, no, I don't have any seasonal allergies. He refused to contract an industrial hygienist for further testing until I could get a medical doctor to identify the specific chemicals that might be causing my symptoms and/or were linked to lymphoma—an impossible task, given the 85,000+ chemicals in circulation in the US.

I continued studying material data safety sheets for the melamine furniture, paint, and cleaning products to no avail. Months later, dashing into my office to retrieve a document, I turned round and round wondering, what could be making me so ill? With sudden clarity, I looked down and realized, my God, it's the *carpet*. Quick citizen epidemiology of my fellow sufferers confirmed this common denominator. Vincent was infuriated that I should question the safety of the tacky blue industrial carpet that he had glued over every square inch of the university's elegant nineteenth-century wood floors. It plastered dormitories, the gym, an estimated 95% of classrooms and offices, auditoriums, the president's house, a new LEED-certified building, and even the dining room. Vincent challenged me, "I've been putting in carpets for twenty years and no one has ever complained," but he let slip, "we used to get high as a kite" with the glue. He threw away the copy of private lab tests I commissioned that showed numerous benzene derivatives known to be carcinogenic in my office air. He also apparently ignored indoor air quality complaints filed by librarians who had been dropping like flies from

assorted cancers.

Vincent moved me to the only uncarpeted space left on campus—a creepy custodial closet in the campus theater. Preferring the power of his master key over intra-campus mail, Vincent left on my desk a brochure produced by the Carpet and Rug Institute (www.carpet-rug.org), the trade lobbying arm for this $100 billion industry. Titled "Clearing the Air about Clean Carpet," the text claims that carpet "improves indoor air quality," "retains warm air longer," and "provides safety protection for the whole family." When I reported the intrusion and Vincent's aggressive stance towards our group of sickened faculty to Provost Gabriel, *I* got called on the carpet instead. "Vincent is a good guy," the provost cautioned me, "Let's get more proof." He did wonder a little uneasily, how is the carpet in my chambers? "Provost Gabriel," I replied, "I regret to tell you that the carpet in your office feels like an anvil on my lungs."

To prove me wrong, on a January morning, Vincent unilaterally sent his men to rip out the carpet from one small hallway in our building to be replaced with vinyl tile. Departmental staff called to complain about the dust they kicked up, and an environmental health professor questioned the vinyl. Vincent called off his men, but left inch-deep chunks of carpet glue exposed to foot traffic. One staff member was almost hospitalized for a severely swollen esophagus, and several others reported new symptoms from the dust swirling throughout the building. The next day Vincent ordered two workers to vacuum the hall, but the glue remained exposed for another half year. A fine dust permeated all the books and papers in my abandoned office. I could no longer tolerate meetings in the one uncarpeted room in our building. I became an itinerate carpet-bagger without the carpet and held office hours on an outdoor bench the rest of that winter.

Later that year at a forum about the President's Cancer Panel, I picked up a brochure for the "chemically-injured." Having been painted as a "sensitive," this concept finally gave me language for an occupation health complaint. I stopped apologizing in my emails and demanded an investigation. A literature search led me to Lynn Lawson's (1993) environmental history of an uncannily similar episode at the headquarters of the Environmental Protection Agency in 1987–88. After new carpets sickened a fifth of their workforce, EPA scientists launched their own investigation and found the common denominator was a semi-volatile compound, 4-phenylcyclohexene (4-PC) that is a byproduct of the benzene-derived glues in carpet. Although both its parent compounds (styrene-butadiene) are carcinogens linked to lymphomas and blood cancers like leukemia, 4-PC has never been

screened for safety. The EPA scientists' union, Local 2050, called for a regulatory exposure limit to be set for 4-PC at 5 parts per *trillion*. The carpet industry countered with a voluntary proposal to self-police at 300 parts per *million* (Hirzy & Morison, 1991).

At last Vincent hired an environmental health consultant who barely talked with those of us who were ill. No tests of 4-PC were made. Tens of thousands of dollars produced a boilerplate report about unknown causality, and the university abandoned the investigation. Franny, the HR director, sent another untenured colleague and I letters explaining that without conclusive proof, carpeting removal would "exceed a cost of [another] $100,000" and therefore, "this is not an accommodation that the University feels is reasonable to undertake at this time." While conveying that each our lives was not worth $50,000, Franny admonished that "re-carpeting continues to be highly requested maintenance project from other faculty, staff, or students" and the university intended to continue using "the same or similar mastic that was used in the recent Geography building project (AIM 4300) which meets [Carpet and Rug Institute's] Green Label Plus testing program."

Sierra magazine ranks Gable University as a "Cool" school for its recycling, compost, light savings, and electricity car plug station. Though Princeton Review also ranks it high as a "green college," it seems a sickly shade of green.

Act II, Again

I had to publish or perish, literally. A year later, the scene opens to a new university where I am happily tenured until a botched building renovation sent pulverized carpet glue throughout the HVAC system while I held office hours. Through the cognitive fog of the next ten months, I cannot remember my lines, but improvise with an occupational health claim and citizen epidemiology when the bureaucrats refuse to vacuum the building.

Act III, Enough

Four years later, my only daughter was sickened by new carpet in the public schools. At least eleven children were ill in four classrooms; a teacher got cancer. Yet the district refused to remediate because the carpet was self-labeled "green." Then, like manna from heaven, a group of nonprofits published a report on forty-three hazardous substances in carpet—from heavy metals in the coal fly ash recycled as carpet filler, to phthalates in plasticizers, to "forever chemicals" (PFAS) in stain repellents, to perchlorate (a carcinogen associated with rocket

fuel) for static, and more (Vallette, Stamm, & Lent, 2017). A year later, another report found all these same chemicals in all the "greenest" marketed carpets (Halley, 2005). Three branches of California's Environmental Protection Agency (CalEPA) are actively investigating how to handle the heavy metals in carpet recycling, the hazard of flame retardants (PBDEs) in carpet padding, and "forever chemicals" (PFAS) in stain repellants. In an exhausting two-year fight, we helped elect two new environmentally concerned trustees who proposed and passed a policy to phase out all carpet.

Now may I please exit stage left back to my anthropological comfort zone of dirt floor huts? Alas, a reluctant encore is underway. Carpet remains an invisible disability barrier throughout my university. I hear rumors that new carpets being laid at CalEPA headquarters reek, despite their own pathbreaking investigations into this industry. With a Green New Deal on the national agenda, I wonder what lurks in the carpets in H.U.D. housing on Native American reservations and for other impoverished communities.

Having learned that subaltern toxicity talking points about "green criminology" (Lynch 2018) seem not to be heard in the American Anthropocene, I now speak in intersectional climate allegories about how laying carpet is like pouring spun layers of coal and oil onto floors. Recognizing the potency of neoliberal faith in the guise and guile of green labels, I am adapting my lines for my renitent role of Cassandra of the Carpet in this Greek tragedy.

Acknowledgements

I thank Rachel Lee for having invited me out of my disability closet to speak publicly about carpet for the first time at the May 2017 "Chemical Entanglements" conference at UCLA. I treasure those colleagues at Gable University who believed my warning. I am grateful to the Mellon Foundation for a "New Directions" fellowship in 2017-18 to retrain myself in toxicology for ethnographic research about cultural perceptions of toxicity in everyday life.

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Liza Grandia, cultural anthropologist, is an Associate Professor in Native American Studies at the University of California-Davis, where she directs the Indigenous Research Center of the Americas to support communities facing environmental threats to their territories. For her moonlit civic work on carpet, Sierra Club's northern California chapter awarded her the "best activist group" of 2019.