I've been thinking…

Ants, Amazon, IVs and Weed
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I've been thinking about ants, Amazon, IVs, and weed.

Whoever concluded we are direct descendants of apes must have missed Solomon's advice about considering ants. Seriously, nonhuman primates travel light. More like ants, we humans spend our days schlepping stuff around.

We pack suitcases and briefcases, pull them through airports, stow them overhead, and drag them to taxi stands, hotel rooms, meetings, and back home. We push carts through stores, fill them with goods, and scan their UPC codes at self-checkouts while placing them in reusable bags—which we already hauled into the market—as they rest on scales that keep us honest. We pack our purchases in SUVs, drive home, pull them out, and take them in. Then take stuff out to the trash, the garage, a Shurgard unit, the Goodwill, and pick up more stuff on the way home. We are closer in appearance to chimps, but I'd say our daily activities more closely resemble ants.

In addition to ants, I'm pretty sure I got some gray squirrel in me. Grays are the ones who bury nuts all over the place—only to forget where.

With five kids, I was often amazed at the staggering number of shoes involved. In frugal attempts to pass down lightly used dress shoes and flip flops, I'd stash them in boxes, lug them to the garage, and promptly forget they existed until we moved or held a yard sale, by which time every pair was smaller than any foot in the household. I've wondered if anyone has thought of developing a shoe-management app. I mentioned the idea to a couple with their eight kids at a local 5 Guys Burgers and Fries. They thought I might be on to something. "No kidding," said I. "Target's shoe boxes are bar coded and scanned into stock. With a few clicks on the computer, a sales associate can tell you if your size is in stock and, if not, which nearby store has them." Some of the older kids of the couple's tribe looked at me as if I had been smoking something.

Speaking of. Since several states have legalizes marijuana, a number of articles have appeared in the news about the challenge of tracking products. Not to worry. Our Colorado led the way by putting regulations in place that require bar-code tracking of *medical (*and now recreational*)* cannabis from seed to *patient*.

Plants in grow houses are tagged with bar codes, as is each room and employee. This assists growers in tracking every strain and knowing exactly how much of what is in each blend.

When the cannabis arrives at dispensaries, transporters, and receivers, product bar codes are scanned and shipments are weighed to verify nothing has mysteriously disappeared.

Patients are checked into clinics by scanning the bar codes on the back of their drivers' licenses. And whatever is dispensed is scanned into their *medical records*.

Amazon.com leans on similar technology in their 40 fulfillment centers across the U.S. These facilities, some as big as 28 football fields, are virtual ant colonies of Amazombies schlepping, storing, and retrieving hundreds of thousands of different products.

Clicking the purchase button on Amazon checkout pages triggers the printing of customers' address labels with bar codes in fulfillment centers. When a runner scans your label, her handheld displays what's in your virtual cart and directs her on the most efficient route to the nearest storage cubicles housing the items required for fulfilling your order. Before placing an item in a literal cart, she scans the product's bar code to verify it really is what you purchased. Before being boxed and shipped, completed orders are put on scales to verify the aggregate weight syncs with system data.

Amazon's technology-assisted process has all but eliminated missing or misplaced ingredients in boxes they ship. The giant has achieved error rates below one in a thousand orders fulfilled.

So, what about utilizing bar coding while fulfilling drug orders (especially IVs) in hospital ant pharms? There are proven apps (not apes) for this too, you know—which, reside on a much lower shelf than rocket science. So why are fewer than ten percent of US hospitals scanning IV ingredients to verify accuracy before the orders are approved and runners schlep these high-risk bags to nurses on 4W?

Medical marijuana growers and dispensaries are preventing theft, complying with strict drug-enforcement laws, and saving money with scanning. Internet warehouses as well as old-fashioned brick-and-mortars are protecting their bottom lines, getting orders right, avoiding rework, and satisfying customers.

But, so what if someone misplaces hand-me-down sneakers, gets the wrong book delivered on our doorstep, or leaves a dispensary with the wrong herbal mix? Admix the wrong ingredients or volumes in IVs, however, and patient's lives and professionals' careers are at risk (to say nothing about the cost of extended stays and lawsuits that follow).

Why are we slow to Ape the Amazon's and Nordstrom's of the world and utilize proven bar-code verification-and-fulfillment systems in clean rooms?

I'm all for utilizing scanning and weighing for tracking and controlling recreational drugs. I am more concerned that these accuracy technologies be used in IV rooms with potentially life-saving and life-taking drugs.

While verification scales do not yet have much traction in IV rooms, stay tuned. If it works for doobie and Ding Dongs, weighing just might be useful for verifying volumes of diluent and drugs during the admixture process.

It's Saturday. I think I will clean out my garage and do a dump run. Hmm. Target's on the way home.

What do you think?

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