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# Sidewalks are for people? Futuristic fantasies, disabled lives, and crip sitveillance

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## Abstract

This article considers so-called self-driving food delivery robots in relation to crip studies and surveillance studies. We analyze these disabling technologies through a crip positionality we name crip sitveillance — sousveillance practiced from the sitpoint of crip subjects that engages irony and parody to highlight how new surveillance technologies disable crip lives. We explore as well responses to these vehicles on social media, in which we find evidence that these vehicles provoke unease and, perhaps, emerging crip sousveillant subject positions.

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## Introduction

As we write this, Adelman, a disabled graduate student, is unable to access the Medicaid-funded home care aide provided under Texas' STAR+PLUS Waiver. We cannot be certain whether this interruption in home care aide was caused by the pandemic's great resignation — in Texas, home care workers are paid far less than a livable wage — or by the increased surveillance home care aides must submit to under the 21st Century Cures Act — care workers paid through Medicaid must use the highly intrusive Electronic Visit Verification system. Whatever the causes, Adelman and Banner, the authors, found ourselves commenting on the irony of his lack of home care aids in relation to a futuristic 1990s vision about home care. Reports in that decade from leading robotics industries researchers predicted that, by the twenty-first century, robots would have replaced home care aides, decreasing the costs of and increasing the supplies of home care for disabled and elderly people. Yet Adelman had neither human nor robot care workers available to him. Instead of the prophesized robots for home care, Adelman could encounter robot workers in the form of automated food delivery vehicles, which consistently blocked his path as he navigated campus.

Our campus' sidewalks are covered with what Reddit posts affectionately call "Tobors." Developed by Starship Technologies, these so-called autonomous vehicles, about the size of a 40-pound dog, have a compartment in which they hold campus dining services food products; an accompanying app allows a user

to order food, set a delivery location, and, when meeting the vehicle, unlock its compartment. While the company frames the vehicles as autonomous, Starship also employs humans to observe the vehicles' movements through a computer interface, and to manually take over their movement when necessary, a set up similar to drone operations. Drawing on critical theory on drones as instantiations of military perception and robot imaginaries (see, *e.g.*, Bousquet, 2018; Rhee, 2018), we refuse the affectionate term “Tobor” (“robot” reversed) and call these vehicles autonomous drone vehicles, or ADVs.

For a lucky majority, these ADVs might be the bearer of nourishment from the university's food services. For the unlucky minoritized — the elderly, the non-sighted, wheelchair users, those with arthritis, Myalgic Encephalomyelitis/Chronic Fatigue Syndrome, Ehlers Danlos Syndrome, and/or fibromyalgia — these ADVs are an immediate source of physical danger. For example, when Adelman leaves his residence to go to the library or to attend class, the path for his power wheelchair is often blocked by ADVs idling in or near the curb cuts he needs to access. But not to worry: wait a few minutes, and eventually the humans operating these drones will check their surveillance cameras and pilot them out of Adelman's way. For his patience sitting in the danger zone of the blacktop — certainly Adelman would never kick corporate property out of the way, especially since it would violate the University's honor code — the drones sometimes offer a perky “My apologies!”

This article takes this nexus of enablement and disablement playing out within regimes of surveillance to articulate a new concept for surveillance studies, critical information studies, and critical disability studies: *crip sitveillance*. In surveillance studies, David Lyon (2017) has canonically defined *surveillance* as a watching from above, or a watching that is enacted by those with power within situations of unequal power. In that same literature, *sousveillance* has been defined as “watching from below,” or a watching performed by those without power. As we make clear below, disabled people have long practiced sousveillance. We name the sousveillance practiced by disabled subjects who claim a crip identity *crip sitveillance*. “Crip” is a term reclaimed by disabled people who understand differences denigrated by a normalizing and ableist society as valuable in and of themselves (see, *e.g.*, McRuer, 2006) [1]. Crip culture is defined by irreverence, illogical juxtapositions, and parody, and building on this, we define *crip sitveillance* as a form of watching, jamming, interrogating, and ironically mocking how disabled lives are used to justify new surveillant assemblages while also being posited as obstacles to futuristic scenarios. We use *sitveillance* rather than *sousveillance* to mark out how our sitpoints a term, drawn from feminist standpoint theory, that crip theorists use to mark out how being crip informs one's knowledge — inform our sousveillance. Following in a long line of technoscience interventions that hearken to modes of tactical irony and play, from Donna Haraway's (1987) ironic manifesto for cyborgs to Simone Browne's (2015) dark sousveillance's enactment of subterfuge and networked parody, we define crip sitveillance as a mode by which crip subjects refuse, confuse, and mock surveillance systems.

Mocking, refusing, confusing: these seem apt responses to surveillance systems that seem to mock and refuse our own rights and mobility, and that, as we will demonstrate below, provoke uneasy feelings among the humans who encounter them. While the danger in which these devices put us is deeply serious business, we consider how their aesthetics and marketing, which draw on cute machine design, are entangled with technoliberalism and what Neda Atanososki and Kalindi Vora (2019) call “the surrogate effect.” By contextualizing the introduction of these ADVs at our own university, and the institutional production, maintenance, and promotion of them, we argue, drawing on Nick Blomley's (2010) work, that a pedestrian rationality invested in ensuring the flow of data suffuses the university and its mode of entrepreneurial technologism. The devaluing of some forms of university labor — in this case, racialized food service work — to capacitate other forms of labor — programming work — should be seen, we argue, as linked to, even as it is kept separate from, the devaluation of disabled life that the ADVs present and represent.

Simone Browne (2015) reworks, through a Black studies approach, the concept of sousveillance. Steve Mann's definition of sousveillance is canonical in surveillance studies scholarship. Mann defines it as the "observing and recording by an entity not in a position of power or authority over the subject of the veillance." Browne hones in on Mann's explanation of sousveillance's history: "Before approximately 50 years ago — and going back millions of years — we have what we call the 'sousveillance era' because the only veillance was sousveillance which was given by the body-borne camera formed by the eye, and the body-borne recording device comprised of the mind and the brain" [2]. Browne connects Mann's emphasis on the visual to scholarship on Blackness and visibility to note that within white supremacy, a "cumulative white gaze ... functioned as a totalizing surveillance" [3]. Browne posits "dark sousveillance" "as a way to situate the tactics employed to render one's self out of sight ... I plot dark sousveillance as an imaginative place from which to mobilize a critique of racializing surveillance, a critique that takes form in antisurveillance, countersurveillance, and other freedom practices. ... Dark sousveillance charts possibilities and coordinates modes of responding to, challenging, and confronting a surveillance that was almost all-encompassing" [4].

Just as Browne reworks Mann's concept of sousveillance through Black studies, we want to rework Mann's concept through crip studies. First, to refer back to Mann's figuring of sousveillance in history, we note that his emphasis on "the eye" — on sight — has a vexed relationship to disability studies work, such as that of Georgina Kleege (*e.g.*, 1999), where senses other than sight are also rich sites of knowledge production. In other words, smell, touch, and other senses, as well as other methods of knowing such as affects and emotions, are also ways in which sousveillance occurs. (Below, we argue that affective responses to the ADVs exemplify non-ocular modes of knowing — feeling — sousveillance.) Second, we emphasize that the field of visibility is indeed racializing and, as disability studies work has long argued, is also normalizing — that is, organized to distinguish and categorize in terms of normal/abnormal, pathological/healthy, freak/ideal. Surveillance is instituted within a visual field of normalization (see, *e.g.*, Garland-Thompson, 2009). Third, we want to emphasize that this normalizing visual field includes an ableist gaze that seeks to identify, via either the human eye or its technological surrogates, fraudulent claims to disability (see, *e.g.*, Dorfman, 2019). In other words, surveillance of disability coalesces around and expresses the cultural coding of disability as mendacity.

While emphasizing that the historical, social, and structural systems that Browne discusses are not analogous to those of disability (on this point, see Pickens, 2019; Schalk, 2019; Tyler, 2022), we draw from her redefinition of sousveillance as dark sousveillance in our definition of *crip sousveillance*: a position from which to craft critiques of forms of surveillance that are ableist and disenabling.

Such critiques are not new in disability studies scholarship, but their intersections with work in surveillance studies have not always been articulated as such. For example, Susan Schweik's important work on the history of the ugly laws (discussed in greater detail below) and their basis in surveilling public space does not draw out implicit connections with surveillance studies. In their work, Leon Hilton (2017) unearths tactical modes of resistance to the racializing surveillance predicated on "protecting" autistic lives. We would add here that underground economies developed to ensure people on disability benefits might live above the poverty line — benefits granted on the basis of state surveillance of disabled people's bank accounts — comprise a kind of crip sousveillance, where, by observing surveillant systems, disabled people develop forms of fugitive knowledge. In sum, we hope that this article contributes to deepening discussions among surveillance studies, disability studies, and crip theory.

In articulating dark sousveillance, Browne notes that it is not only enacted by those racialized subjects white supremacy surveils. Dark sousveillance, Browne argues, is a practice. It was practiced by a white abolitionist who published a note in a Northern paper warning (free) Black northerners of "slave catchers" who might, under fugitive slave laws, kidnap them. We similarly propose crip sousveillance as a *practice*, not as tied to an essentialized body and its capacities. In other words, people who are not-yet-disabled can practice crip sousveillance. While both of us are disabled — one, visibly (using a wheelchair); the other, invisibly (fibromyalgia and ME/CFS) — in our engagements with both Internet publics and with critically thoughtful undergraduates, we have observed those who are not-yet disabled engage crip sousveillance as a

practice, a point we return to below. When we consider the number of times we have witnessed phone-screenfocused students stumble over the ADVs, the disability studies truism that “being able-bodied is a temporary condition” plays out before us, perhaps indicating an increasing legion of the crip-to-come who, by virtue of colliding with an ADV, might join our state of being crips practicing crip sousveillance. We also view those temporary able-bodied people recording to the Internet their confusion, uneasiness, and revulsion at these ADVs as enacting the potential for allied forms of crip sousveillance. Our own practices of crip sousveillance have taken multiple forms, some of them predicated on the kind of visibility our own disabilities achieve within a regime of ableist visibility. Crip sousveillance, as we will elaborate throughout this article, is a practice available to the many, not just the minoritized few.

However, we argue that the particular kind of crip sousveillance we practice deserves its own term — *crip sitveillance*. Crip studies has reframed the feminist epistemological intervention of standpoint theory (e.g., Harding, 1990) as *sitpoint theory* (Johnson and McRuer, 2014). This terminological revision emphasizes the many physical positions from which, and in which, crip knowledge occurs. We offer *crip sitveillance* to emphasize that being crip — that is, understanding the world through a crip sitpoint — defines the sousveillance we perform. *Crip sitveillance* might be defined as “practices of exposing, disrupting, and irreverently challenging ableist technological systems.” Drawn from crip theory and crip-of-color critique (Kim, 2017), crip sitveillance also insists on identifying and challenging the whiteness that supports these techfuturistic scenarios, which are directly entangled in state-sanctioned differentials of exposure to slow death.

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## Sidewalks, pedestrian rationality, technoliberalism

To begin, we consider the sidewalk and its histories of surveillance. While today it is cameras mounted to ADVs that scan the sidewalk, the sidewalk has historically been a site of human-enacted lateral surveillance, whether such humans were peers, strangers, or law enforcement. In disability studies, human-enacted sidewalk surveillance is notorious in the history of the “ugly laws.” While not always enforced, these laws, on the books in some U.S. states until at least 1974, were enacted for the express purpose of removing from public view anyone whose presence might connote, to the surveiller’s mind, the criminal, the disabled, or the pathological. In her compelling work about these laws, Susan Schweik (2009) notes the history of resistance to them, expressed in cultural aesthetics such as literature and cartoons and through tactics those considered “mendicants” used to make their presence legal, including through authoring memoirs. Although these laws are no more, their legacy lives on today. For example, as Schweik (2011) argues, the privatization of cities drives closures of sidewalk access, as mayors and city planners gentrify areas of cities by placing restaurant seating on sidewalks, or installing metal and stone contrivances to prevent “loitering” of the unhoused.

Federal legislation meant to ensure access to the sidewalk also entailed the tactical efforts of disabled people. One event in what Aimi Hamraie (2017) names “access-knowledge” as a practice and method disabled people undertake is when people who used wheelchairs in Berkeley, California, smashed concrete curb cuts, thus making visible how infrastructure made living independently as a disabled person impossible. This was one among disabled tactics to build access that led to the passage of federal legislation, the Americans with Disabilities Act, in 1993, which mandated public spaces be accessible for disabled people. Curb cuts, ramps: their implementation in the 1990s ensured, and signaled, that disabled people had a right to access. Sidewalks, in this instance, were opened up for all people.

When we stumble on ADVs that block our paths and are confronted by an Internet response to them that posits them as cute — oh, these cute Tobors! — we sense the rise of a new cultural code. Where once what was deemed ugly could be removed, by force of law, from the streets, today what is deemed cute seems to have been given right of way. This appears to pit the rights of disabled people against the rights of corporate interests to move goods — the rights of disabled people against the “rights” of the market.



In his fascinating analysis of sidewalks, Nick Blomley argues that legal and policy domains have not distinguished among these rights. Rather, for Blomley legal and policy arenas have been and are invested in ensuring not rights but rather *sidewalk flow*. Blomley names this ideology “pedestrian rationality,” which we will expand on below. Published in 2010, Blomley’s book appeared prior to the ADV’s sudden takeover of sidewalks, and building on his work, we posit that today this flow is less about the flow of people and goods and more about the flow of data. The most glaring example supporting this claim might be Google’s attempt to smartify Toronto (see <https://www.sidewalklabs.com/toronto>). Run by Google’s Sidewalk Labs unit, Sidewalk Toronto ultimately failed, but its goal is instructive here: ubiquitous computing throughout public space, including the sidewalk, to enable Google to mine and re-sell the massive data it would gather.

To expand on our claim that sidewalk flow now encompasses data flow, we deploy our crip sitveillant sitpoint — that is, our crip way of seeing — to examine the ADVs more closely. First, we ask, how does an ADV surveil the sidewalk? Starship Technologies gives an answer through technical specifications and technological rhetoric. Their public relations officers regularly assure journalists that the ADVs are “80 percent” autonomous due to complex machine learning programming, the lidar on the ADVs, and a few mounted cameras. But this elides an important detail: human workers sit at a desk monitoring the ADVs, able to “see” through the ADVs’ mounted cameras and thus manually pilot them. While this minor but significant detail has been revealed in multiple news articles about companies that manufacture and run these ADVs, our crip sitpoints have revealed this to us multiple times, for whenever we tried to reverse-engineer the process whereby after several minutes an ADV might suddenly re-activate and move out of our way we realized a human worker must have access to controlling them. We argue, then, that the ADVs constitute one node in a broader surveillant assemblage, composed of human workers, technological components, third parties to whom the company grants access to its data, and the technoscientific entities for whom that data is a valuable site of capitalist accumulation. Whatever the technical specifications by which these vehicles navigate the built environment, through our crip sitveillance we re-define their way of seeing as determined by a capitalist surveillance assemblage [5].

Any “way of seeing” is predicated on those who are seen within these visual logics, and so we ask, whom does an ADV see? As indicated above, in the instance of a person using a wheelchair, the ADV does not register disabled modes of living as worthy of visual recognition. For the ADV, a person using a wheelchair is invisible, unrecognizable either to the human worker piloting it or the so-called machine learning programmed into it. Confirming other recent work on disability and the ableism of artificial intelligence and machine learning (Nakamura, 2019; Whitaker, *et al.*, 2019), we argue that the ADV surveillant assemblage prioritizes the movement of commodities and its data flows over disabled bodies, whose modes of traversing the world are de-prioritized.

We find it nothing if not ironic that while the ADV does not recognize disabled humans within its own way of seeing, Starship Technologies has an entire Web page trumpeting that the company’s ADVs “serve” disabled people. Our perception of this as ironic stems from our crip understanding of its predictability, for it embodies a logic already defined within disability studies of technology. Mara Mills (2010) has defined the assistive pretext as a practice and rhetoric that justifies the introduction of new technologies by claiming they are assistive. It is a pretext because once technologies are accepted, it becomes clear they were never intended as assistive, or rather, their assistive function was only an excuse, a rationale, a justification for the technology. The corporations marketing these ADVs are fluent in the language of the assistive pretext: this was obvious in the speed with which that page was added to Starship Technologies Web site. Soon after wheelchair user Emily Ackerman tweeted that one of these ADVs had blocked her in the curb cut and the tweet went viral (Ackerman, 2019), and soon after Banner and Adelman questioned the Starship representative on their campus, Starship Technologies newly added a page on their Web site containing testimonials from disabled people and disability organization representatives about how the ADV food delivery service enhanced disabled lives (<https://www.starship.xyz/accessibility/>) [6].

The assistive pretext cropped up in other areas of the university, in a manner that indicated its intersections with what, following Blomley, we call the “pedestrian rationality” of the corporate, entrepreneurial, and

technologized university. Blomley's concept of "pedestrian rationality" names how three domains that oversee sidewalks — "the municipal engineering department, the courts and the legislature" — view them, or at least, come to regulate them. He argues, "Pedestrianism values public space not in terms of its aesthetic merits, or its success in promoting public citizenship and democracy. Rather, the successful sidewalk is one that facilitates pedestrian flow and circulation. Rather than seeking to promote and enhance a Habermasian public sphere that is distinct from the state, pedestrianism views the sidewalk as a form of unitary municipal property, held in trust for an abstract public" [7]. Under pedestrian logic, the sidewalk exists to ensure the flow of goods (including people) from point A to point B.

Blomley emphasizes that he uses the term "pedestrian rationality" for more than only its evocation of walking; it is also appropriate because it insists on the mundane nature of this logic, its seeming everydayness that allows it to remove itself into the background. But of course, ruptures to pedestrian rationality occur, all the time. A rupture occurred when Adelman, like Emily Ackerman, was blocked from entering the curb cut and had to sit in the street, hoping that anyone driving a car through the intersection would see him and swerve away (see Ackerman, 2019). When Banner and Adelman met with the representative but were unable to obtain satisfactory information from him, Banner asked the University's Accessibility Committee to invite the representative to its next meeting, where she peppered him with questions, joined by other similarly concerned committee members. The representative used the assistive pretext at the meeting, and it was met with murmurs of agreement from those gathered in the room. Essentially, the committee was left with the sense that more campus members would benefit from these ADVs than would be harmed by them. This, we argue, is a form of pedestrian rationality — the mundane, everyday operations of a university enacting cost benefit calculations, deferring to the public safety official (but not the crips in the room) regarding potential harms, and leaving the ADVs free to roam.

Another element of this pedestrian rationality — the pedestrian rationality of a university ensuring that data, credentials, grant monies, expertise, and knowledge production flow through its halls — was the claim that the ADVs were providing jobs for computer science students. Without knowing what grants or what centers/departments were funding such students, we can speculate that the U.S. Department of Defense's significant investment in universities, robotics, and biomechanics might be, if not a direct, at least a provisional logic for developing robots able to maneuver through highly congested urban areas. Or we might speculate that on a campus such as ours with significant federal grants for biomechanical engineering, including high tech prosthetics devices, the newly disabled student, staff, or faculty member presents another opportunity for research and development.

This gesture to employing students might be named an employment pretext. Or it could be understood as the devaluation of certain forms of campus labor. In 2019, campus food services workers employed by Chartwell's, a company that nationally has succeeded in privatizing university food services, undertook a unionization effort. That effort failed. Soon after, the ADVs appeared on our campus, with their presumed value for enhancing the expertise of computer science students. Devaluing one form of already degraded and racialized work for the enhancement of another can be understood through Neda Atanososki and Kalindi Vora's (2019) concept of the "surrogate effect." In their work on the discourses, designs, and imaginaries of robot labor, the surrogate effect names the liberal subject as "a subject whose freedom is possible only through the racial unfreedom of the surrogate" [8]. The technological imaginary posits the development of robot workers as "freeing" humans from "historically degraded tasks," such as automotive manufacture, taxi driving, and, of course, food delivery. By creating "enchanted" automated objects, technoliberalism reifies hierarchies of labor that actively reproduce and intensify "the differential conditions of exploitation under racial capitalism" [9]. The ADVs are developed and deployed under precisely such technoliberal formulations. Presumably they will free humans from the drudgery of food service work; they will enhance computer science students' skills, making them more desirable in the (more highly remunerated) markets for coding jobs. Yet humans still prepare campus dining services' food within exploitative labor conditions, and low-paid workers now are employed to manage the robot workforce on college campuses. With their assistive pretext, the ADVs posit disabled users as liberal subjects, even as their material presence diminishes disabled people's rights to the sidewalk. This disabling of certain humans enacted by the ADVs and their reproduction of racialized conditions of labor, then, is entangled in

pedestrian rationalities of the privatized university. It makes bluntly clear whose futures such ADVs are meant to enable.

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## On the cuteness of ADVs

We now exit the dry and dusty rooms of academic committee labor to enter the livelier — yet perhaps deadlier — domain of the cute. As mentioned earlier, students on our campus often post to Reddit about the ADVs, referring to them affectionately as Tobors. As detailed below, the ADV Internet archive also identifies the ADVs as evoking sentimental registers of cuteness: when they are “disabled,” they become objects of pity. Work in cute studies typically understands that which is “cute” to elicit an affective response, sometimes to care for it, sometimes to engage with it, even sometimes to nurture it. These affective relations involve a blurring of the boundary between subject and object. In her work on cuteness as an aesthetic, Ngai (2015) argues that cuteness inherently involves gender, sexual, and racial power differentials — and here we would add power differentials determined by ability status. Joshua Paul Dale (2016) argues that cute machine design aims not only at inspiring these kinds of nurturant affective responses but also at crafting participatory, pro-social behaviors. As we argue below, our archive of Internet responses to the ADVs demonstrates that such design aims have succeeded. It is precisely the pro-social behavior that the ADVs inspire that diminishes the uneasiness and conflicting affects they also inspire.

The “cuteness” of the ADVs aids their surrogate effect work — that is, how they obscure the racialized and gendered labor (of unfreedom) that the robots supposedly replace. To rephrase, in the designs and promotion of their ADVs, Starship Technologies has drawn on a visual cultural tradition of rendering robot servants as “cute,” a visual technocultural tradition that effaces the historically racialized and gendered labor performed by devalued, coded “unfree,” persons. In other words, this cuteness aids in obfuscating the political struggles over food service labor on university campuses.

Additionally, Ngai’s theorization of cute aesthetics helps explain why so many Internet posts refer to “disabled” ADVs as cute, and as pitiable and deserving of “care.” In one of her elaborations on the aesthetics of cute, Ngai (Jasper and Ngai, 2011) states: “Cuteness is a way of aestheticizing powerlessness. It hinges on a sentimental attitude toward the diminutive and/or weak, which is why cute objects — formally simple or noncomplex, and deeply associated with the infantile, the feminine, and the unthreatening — get even cuter when perceived as injured or disabled.” While Ngai is not addressing disabled humans but rather commodity objects understood under the aesthetics of “cute,” we want to linger, for a moment, on the implicit connections between objects rendered cuter when perceived as disabled and the long history of sentimental pathos associated with disability. That sentimentality, as disability studies scholars have long understood, is a mode by which disabled people are rendered objects that are worthy of pity but not rights, of pity but not independence. Refusing the sentimental register in order to assert claims to rights undergirds the disability activist slogan, “No pity!”

As Ngai notes, “the cute” can easily slide into its pathological manifestations, for example through cuteness’ slippage into phobia. Here, other images demonstrating a different reaction to the ADVs are instructive. For example, one video clip records an ADV as it is smashed to bits under an oncoming cargo train, and it is unclear whether the person filming this is reveling in delight or horror. These posts reveal how quickly some forms of care turn violent. *David, I’m wondering what you, as someone endangered by a potential collision with a large-force vehicle, think about the Reddit post I shared with you ([https://www.reddit.com/r/utdallas/comments/t5qzla/a\\_tragedy\\_of\\_tobor\\_proportions/](https://www.reddit.com/r/utdallas/comments/t5qzla/a_tragedy_of_tobor_proportions/)), of someone observing/recording an ADV get smashed by an oncoming train. In other words, how do you see this from your crip sitveillant perspective?*

**David:** This Reddit post, as I read it, demonstrates the spectacular nature of the ADV. One must also pause to wonder about the evacuated violence of the clip. There is no bloodrobots do not have blood. There are

only sparks, and the quick demolition of the machine. As someone frequently blocked on campus by these machines, the threat of violence to my body is ever present to me. These machines block access to the sidewalk, and so they increase the likelihood that I will be injured by a large vehicle, especially given that public space is not designed for complex, rehab levelpowered wheelchairs such as my own.

The ADVs will occasionally apologize via prerecorded audio, and on the same forum this clip was posted, a user reflects on their sadness ([Figure 1](#)). In contradistinction, one would hope that viewing/recording my disabled, bloodied body would prompt a different reaction.



Adventurous\_Text · 19 days ago

Computer Science

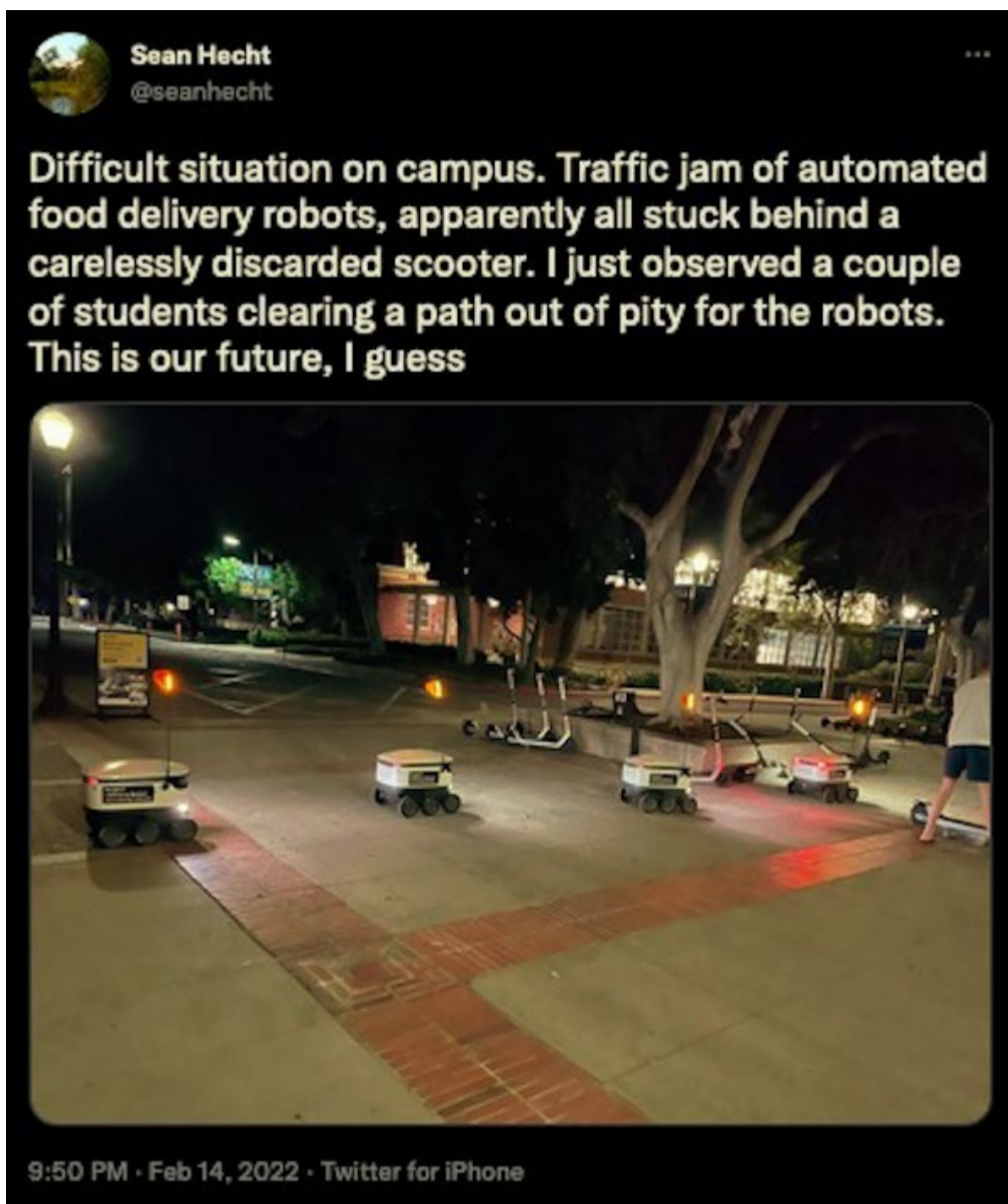
Holy shit I know that's a robot but why do I feel so sad :(

 **4**   Reply Give Award Share Report Save Follow

**Figure 1:** A UTD student reflects on an ADV being smashed to bits by a train.

**Olivia:** I'm interested in thinking a bit more about the sentimental registers articulated in some of our archive of Internet reactions to the ADVs. Here ([Figure 2](#)), for example, is a tweet from someone about them on the UCLA campus:





**Figure 2:** Twitter post about ADVs on the UCLA campus.

There seem to be multiple valences in this tweet: the ironic (“difficult situation on campus”); an ironized helplessness (“This is our future, I guess”); actual resignation (“I guess”). The tweet seems also to be attuned to “the pity for the robots” that motivates the students who ultimately cleared a path for the “disabled” ADVs. Those emotional registers inspired by the loitering ADVs seem distinct from the emotional registers with which city officials and middle-class people approach humans who loiter.

Here, the tweet in [Figure 2](#) raises, for me, questions about what Mimi Sheller (2018) calls “mobility justice.” Noting that freedom of mobility is assumed to be a universal human right, Sheller demonstrates

that in “practice it exists in relation to class, race, sexuality, gender, and ability exclusions from public space, from national citizenship, from access to resources, and from the means of mobility at all scales” [10]. She argues that “mobility (in)justices ... are the process through which unequal spatial conditions and differential subjects are made” [11]. It is perhaps too obvious to point out the irony that the name of this company, Starship Technologies, hearkens to early space imaginaries depicted in *Star Trek*, and so links to the galactic-imperialist visions of technology celebrities like Elon Musk and Jeff Bezos. Yet that obviousness is precisely what generates, I suspect, the ambivalent helplessness of the tweet’s final phrase, “This is our future, I guess” — the open secret that while powerful rich men can move about the world, and the galaxy, at whim, others will be denied mobility justice. And in the case of people using wheelchairs, these ADVs make that injustice starkly clear. *David, I wonder what you think about this?*

**David:** For me, this tweet surfaces everything you mention, but also, the visual register suggests a corporate apathy as well — the presence of the “traffic jam” itself implies either Starship’s inability to prevent such occurrences, or their lack of desire to do so. In this sense, Starship’s apparent apathy towards their own creations inspires actions on the part of others. ADVs are a disruptive force on campuses — at UTD, UCLA, and elsewhere, making campus less safe for certain kinds of bodies, as we have mentioned. Yet, as a public, we are being taught to “pity” these machines. Read critically, this pitystemming from a valuation of the “helpless but cute” ADVs — operates as a means to offload labor. Starship does not have to invest in as much labor listening to stakeholders or investigating solutions that might cut into their profit margins — such as ruggedizing the ADVs so that they might use the street like other vehicles. Instead, they can rely on “pity” as a means to clear obstacles from the ADV’s path.



**Figure 3:** One of the authors trapped in a curbcut traffic jam, or, “This is our future, I guess”.

In much the same way, I would argue that Starship relies on human empathy to act as a safety valve for their own design flaws. In the moment that a bevy of these ADVs block my path ([Figure 3](#)), it is not the machines that move autonomously out of the way. Rather, the ADVs are moved through human intervention. This occurs most often from able-bodied strangers moving the ADVs from my pathway. Less often, the ADVs have seemingly been moved by the intervention of offsite human operators. By and large however, I am reliant on the proverbial “kindness of strangers” to move these machines from my path, allowing me to get to safety (*i.e.*, out of oncoming traffic). This, in turn, assumes that in public spaces there will always be kind “able” bodies available to assist, whether it is to assist a disabled human or to assist a “disabled” ADV. This is a fallacy. In other words, these ADVs rely not just on design features of the built environment but on their own “cute” and participatory design features, meant to inspire human empathy, that grants them a non-acknowledged “right” to the accommodations meant to allow humans to access public space.

**Olivia:** I want to return here to the audio features of these ADVs. You mentioned above, David, that when they block your path, once they finally move out of the way they play a programmed audio apology: “I’m so sorry!” You and I know that other audio messages from the ADVs on our campus include: “Hello! Here’s your delivery!”; “Thank you! Have a nice day!”; and “Have a good day/afternoon!” The speech patterns they use is inflected with a “cutesy” lilt. So the audio is also designed to reinforce a general cuteness of the machines. Also interesting is that during specific seasons, someone ordering from the service can, on the app, select what song they’d like to have played when they accept the delivery. One choice around the winter vacation time was Mariah Carey’s “All I want for Christmas is you.” While I suspect this song was included due to its global popularity, it is fascinating that the company chose to program into its non-human food deliverers a song that revises the typical children’s statement of desire to enter commodity capitalism — “Santa, all I want for Christmas is this or that toy” — into a statement of adult desire for another human. In this, I’d wager the intent, whether conscious or not, is to grant the ADV an affect of being able to desire and to love.

In any event, that the app includes a “choice” for its user indicates that the company is well versed in technoliberalist commodity capitalism’s dogmas about customer engagement. This ties into how theorists of “the cute” argue that cute machine design aims to inspire pro-social engagement. *David, I’m wondering how you see this in relation to your own motorized vehicle?*

**David:** For me, the moment of encounter between my “motorized vehicle” as you say — my power wheelchair — and the ADV emphasizes the limits of a technologized social space, as we have argued. My wheelchair may be evoked in Starship’s tactical suggestion that the ADVs are capable to assist disabled individuals to access food, as evidenced by their claim that “[a]ccessibility is integral to our service” and that “[o]ur robots provide a welcome help to people with disabilities around the world” (<https://www.starship.xyz/accessibility/>). Setting aside the freighted language suggesting that the ADVs are a “welcome” help to people with disabilities, thereby working to invalidate critique, my wheelchair demonstrates the limits of this rhetoric in the moment of a “traffic jam,” where the ADVs cannot easily adjust and continue their deliveries without human intervention.

In this sense, this moment of encounter also clarifies competing notions of “assistive technology.” Starship argues that these ADVs are assistive to certain kinds of bodies — while tacitly ignoring the material effects of the ADVs in endangering other disabled bodies via “traffic jams,” emphasizing instead a corporatized understanding of assistance designed to produce profit. At the same time, my power wheelchair emerges out of a medical industrial complex that privileges technological innovation, like the ADVs — while also being wedded to a medical paradigm of disability, and to a web of governmental funding sources.




Thus, while both of these paradigms are built on logics of technological innovation, I suggest that the confrontation of these paradigms, as symbolized by these vehicles, demonstrates the failure of “technological innovation” as such. In addition, on a larger scale, this confrontation points to the limitations of Starship’s generalized, nonspecific rhetoric of accessibility, whose primary aim is to support technoliberalist capitalism. In such a confrontation, all productivity grinds to a halt, gesturing towards the true fragility of this logic, as well as of any intellectual project that deliberately ignores disabled bodies in order to maximize profit.



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## Conclusion: Crippling surveillance

To reiterate, *crip sousveillance* is a critical practice undertaken by those who may be presently able-bodied but have not yet found themselves claiming and knowing from a crip-identified position. *Crip sitveillance* is “a form of watching, jamming, interrogating, and ironically mocking how disabled lives are used as the justification for systems of surveillance.” Those who practice crip sitveillance might be said to engage in a form of “en-crip-tion”: speaking in tongues to pedestrian rationality, whose communication channels are unable, or unwilling, to decode our messages. Under pedestrian rationality, the flows of objects, goods, and data are protected; the kinds of objects, goods, data, and also humans that are flowing are unimportant.

The techfuturistic and techpresent scenarios of automated delivery of goods and human-free labor are disabling the very feature that decades of crip activism enabled. As we have engaged the meager yet convivial tactics at our disposal to interrogate and mock the rhetorics used to excuse these injustices — injustices that for a minoritized few are matters of life and death — we have speculated that a stronger tool we shall see used in the future will be that great American tradition, a lawsuit. Yet as crip, Black, feminist, queer, and other fields of study have long argued, the law is an inadequate instrument. Therefore, we shall continue our en-crip-tions, and expand on the lexicon of surveillance studies and crip theory through the practice of crip sitveillance. 

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## Notes

1. “Crip” additionally names the resonances between heteronormativity and ableism, and homonormativity and disability. A discussion of heteronormativity and ableism in relation to the ADVs falls outside the scope of this paper.

2. Quoted in Browne, 2015, p. 20.

3. Browne, 2015, p. 21.

4. *Ibid.*

5. We are not using the term “surveillance capitalism,” as this denotes a different concept.

6. According to the Wayback Machine, Starship added this accessibility page sometime around August 2020. See [https://web.archive.org/web/20200901000000\\*/https://www.starship.xyz/accessibility/](https://web.archive.org/web/20200901000000*/https://www.starship.xyz/accessibility/)

7. Blomley, 2010, p. 4.

8. Atanososki and Vora, 2019, p. 5.

9. *Ibid.*

10. Sheller, 2018, p. 20.

11. *Ibid.*

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