

computers are bad

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Audible even over the squeal of an HVAC blower with a suffering belt, the whine of small, high velocity fans pervades the grocery side of this Walgreens. Were they always this loud? I'm not sure; some of the fans sound distinctly unhealthy. Still, it's a familiar kind of noise to anyone who regularly works around kilowatt quantities of commercial IT equipment. Usually, though, it's a racket set aside for equipment rooms and IDF closets---not the refrigerator aisle.

The cooler screens came quickly and quietly. Walgreens didn't seem interested in promoting them. There was no in-store signage, no press announcements that I heard of. But they were apparently committed. I think I first encountered them in Santa Fe, and I laughed at this comical, ridiculous-on-its-face "innovation" in retailing, falsely confident that it would not cross the desert to Albuquerque's lower income levels. "What a ridiculous idea," I said, walking up to a blank cooler. The screens turn on in response to proximity, showing you an image of what is (supposedly) inside of the cooler, but not quickly enough that you don't get annoyed with not being able to just see inside.

I would later find that these were the good days, the first phase of the Cooler Screen's invasion, when they were both limited in number and merely mediocre. Things would become much worse. Today, the Cooler Screens have expanded their territory and tightened their grip. The coolers of Walgreens have gone dark, the opaque, black doors some sort of Kubrickian monolith channeling our basic primate understanding of Arizona Iced Tea. Like the monolith, they are faceless representatives of a power beyond our own, here to shape our actions, but not to explain themselves.

Like the monolith, they are always accompanied by an eery sort of screeching.

Despite my leftist tendencies I am hesitant to refer to "late-stage capitalism." To attribute our modern situation to such a "late stage" is to suggest that capitalism is in its death throes, that Marx's contradiction has indeed heightened and that some popular revolution is sure to follow. What is to say that things can't get worse? To wave away WeWork as an artifact of "late-stage capitalism" is an escape to unfounded optimism, to a version of reality in which things will not spiral further downward.

Still, I find myself looking at a Walgreens cooler that just two years ago was covered in clear glass, admitting direct inspection of which tall-boy teas were in stock. Today, it's an impenetrable black void. Some Walgreens employee has printed a sheet of paper, "TEA" in 96-point Cambria, and taped it to the wall above the door. Taking in this spectacle, of a multi-million dollar effort that took our coolers and made them more difficult to use, of a retail employee's haphazard effort to mitigate the hostility of their employer's merchandising, it is hard not to indulge in that escape. Surely, things can't get much worse. Surely, these must be the latter days.

Gregory Wasson is the sort of All-American success story that you expect from a neighborhood brand like Walgreens Also Known As Duane Reade In New York City. Born in 1958, he honed his business sense working the family campground near Delphi, Indiana. A first-generation college student, he aimed for a sensible profession, studying pharmacy at Purdue. Straight out of college, he scored a job as a pharmacy intern at a Walgreens in Houston.

Thirty years later, he was CEO.

A 2012 Chicago Tribune profile of Wasson ends with a few quick notes. One, "Loves: The desert," could easily go on a profile of myself. Another, "Hobbies: Visiting Walgreens across the country," is uncomfortably close as well. It's not that I have any particular affection for Walgreens, in fact, I've long thought it poorly managed, but for reasons unclear to me I cannot seriously consider entering a CVS. I don't know what they get up to, over there under the other red drug store sign. I hear it has something to do with long receipts. I don't want to find out.

I suppose some of Wasson's sensible, farm-and-country upbringing resonates with me as a consumer. It also makes it all the more surprising that he would become one of the principle agents behind Walgreen's most publicly embarrassing misstep to date. There must have been some sort of untoward influence, corruption by exposure to a Bad Element. Somehow, computers got to him.

Arsen Avakian came from Armenia as a Fulbright scholar. With a background in the most capitalist corners of technology (software outsourcing and management consulting), he turned to the food industry and worked in supply chain management systems for years before deciding to strike out on his own. Steering sensibly away from technology, he chose tea. Argo Tea started out as a chain of cafes based in Chicago, but by 2020 had largely shifted focus to a "ready-to-drink premium tea line derived from one of its most popular café beverages." This meant bottled tea, sold prominently in Walgreens.

It seems to be this Walgreens connection that brought Wasson and Avakian together. Wasson retired from Walgreens in 2014, and joined with Avakian and two other tech-adjacent executives to disrupt the cooler door.

Several publications have investigated the origin of Cooler Screens, taking the unquestioningly positive view typical of business reporters that do not bother to actually look into the product. Avakian, researching the branding and presentation of his packaged premium teas, was dismayed at the appearance of retail beverage sections. "Where is the innovation?," he is often quoted as saying, apparently in reference to the glass doors that have long allowed shoppers to see the products that they might decide to buy.

Avakian reportedly observed that people in store aisles would frequently look at their phones. I have a theory to explain this behavior; it has more to do with text messages and Tik Tok and a million other things that distract people milling around in a Walgreens to kill time (who among us hasn't taken up a fifteen minute gap by surveying a Walgreens? Fifteen minutes, perhaps, of waiting for the pharmacy in that very Walgreens to fill a prescription?). To Avakian's eyes, this was apparently a problem to be solved. People distracted from the tea are not, he seems to think, purchasing enough tea. The tea needs to fight back: "How do we make the cooler door a more engaging experience?," Cooler Screens CRO Lindell Bennett said in an interview with a consulting firm called Tinuiti that proclaims in their hero banner that "the funnel has collapsed."

Engagement is something like the cocaine of the computer industry. Perhaps in the future we will look back on it as the folly of quack practitioners, a cure-all for monetization as ill advised as the patent medicines of the 19th century. At the moment, though, we're still in the

honeymoon phase. We are cramming engagement into everything to see where it sticks. It is fitting, then, that our cooler screens now obscure the inventory of Coca-Cola. It's crazy what they'll put into things, claiming it a cure for lethargy (of body or of sales). Coca into cola. Screens into coolers.

It's a little hard to tell what the cooler screens do. It comes down to the typical struggle of interpreting VC-fueled startups. Built In Chicago explains that "The company's digital sensors also help brands collect data on how consumers interact with their items." This is the kind of claim that makes me suspicious on two fronts: First, it probably strategically simplifies the nature of the data collected in order to understate the privacy implications. Second, it probably strategically simplifies how that data will be used in order to overstate its commercial value.

The simplest part of the cooler screen play is their use as an advertising medium. There seems to be a popular turn of phrase in the retail industry right now, that the store is a canvas. Cooler Screens' CRO, in the same interview, describes the devices as "a six-foot canvas with a 4K resolution where brands can share their message with a captive audience." I'm not sure that we're really captive in Walgreens, although the constant need to track down a Walgreens corrections officer to unlock the cell in which they have placed the hand lotion does create that vibe.

Cooler Screens launched with a slate of advertising partners, basically who you would expect. Nestlé, MillerCoors, and Conagra headlined. The Wall Street Journal, referring to a MillerCoors statement, reported that "a big barrier for MillerCoors is that half of shoppers aren't aware beer is available in drugstores." I find this a little surprising since it is plainly visible next to the other beverages, but, well, these days it isn't any more, so I'm sure there's still a consumer awareness gap to be closed.

The idea of replacing cooler doors with a big television so that you can show advertising is exactly the kind of thing I would expect to take off in today's climate, but doesn't yet have that overpromising energy of AdTech or, I am learning, BevTech. The Cooler Screens are equipped with front-facing sensors, but no cameras facing the outside world. Cooler Screens seems appropriately wary of anything that could attract privacy attention, and refers to its product as "identity-blind." This, of course, makes it a little confusing that they also refer to targeted advertising and even retargeting as consumers approach the cooler.

To resolve this apparent contradiction, Cooler Screens describes its approach as "contextual advertising." They target based not on information about the customer, but on information about the context. The CRO offers an example:

When you think about it within the context of "I'm in front of an ice cream door and I want to buy," you have the ability to isolate the message to exactly what a consumer is focused on at this point in time based on the distance that they are from the door.

Age-old advertising technology would use the context that you are in front of the ice cream door as a trigger to display the ice cream through the door. In the era of the Cooler Screen, though, the ice cream itself is hidden safely out of view while the screen contacts a cloud service to obtain an advertisement that is contextually related to it.

It should be clear by this point that the Cooler Screens as an advertising medium don't really have anything to do with how the items behind them are perceived by consumers. They have to do

with how the advertising space is sold. Historically, brands looking to achieve prominence in a retail environment have done so through the set of practices known as "merchandising." Business agreements between brands and retailers often negotiate the physical shelf space that stores will devote to the brand's products, and brands throw in further incentives for retailers to use brand-provided displays and move products to more lucrative positions in the store. As part of the traditionally multi-layered structure of the retail industry, the merchandising of beverage products especially is often managed by the distributor instead of the retailer. This is one way that brands jockey for more display space: the retailer is more likely to take the deal if their staff don't have to do the work.

With Cooler Screens, though, the world of AdTech can entirely disrupt this tie between placing products and placing advertising. Regardless of what is behind the door, regardless of what products the store actually chooses to stock, regardless of the business incentives of the beverage distributor that actually puts things into the coolers, the coolers will display whatever ads they are paid for. Are the cooler screens controlled by a real-time auction system, like many online advertisements? I haven't been able to tell for sure, although several uses of phrases like "online-like advertising marketplace" make me think it is at least the goal.

The first, and I suspect primary, purpose of the Cooler Screens is therefore one of disintermediation and disconnection. By putting a screen in front of the actual shelves, store display space can function as an advertising market completely disconnected from the actual stocked products. It's sort of like the 3D online stores that occupied the time of VR entrepreneurs before Mark Zuckerberg brought us his Metaverse. The actual products in the store aren't the important thing; the money is in the advertising space.

Second, the Cooler Screens do have cameras on the inside. With these, they promise to offer value to the distributor. Using internal cameras they can count inventory of the cooler, providing real-time stock level data and intriguing information on consumer preference. Cooler Screens promises to tell you not only which products are out of stock, but also which products a consumer considers before making their purchase. Reading between the lines here I assume this means the rear-facing cameras are used not only to take inventory but also to perform behavioral analysis of individuals who open the doors; the details here are (probably intentionally) fuzzy.

The idea of reporting real-time inventory data back to distributors is a solid one, and something that retail technology has pursued for years with ceiling mounted cameras, robots, and other approaches that always boil down to machine vision. Whether or not it works is hard to say, the arrival of the Cooler Screens seems to have coincided with a rapid decline in the actual availability of cold beverages, but presumably that has more to do with the onset of COVID and the related national logistical crisis rather than the screens themselves. The screens are, at least anecdotally, frequently wrong in their front-facing display of what is and isn't in stock. Generally they present the situation as being much better than it actually is. That this provides a degree of cover for Walgreens faltering ability to keep Gatorade in stock is probably a convenient coincidence.

Cooler Screens was born of Walgreens, and seems to have benefited from familial affection. Placement of Cooler Screens in Walgreens stores started in 2018, the beginning of a multi-year program to install Cooler Screens in 2,500 stores. This would apparently come at an expense of \$200 million covered by Cooler Screens themselves. Cooler Screens was backed by venture funding, including an \$80 million round lead by Verizon and Microsoft. Walgreens discussed Cooler Screens as part of their digital strategy, and Cooler Screens used Walgreens as a

showcase customer. The Cooler Screens family was not a happy one, though.

The initial round of installations in 2018 reached 10,300 screens in 700 stores. Following this experience, Walgreens seemed to develop cold feet, with the pace of installation slowing along with Walgreens broader participation in the overall joint venture. Walgreens complained of "freezing screens, incorrect product displays, failure to update stock data accurately, and safety concerns such as screens sparking and catching fire."

In statements to the press, Cooler Screens referred to mention of frozen and incorrect displays as "false accusations." I can only take that as anything other than an outright lie if I allow myself to believe that the leadership and legal counsel of Cooler Screens have never actually seen their product in use. Given the general tenor of the AdTech industry, that might be true.

If it has not become clear by this point, the poor performance and reliability of the Cooler Screens is not only a contention by Walgreens but also a firm belief of probably every Walgreens customer with the misfortune of coming across them. In an informal survey of four Albuquerque-area Walgreens that I occasionally use, more than half of the screens are now dark. It varies by location; in one store, there are two not working. In another, there are two working. The cooler screens that still cling to life are noticeably infirm. As best I can remember, animations and video have never played back smoothly, with over a second sometimes passing between frames.

The screens are supposed to show full-size ads (increasingly rare) or turn off (now the norm) when idle, and then as a customer approaches they are supposed to turn on and display a graphical representation of the products in the cooler that is similar to---but much worse than---what you would see if the cooler door was simply transparent. Since they were first installed this automatic transition has been a rocky one. Far from the smooth process shown in Cooler Screens demo videos, the real item as installed here in the desert (which look worse than the ones in the demo videos to begin with) noticeably struggle to update on cue. As you approach they either fail to notice at all or seem to lock up entirely for a few seconds, animations freezing, as they struggle to retrieve the images of stock they should display. What then appears is, more often than not, wrong.

Early on in the Cooler Screens experiment they were wrong in more subtle ways. They would display one product as out of stock when it was, in fact, physically present just behind the door. They would display three other products as in stock when there were none to be found. That was the peak performance the rear-camera-based intelligence would achieve. Today, it seems like the screens' basic information on cooler layout is no longer being maintained. They display the wrong products in the wrong places, sometimes even an entirely wrong category of products.

It's perhaps hard to understand how they work so poorly, unless you have seen any of the other innovations that the confluence of AdTech and digital signage have brought us. There seems to be some widespread problem where designers of digital advertising products completely forget about basic principles of mechanical reliability.

It is ironic, given the name and purpose of the cooler screens, that they are not at all cool. In fact they run very warm, hot to the touch. I cannot be entirely sure of my own senses but in a recent trip to a Walgreens I swear that I could feel the heat radiating from the Cooler Screens as I approached the section, like an evening walk approaching a masonry wall still warm from the day's sun. As a practical matter they are mounted to the outside of standard glass cooler doors. Yes, it is deeply ironic that behind the cooler screens are normal glass doors through which their cameras are allowed to see the contents the way that customers are not, but at least the door provides some insulation. Still, somewhere between the cooler refrigeration and the store air conditioning, the excess thermal output of the new cooler

doors is being removed at Walgreens' expense.

I was a bit baffled at how hot they ran (and how loud the cooling fans can be) until I considered the impressive brightness of the displays. Cooler Screens does refer to them as vivid and engaging, and they must have thought that they needed to compete with store lighting to catch attention. They are bright, almost uncomfortably so when you are close up, and the wattage of the backlighting (and attendant heat dissipated) must be considerable. Based on some experience I have with small SoCs in warm environments, I suspect they have a thermal problem. The whole system probably worked fine on a bench, but once manufactured and mounted with one face against an insulated cooler door, heat accumulates to the point that the SoC goes into thermal throttling and gives up on real-time playback of 4K video. The punishing temperature of the display and computer equipment leads to premature failure, and the screens go dark.

At a level of personal observation, the manufacturing quality of the screens also seems poor. The fit and finish is lacking, the design much less refined than the ones Cooler Screens displays in its own marketing material. The problems may be more than skin-deep, based on Walgreens reports of electrical problems leading to fire in more than one case. Cooler Screens contends that these cases were the result of failures on Walgreens part; it can be hard to tell who to blame in these situations anyway. But design and software problems must be the fault of Cooler Screens and, besides, Walgreens doesn't even like them.

Walgreens pulled the plug, or at least tried, early this year. In February, Walgreens terminated the business partnership with Cooler Screens. Only one third of the planned displays had been installed: Walgreens had started to back out years earlier. In 2021, Roz Brewer took over as CEO of Walgreens. According to reporting, she "did not like how the screens looked" and "wanted them out of the stores." According to Cooler Screens themselves, Brewer described them as "'Vegas' in a derogatory way."

I am skeptical of corporations in general and especially of their executives, and I have a natural aversion to the kind of hero worship that brings people to refer to CEOs as "visionary." Still, how validating it is to find someone, anyone, in corporate leadership who sees what I see. Cooler Screens alleges that "when she realized that her opinion on how the doors looked was not enough to get out of the contract... she and her team began to fabricate excuses." As would I! They are so evidently horrible, I would be fabricating excuses in the sense that one does to get out of a bad date. "I am sorry about not installing the Cooler Screens on schedule but I have plans tomorrow with someone else who is not you." Perhaps we can install cooler screens in 500 more stores some other time? "Sure, call me, we'll work something out," I say, scrawling 505-FUCK-OFF on an old receipt.

Still, one does not typically start off a first date with a multi-year agreement in which one party commits \$200 million in exchange for future revenue. Cooler Screens sued Walgreens, arguing that Walgreens has failed to perform on their 2018 contract by not installing additional screens. They're asking for an injunction to prohibit Walgreens removing the currently installed units. Walgreens is contending that Cooler Screens failed to perform by installing screens that broke and occasionally caught fire, Cooler Screens retorts that the screens would have worked fine if Walgreens stores were in better condition.

The consumer, as always, is caught in the crossfire. As Cooler Screens continue to fail it seems unlikely that they will be repaired or replaced. As the lawsuit is ongoing, it seems unlikely that they will be removed. We just open every door and look behind it, thinking fondly of a bygone era when the cooler doors were clear and you could see through them. Now they are heavy and loud and uncomfortably warm. In the best case, we get to see a few

scattered frames of a Coca Cola animation before they manage to present an almost shelf-like view of products that may or may not be in the cooler behind them.

Hope springs eternal. Earlier this year, Kroger announced the installation of Cooler Screens in 500 more of their stores, the result of a three-year pilot that apparently went better than Walgreens. The screens have claimed Walgreens as their territory, leaving destruction in their wake. They are advancing into the Smith's next.

One of the strangest parts of Cooler Screens, to me, is Cooler Screens insistence that consumers like them. I have never personally seen someone react to Cooler Screens with anything other than hostility. Everyday shoppers make rude remarks about the screens, speaking even in somewhat elevated tones, perhaps to be heard over the fans. Employees look sheepish. Everyone is in agreement that this is a bad situation.

"The retail experience consumers want and deserve," Cooler Screens says on their website. I would admire this turn of phrase if it was intended as a contemptful one. Cooler Screens promise to bring the experience of shopping online, "ease, relevance, and transparency." "Transparency" seems like a poor choice of language when promoting a product that infamously compares poorly to the transparent door it replaces. Relevance, too, is a bold claim given the unreliability of their inventory information. I suppose I don't have anything particularly mean to say about ease, although I have seen at least one elderly person struggle to open the heavy screens.

Still, "90%+ of consumers no longer prefer traditional glass cooler doors." What an intriguing claim! 90%+? How many plus? No longer prefer traditional glass? What exactly does that even mean?

Indeed, Cooler Screens presents a set of impressive numbers based on their market research. 94% of respondents say the screens impacted their shopping positively or neutrally (and the breakdown of positive/neutral in the graphic shows that this isn't even relying on a huge amount of neutral response, a good majority really did say positively). 82% said they found the content on the screens memorable. I certainly do find them memorable, but perhaps not how Cooler Screens intends.

I struggle to reconcile these performance numbers with the reality I have observed. Perhaps Albuquerque is a horrible backwater of Cooler Screens outcomes; I have not thoroughly inspected many out-of-town Walgreens. Maybe there exists, somewhere back East, a sort of Walgreens paradise where the screens are all in working order and actually look good and people like them. Or perhaps the surveys backing this data were only ever collected in the first two days following installation at Walgreens locations adjacent to dispensaries holding free pre-roll promotions. I don't know, because Cooler Screens shares no information on the methodology used to collect these metrics.

What I can tell you is this: customer experience data collected by Cooler Screens seems to reflect some world other than the one in which I exist.

I wish I lived there, the Walgreens must be exceptionally well-stocked. Out here, I am hoping the staff have fabricated crude signs so that I don't have to manually open every door. I am starting to memorize Walgreens shelf plans as an adaptation. I am nodding and appropriately chuckling when a stranger says "remember when you could see through these?" as they fight against retail innovation to purchase one of the products these things were supposed to promote. You cannot say they aren't engaged, in a sense.