

How Soylent and Oculus Could Fix The Prison System

By Shane Snow

My list of biggest fears in life goes something like this:

#1: Being trapped in submarine

#2: Floating away into space

#3: Going to prison

The theme, if you care to psychoanalyze, is control.¹ But in addition to the mental claustrophobia of being locked up, my fear of prison also stems from the fact that some 21 percent of U.S. prison inmates get raped or coerced into giving sexual favors to terrifying dudes named Igor.²

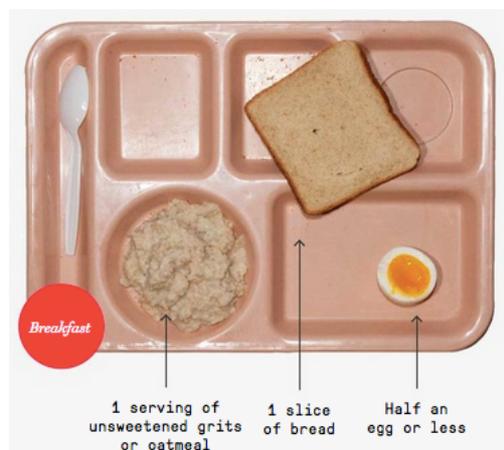
Living in fear of violence is not part of a prison sentence, but it ends up being part of the punishment all the same. In fact, among the 2.2 million incarcerated people in America in 2012, there were 5.8 million violent crimes reported in prisons—five times as many as happened outside of jail nationwide.³

Writes former inmate Darnell Hill [on Quora](#),

“The basic coping skill in dealing with chronic anger, fear, frustration, peer pressure, abandonment, loneliness and hopelessness is through violence... There is no therapist or counselor to process your thoughts with unless the institution deems you as having psychological issues.”

It's no wonder people come out of clink all messed up.

There are lots of other problems with prisons besides the violence.⁴ Education and rehabilitation in prisons are a joke. Over half of prisoners are back in the can within three years. Privatized prisons have totally messed up incentives, as Jon Oliver reported [here](#) and SmartAsset explained [here](#). And many prisons undernourish their prisoners. As the Marshall Project recently [investigated](#), prison food is basically terrible, and in some states sheriffs are allowed to pocket state funds for prisoner food when they feed prisoners less.⁵



Prison breakfast in Morgan County, Alabama

Somehow our prison system costs taxpayers between \$20,000–60,000 per prisoner, depending on the state—which looking at the above meal, seems more than a little outrageous. That's more than the average American's income. All told, our prison system costs taxpayers about \$74 billion annually.⁶ The actual cost to society is greater, because a lot of those prisoners commit crimes

again. Private prisons stand to gain financially from this, because inmates don't get rehabilitated and end up back in the (money-making) slammer.⁷

Much of the cost of prisons, interestingly, is tied up in payroll and benefits for the half-million prison guards (1 corrections officer per 4 inmates). Including administrators and maintenance and health staff, approximately 1 in 9 government employees works in corrections.⁸ It's a bloated system with little incentive to make things better.

How to fix prison, Silicon Valley-style

I believe we could fix all of these problems using the Silicon Valley idea of "[first principles](#)," or boiling down a problem to its core and building a new solution from the ground up.

Boiled down, prisoners basically need the following things:

- Food
- Sleep
- Safety
- Socialization
- Education
- Health and psychological care

Notice what's not on the list: cell blocks, prison yards, prison gyms, physical interactions with other prisoners, and so on. Those are all current conventions in prisons, but [history is clear](#): innovation happens when we rethink conventions and apply alternative learning or technology to old problems.

Knowing that, here's one way we could rebuild the prison system:

Step 1: Soylent

Soylent is basically the goop from The Matrix: ultra-nutritious oat-flavored water invented by Silicon Valley nerds. It can replace all your meals and make you healthier than sticking to whatever it is you normally eat. [I wrote about early prototype Soylent](#) for Tim Ferriss's blog a couple of years ago, if you want a primer.⁹



For [\\$7.70 a day](#), you could give every inmate a perfectly balanced diet while dramatically simplifying prison logistics. If we were ordering in bulk for 2.2 million prisoners, Soylent would obviously give a discount. Let's call it \$10 to make the math simple and/or to account for larger inmates who need more than 2,000 calories.¹⁰ After replacing prison food with Soylent, you could get rid of prison cafeterias and replace all the food services staff with a delivery person who drops off and picks up plastic bottles to each cell every day. Prisons would no longer need utensils

(potential shanks), napkins, or to break up cafeteria fights. No more birthday cakes with hacksaws inside. And fewer nutrition-related health problems.

- Cost per prisoner: \$3,650 per year.

Step 2: Oculus Rift

Prisoners have cellmates and gym time and free time in the prison yard because solitary confinement makes you go nuts. You need human contact if you don't want to pop out of prison a crazy person. The problem is these places are where all the violence happens.

However, you could take the fear factor out of prisons by simply making all socialization happen through virtual reality. Bonus, you could deliver rich education through VR as well.

Virtual reality headsets [are so good now](#) (and getting better) that they can make your brain feel like you're actually somewhere else. I get the same feeling in the pit of my stomach when I'm standing on a cliff in virtual reality as I do when I'm experiencing heights IRL.



By equipping every inmate with an Oculus Rift headset in his or her own cell, you could isolate prisoners from violence without isolating them from people. Put all the prisoners inside Second Life, Prison Edition, give them all a headset, and let them build virtual characters. You could design an awesome system for rehabilitation, give access to e-learning tools, Kindle books, Minecraft and other digital tools for creativity (prison is boring), psychologist sessions (the psychologist could log in remotely from anywhere in the world), and even handle all correspondence and prison visits from relatives and friends electronically.

What this eliminates: prison yards, prison libraries, packages and letters secretly containing drugs or shanks.

Annual cost per prisoner (assume you replace the gear once a year):

- Oculus Rift: \$350
- Xbox One Controller: \$60
- Keyboard: \$40
- Turtle Beach headset: \$100
- Charging dock (for everything): \$100

Step 3: Health and hygiene

If you're spending your whole day inside of virtual reality, you're gonna need a good chair. Also, what about exercise? How small could we make a prisoner's physical world if we gave them a robust virtual world?

I'd suggest we outfit every cell with just enough space for the following:

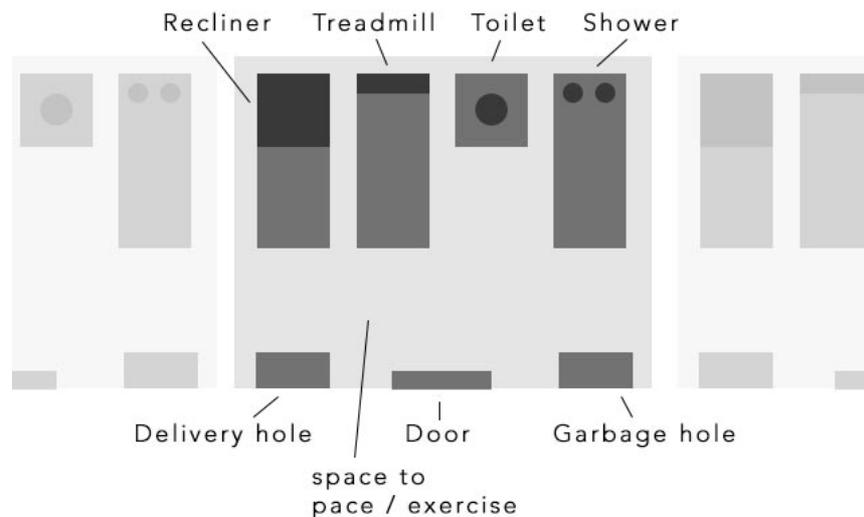
- A reclining chair that doubles as a bed. \$1,000
- A treadmill. (For exercise, with or without VR goggles on) \$300

- A neoprene dumbbell set. \$80
- A toilet. \$100
- A shelf. \$20
- A fan. \$20
- A shower and sink: \$250
- A Fitbit (so the prison can monitor how you're doing): \$100
- Bonus: one of those sunshine/anti-depression lamps since you're not ever going outside: \$50

If we had to replace each of these things every 2 years, the annual cost would be around \$1,000

You'd only need room for the recliner, treadmill, toilet, and enough space to do pushups/situps/dumbbell exercises. I would suggest a small window so you could see sunshine and get fresh air if you wanted.

The cell could be laid out like this:



You could cram all of this into the same 6' x 8' size of a typical solitary confinement cell. It wouldn't be fun, but hey—it's prison.

I would design the cells to be modular outdoor trailers, so you could flexibly hook new cells up to a cell block / trailer park as needed. If you ran the VR system over WiFi, all you'd need would be electricity to wire up the treadmill and charging dock (you could modularize this too), and water to hook up to the shower/sink.¹¹ Plumbing would be a little more involved but could be standardized. Let's say the cell, between amortized cost of construction, maintenance, and electricity/water, costs \$2,500 a year.

You'll also need the following on the regular:

- Toilet paper: \$50/year
- Soap/shampoo: \$50/year
- Lysol wipes (all you'd need to keep the cell clean, given how little there is): \$50/year
- Laundry (every two days you get a fresh jumpsuit and drawers, and every week a towel: I'd outsource the laundry to FlyCleaners to save on facilities and admin. Estimated cost: \$350/year)

Once a month, you'd get to take a field trip to the barbershop for a haircut (everyone gets a buzz cut), then visit the health center for a quick checkup. You'd weigh in on a Fitbit Aria scale, so they could digitally track your weight alongside your other vitals. Let's call the cost of all that another \$500/year.

Step 4: A simulation that rewards good behavior

Writes Hill: "Which is more inhumane, to put men on the yard that you know will try and kill

each other or to lock them up to keep them separated and give them yard periodically? A lot of men don't mind being locked up all day if it means saving their life or keeping them from having to take someone else's."

To make our Oculus plan work, we'd need to design a modified World of Warcraft or Second Life style of networked role playing game to turn prison into [Ready Player One](#). Critics will say, "Prisoners shouldn't be allowed to play video games!", but what this will be more like an education/rehab simulation than Grand Theft Auto. The goal is to work your way out of prison and into upstanding society status. If you're locked away for life, the goal would be to unlock perks for good behavior and to perhaps eventually contribute to society as a virtual worker.



Basically, you would have players control characters that gain upgrades and points for completing classes, work, or therapy sessions, and for interacting collaboratively with other prisoners to do simulated tasks. I'd propose we stick Minecraft and some other apps in there to simulate the paint brushes that prisoners get when they behave well in regular prison. If you behave well, you unlock more of these. If you are violent or non-collaborative in the simulation, you get those things taken away from you.

A huge benefit is we could track everything that prisoners do.

This system wouldn't work for mentally ill inmates, but it would be great for inmates who are illiterate (anyone can learn to use an Xbox controller). Again, you're still in a tiny cell with boring food and no one to hang out with, so it's not better than being, you know, free.

Step 5: Administration

So far, our variable cost per prisoner is \$8,650 per year. We'd have some fixed costs, of course, but they would be dramatically decreased from the typical prison because you'd no longer need shared facilities or nearly as much security.

The great thing about the modular trailer cells is you could set them up in a field or something without needing a larger prison building to house them. I would centralize prisoners in places with moderate weather, line them up in blocks with cameras,¹² and stick a tall fence around it all.

Here's what other fixed costs you'd likely have:

- Software: Someone's gotta build and maintain the Second Life, Prison Edition. You'd also probably have costs for education software built in.
- Mainframe: Some sort of centralized hardware would be needed to run all the VR rigs. I would give this job to IBM and pay an annual subscription for them to maintain it all.
- Security perimeter and maintenance.
- Guards / supply and food runners. You could dramatically reduce the amount of staff needed to manage prison
- Moderators. For the Second Life game, duh!
- Prison administrators. People to run the whole thing. Again, you'd need a lot fewer.

If with this system, one prison staffer (guard/moderator/supply runner) could manage 200 prisoners, as opposed to the current 4. Average corrections worker salaries today run between \$30-50k. Let's call it \$90,000 a year average salary to account for benefits and pension savings. At that rate, it would cost us \$1 billion for personnel to manage our 2.2 million prisoners. Say the software, mainframe, and security cost a billion each, and general admin cost another half a billion, that would get us to a nice round \$2,000 per prisoner in Admin costs.

Potential objections

With some variation of this plan, we could reduce the annual cost of incarceration to around \$10,000 per inmate—cutting society's cost per prisoner by 2-6x! You're still in jail—in a tiny space, eating tasteless foodwater—so it's not like the situation will be pleasant, but it would be much safer and more conducive to rehabilitation.¹³

Even if this new system cost just as much to operate as the old one, the soft costs of prison would go way down: We'd eliminate prison violence. We'd have a modern system that makes the delivery of rehabilitating education to prisoners much easier (imagine gamifying prison rehab!), and we'd be able to monitor and track *everything* that happens in our prisons, for greater accountability and security. Ex-cons would cost society less because they'd be more likely to get back on their feet and stay out of jail again.

Ironically, there are people with a lot of money at stake for this sort of thing to *not* happen. Those people may argue that Soylent *might be* bad—even though it's shown to be safe, healthy, and certainly better than prison food. They'll argue that virtual reality *might be* dangerous—even though it's 100 percent safer than prison yards. They'll say that prisoners don't deserve to “play video games” in order to pit the public against the idea of using technology as a better way to run prisons, even though being stuck in a prison VR simulation will be nowhere near as appealing as living in the real world. They'll fearmonger about dangers of technology meanwhile perpetuating a system that in almost every way is hurting convicts and non-convicts alike.

I'd rather be trapped in a submarine than have those people run anything—much less our prisons. But whether it's The SoyOculus method or some other, a first principles approach to American incarceration is definitely overdue.

Shane Snow is an award-winning journalist and entrepreneur. This post originally appeared on his blog [ManEatingRobot](#). If you liked it, [subscribe to more via email](#), or [get a free chapter of his bestselling book, Smartcuts](#).

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Notes

1. Yay, therapy!
2. <http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=1151>.
3. http://www.slate.com/articles/news_and_politics/politics/2014/06/prison_crime_rate_the_u_s_violent_crime_rate_is_
4. Aside from the fact that we jail way too many people in the first place, which is a whole separate discussion.
5. WTF???
6. <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=2192>
7. <http://www.cheatsheet.com/personal-finance/what-are-americas-prisons-costing-you.html/?a=viewall>

8. <http://www.theatlantic.com/magazine/archive/1998/12/the-prison-industrial-complex/304669/>
9. [It's now greatly improved](#), and I drink it myself several times a week.
10. Or if we wanted to spring for pre-mixed bottles instead of powder.
11. Bonus: instead of hooking up to the grid, you could generate the electricity from an independent solar panel and battery on the roof of each cell. The [Tesla Powerwall](#), installed by SolarCity costs \$5,000, which, amortized over time, could eventually be a super cheap way to power prison cells.
12. Bonus: stick a couple of \$150 [Dropcams](#) in each cell as well
13. Interestingly, a prison in Norway has recently shown that by focusing on treating prisoners well and rehabilitating them, the costs of locking up criminals (and the potential for future crimes) go down. [This article in The Guardian](#) makes a case for exactly that.

TOP MAN EATING ROBOT POSTS



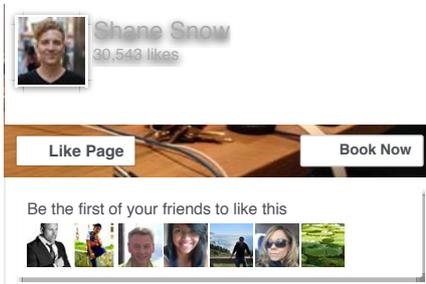
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