

First Person Shooter: Searching for the Real Inside a Police Training Simulator

By Danny Wicentowski

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In reality, police shootings are tragic but often avoidable human disasters that leave behind pain and little resolution. In a VirTra simulation, they are something else.

With a hum, three floor-to-ceiling screens flicker to life inside a darkened, equipment-cluttered room in a law enforcement academy in Hillsboro. This is the VirTra, a "Judgmental Use of Force Training and Firearms Simulator." Onscreen, the projected images of real actors plead, argue, curse, shoot, run, surrender and fight through hundreds of scenarios meant to mimic the real world.

Or, at least, some version of it. Potentially, a dangerous one, filled with split-second ambushes and weapons hidden in the folds of a bystander's sweatshirt.

It is a version of the world where the dead come back to life. After the scenario ends, you see them frozen at the moment of trigger pull, digital ghosts marked by blue dots to show where your laser-simulated shots struck them.

This is the police training of today. The departments in St. Louis County, Jefferson County and O'Fallon rely on VirTra's popular brand of simulation platform, which uses special effects, dozens of actors and a branching system of choices to produce what the company calls "better outcomes" in real use-of-force situations. For an outsider, however, that claim is difficult to fact check.

It is a Tuesday in December, and in a back room normally used by police trainees, the Jefferson County Sheriff's Department allows a *Riverfront Times* writer and other local reporters to try the VirTra. Normally, deputies

train on the VirTra for two to three hours over the course of a year. My time in the simulator runs 40 minutes, and that's after sitting through some five hours of classroom courses, which largely involve discussions about police incidents captured on video.

Allowing reporters into the VirTra is a first-of-its-kind offer from Sheriff Dave Marshak. In his invitation, addressed to "media members," he explained that he wanted "to help you tell a more in-depth and well-rounded story" while learning "the nuances of use of force situations."

The VirTra simulator, the invitation continued, would "open your eyes" to why even shooting someone in the back "may actually be the best choice for an officer."

In theory, the VirTra seeks to use high-production interactive media to simulate use-of-force scenarios that would be impossible, or prohibitively expensive, to do in real life.

In practice, the VirTra's "judgmental training" is about as sophisticated as a choose-your-adventure novel. There's no artificial intelligence behind the characters onscreen, no software that determines whether the belligerent suspect in front of you, for instance, uses a bottle of coconut liquor to hit you or meekly surrenders and apologizes for overreacting.

Instead, it is a human "operator" at the controls of your virtual reality. Today, that's a Jefferson County sheriff's deputy named Matt, who sits at a computer monitor behind me and uses VirTra's control platform to alter dialogue and ratchet the danger. While I try to role-play police tactics, Matt is clicking through possible futures and deciding if they'll work.

With its three screens, this model of the VirTra provides a 180-degree field of possible action. In a way, the simulator, which can cost up to \$300,000, could be seen as the most extravagant and immersive video game ever produced. After entering the room, I relinquish my camera to the care of Sheriff Marshak (deputizing him as an *RFT* photographer in the process).

In exchange, I'm equipped with a holster and a Glock pistol whose barrel is modified with a laser to record accuracy. It's loaded to "fire" with a CO₂ cartridge, which delivers just enough kick to knock back the slide on each shot.

Marshak provides some coaching and encourages me to get into the role. Shooting tactics can be tested, of course, but also the trainee's behavior. In this capacity, the VirTra becomes less of a target simulator than a kind of instructive monologue, performed for an audience of one. In this case, I'd be performing for Deputy Matt.

"The operator here can change the scenarios based upon how you're talking to an individual," Marshak advises. "He can set it for 'compliance,' or we can make things go to the other end of the spectrum."

For officers, he explains, the VirTra training is an opportunity to "work on deescalation tactics and shooting decisions." For the sheriff, the crucial part of that decision training is the possibility for failure, and he believes that's a role where the VirTra excels.

"Let's get the mistakes out of the way in this room," Marshak says. "Let's have the tough conversations about why you made the decisions you did."

The VirTra deposits me in a police car already on its way to City Hall. A dispatcher on the radio describes a black male in his twenties, who is parked in a truck and refusing to leave. A few seconds later, I arrive at the parking lot outside "City Hall," a glass-fronted structure that looks like a bank building. I get out of the patrol car, or, rather, I'm taken out of it. Here, the VirTra's camera decides how you move.

I can see the man from the 911 call. He's sitting in the driver's seat, thinly built with close-cropped hair. I can only see the back of his head. Then I see the gun, which he has pressed to his temple.

With Marshak's advice still in mind, I talk to the man on the screen.

"You don't have to do this," I say, and, without thinking about it, I find myself talking loudly, as if I'm trying to reach someone 30 feet away and not improvising inside a small room. I ask him if I can help.

He doesn't seem react to me at all, and instead he shouts something incomprehensible and anguished without turning in my direction. I keep my hands out to my sides, even when the man exits the truck and starts walking toward the building entrance. I find myself repeating the same lines, "Sir, please," "Sir, it doesn't have to be this way." He doesn't acknowledge me. I can only watch him, gun still pressed to his own head. He nears the front door of City Hall, and now my hand is fumbling with the catch on the holster, but it is too late — the doors are closing behind him.

What follows is the sound of gunshots. The scene ends.

Marshak steps forward into the neutral glow of the VirTra screens. My pulse is racing. It's time for that tough conversation about decision making.

"So, what happened?" he asks. "You were trying to talk to a person and it's not sinking in. That happens to us. The reality of what that was, that's what happens when we didn't make the right decisions. What happened inside? He went on a shooting spree."

I know where this is going. I suggest that I could have moved closer when he got out of the car or fired a warning shot. Marshak patiently dismantles these options. Both could be dangerous, and in the case of "warning shots," he notes, a violation of department policy. How will I justify my failure to intervene, or explain why I didn't even have my gun out? When reporters ask why I didn't prevent the tragedy, Marshak challenges, "what's your argument going to be?"

The sheriff snaps his fingers. "Every second that he's walking closer, you lose options," he says. "Based on what you know now, when he's heading toward the building and not complying verbally, what should you have done?"

The question hangs in the air. The moment passes, and Deputy Matt cues up the next scenario.

I know, of course, what Marshak is driving at, the answer he is pressing for: What I should have done, what I was supposed to do, was shoot the man in the back.

In the next simulation, I face an expressionless white man standing alone in a field. In the span of about two seconds, he looks at me, suddenly pulls a gun, fires once and bolts away. Once again, I'm not quick enough to even get my pistol out of the holster before the scene ends.

If I were a real police trainee, I might be equipped with the VirTra's Threat Fire device, which delivers "adjustable electrical shock to simulate return fire." Here, I just get a talking-to from Marshak.

"Based on that," he asks, "would you be justified in shooting the guy in the back?"

Hours earlier, during the classroom portion of the training course, Marshak had discussed the Supreme Court cases that define a police officer's legal justification for force. The court had ruled that although officers can't shoot someone just for committing a crime, if the officer "reasonably" believes that person poses a danger, even if that person is running away, they can take the shot.

And so, I answer Marshak's question with "Yes, legally," but internally I know this is a dodge to the sheriff's real question. The truth is, as a reporter role-playing as a cop, I just don't know what I should have done with a pistol in my hand and a retreating man's back in my sights.

Marshak seems to detect my discomfort.

"That's a tough one, right?" he says, and chuckles in what sounds like an understanding way. "No one wants to shoot someone in the back. No one wants to justify that, even though legally after he shoots at you, you are

justified because you don't know what's going to happen. Even our police officers struggle with it."

In the next scene, I decide to try role-playing the VirTra the way it's meant to be played — as a cop.

This time, the patrol car deposits me in front of what looks like a suburban house where two figures, an older man and a teenager, are fighting on the front lawn. Three people, seemingly family members, are watching from just outside the front door. Everyone is shouting.

The teenager runs off as soon as the cops show up, and my fellow officer (who is part of the simulation) questions the older man, "Hector," who insists he was "just playing" with his seventeen-year-old brother.

About 40 seconds later, the teen runs back into the scene, armed with a kitchen knife. He charges toward Hector. A woman standing by the doorway, perhaps his mother, wraps him in a bear hug from behind. I pull my gun, and I start telling him to drop the knife. I keep saying it until the teen breaks free and runs headlong toward Hector. I shoot him, and then there's an almost imperceptible pause, a flicker in the VirTra's image and ambient soundtrack, and the teen's body crumples onto the lawn.

The simulation continues. Everyone screams, their amplified wailing coming through the surround sound system at a piercing intensity. Hector cradles his brother's body in front of me, screaming and screaming. "You motherfucker!" he cries. "You motherfucker!"

I don't know how to role-play this, and so I just stand there as everyone continues screaming. I put the Glock back in the holster. I don't notice one of the people standing outside the house, a heavysset black man in a hoodie, pull out a gun before he's already shot at me five times.

There's no "game over" in this scene, and so I get the chance to return fire. I finally get off several shots and land a headshot on the third. The shooter collapses against the door. Finally, the scene ends. The entire scenario lasts less than three minutes.

Marshak again debriefs me. Domestic situations can be chaotic, and he says officers are obligated to identify aggressors and victims, "which can be very, very difficult." In this case, an apparent victim became the aggressor.

Marshak turns to Matt behind the computer. "Let's run the scenario again with a different outcome."

Like Groundhog Day, I'm back at the same suburban house. I'm on high alert. I tell the crowd of people at the front door to back away from the scene (they don't) and I swivel my glance back and forth between Hector and the man in the hooded sweatshirt who I now know is armed. My hand hovers above my holster, and so I'm ready when the knife-wielding teen charges. After he gets locked in the bear hug, I ask him to drop the knife once again.

But in this version, the teen does drop the knife. The situation cools down. I don't have to shoot anybody. The man in the hoodie doesn't shoot at me. My ears aren't ringing with Hector's anguished screaming.

What changed here, however, wasn't anything I did. There was nothing I had learned in the first version that allowed me to deescalate in the second one. The only thing that really changed is that Matt punched the right buttons to make the teen drop the knife.

I'm put through several more scenes. In the next one, a black man in athletic apparel runs right at me with a knife, covering the distance before I have time to draw from my holster. A few minutes later I'm confronting a drunk white woman wearing camouflage-print overalls and holding a crossbow. She eventually puts the weapon down. In the last scene, I conduct a traffic stop on a truck that turns out to be filled with Hispanic migrants, who pour out the back. The scenario spins into a shootout, then a hostage situation and ends with an attempted ambush. ("That was a shit sandwich right there," Marshak remarks.)

Between one of the scenes, I question Marshak about his own thoughts on VirTra's scenarios.

I ask, "Does this feel accurate?"

"Yes and no," he says, after a pause. "The difference is there's no consequences for mistakes."

In reality, an attempt to analyze a police action can quickly become a moral battleground over what is legally justified and actual justice. And unlike a VirTra simulation, where all future options are known in advance, the very concept of a "mistake" has an ambiguous role in a real police shooting.

Legally, if an officer believes a suspect is reaching for a gun, or advancing with a knife — in that moment, they're legally justified to shoot, even if the danger turned out to be a cellphone. In practice, officers are rarely criminally charged in shootings, since it is often a cop's perceptions, even more so than the result of their actions, that determines the legality. If something is legal, can it still be a mistake?

After the simulation, I ask Marshak how this sort of training fits into the bigger discussion around police shootings. More than five years after Ferguson, we're still living with the impact of that outrage, and thanks to the proliferation of cellphone video, the public and media are exposed to more examples of police use of force than ever before.

Marshak starts by acknowledging that shootings are "critical situations," but he says, in contrast to the outrage, those situations are rare. In 2018, amid the tens of thousands of citizen contacts and more than 700 calls involving suicidal subjects, the Jefferson County sheriff's office recorded just 35 use-of-force incidents.

"Nationally, police kill about a thousand people per year," he says, though it's worth remembering that the figure is not tracked by any government database. (In 2019, the *Washington Post* tracked 930 fatal police shootings in the U.S., cobbling together the data through news accounts, social media, law enforcement monitoring sites and the newspaper's own reporting.)

Some of those shootings might be "questionable," Marshak says, but he believes that most are not.

"You have to figure that there's a segment of them that needed to be shot by police," he reasons, "whether you agree with that or not."

Far easier, then, to present no opinion at all — that appears to be the solution arrived by the VirTra, which treads lightly around the core use of its services. Promotional materials tout a "judgmental use-of-force simulator" that produces "improved outcomes" and "better choices," but it never exactly states what those outcomes are, or what consequences those better choices produce.

I wanted to understand more about the VirTra. A few days later — with Marshak's question, "What should you have done?" still echoing in my mind — I arrange a phone interview with VirTra's director of training curriculum, a retired longtime officer named Lon Bartel.

One of the simulator scenarios is still bothering me, the one about the suicidal/homicidal man who walks into City Hall with a gun pressed against his head. It seemed designed to teach me that I had no option other than to kill, and that to delay, or even attempt deescalation, would lead to more bloodshed and community outrage. It was an impossible scenario, one where only one action, a gunshot, affected the world around me.

I tell Bartel about my own inaction and Marshak's suggestions that the right thing to do would have been to take the shot. I had no rebuttal to the shoot-first solution, but at the same time, the VirTra's operator had placed me in a world that didn't seem to respond to my attempts to avoid it.

Bartel tells me he's familiar with the scenario, which is based on a real case. "It's actually one of my favorites," he says.

The scene didn't have to end in tragedy, Bartel explains, but it was also intended to include evidence that should have raised my alert faster. Bartel says the operator could have chosen different dialogue for the subject with the gun, to "set the tone for his mindset" — statements like "They took

everything from me," that are designed to signal to a trainee that the suspect might intend more than suicide.

"He can be amped up and less amped up," Bartel continues. "He can give a plea for help, he can throw the gun out the window, he can assault you, he can get out of the car and start shooting — it has a lot to do with your capabilities and what the trainer is trying to obtain."

To put it another way: It's the trainer who's really setting the "judgmental" parameters in these scenarios, and that means the training goal as well. Bartel says while VirTra doesn't independently collect data on how officers perform, 65 percent of the scenes are designed "not to need force." The variety of options allows operators to test more complicated deescalation techniques, with trainees being judged on the basis of asking the right questions, noticing the right things — and in doing so, if the operator allows it, avoiding a shootout.

However, Bartel concedes there would be nothing to stop an operator from cueing up scene after scene of ambushes and active shooters. But he argues that such a training strategy wouldn't be the result of VirTra's simulator, but the police department or trainer.

"What we don't do is create a situation where everything is a 'shoot'. There's no reason to do that," he says. "In theory, could someone force a use-of-force event? They can, that's true. Ultimately, their policy and training protocol would have to be called into question."

Starting in the 1990s, the most extreme critics of violent video games mobilized around the argument that virtual carnage wasn't just linked to aggression, but that players are actually learning urban warfare skills from first-person shooting games. While most research failed to support that argument, there's still little we can say confidently about the relationship between simulated violence and real-life aggression.

When it comes to police training simulators, which are *trying* to influence real-life behavior, the question is even more pressing.

"The gold standard for testing is, 'Does their behavior in the real world change after the training?' And that research is incredibly lacking," says Stephen James, an assistant professor at Washington State University who runs its Simulated Hazardous Operational Tasks Laboratory. James, in partnership with researcher Lois James, his wife, uses their own sophisticated simulator, complete with filmed scenarios and branching choices, in order to study racial bias and officers' performance under stress.

The VirTra, James says, is "lagging behind what the profession needs out of this training tool." Even with VirTra's branching options, he argues that the system fails to connect trainees' actions to the changes on screen.

"The scenario should be driven by the choices of the officer and not the operator," he argues. "The biggest problem to me in how these simulators are utilized is that it all depends on the quality of the lessons learned. It's really hit and miss, even within the same organization."

From the researcher's perspective, the high-tech advancements behind modern simulators are being wasted without the ability to judge trainees in meaningful ways; and not judged by a human operator wearing a police uniform, but by a "dispassionate metric" that can be applied as a standard beyond just one department or agency.

Instead, the simulators' current use leaves open the possibility for what James calls "negative training," which replaces the incentives for good judgment — i.e., avoiding a shooting — with an adrenaline-pumping crisis that only a vanishingly small number of officers will face in their career.

James acknowledges that officers do confront real-life situations they don't control. He doesn't discount the lived experiences of officers who confront subjects like the shooter in the City Hall scenario, who didn't respond to verbal attempts at deescalation, or those like the ambush shooter who attacked just after I'd holstered my firearm after I'd already shot someone. He argues that those crises are incredibly rare and "just because they happened to an officer once" doesn't justify their inclusion as training scenarios.

"You can have an officer doing absolutely everything right and the operator decides to make it a shooting scenario," he says. "What does that teach you? It teaches you, 'It doesn't matter what I do.'"

Perhaps that was what had bothered me so much about my time in the VirTra. Marshak had asked me, "What should you have done?" The truth is that it did not actually matter. As a trainee playing the cop, all I'd learned was to expect the worst and act the quickest. The VirTra contained a world whose moral compass was judged in virtual retrospect, based on perfect foreknowledge. I was being asked to extend that judgment to what cops face in real life.

While not every scenario I encountered in the VirTra was a brutal calamity that pushed me toward violence, it still felt like a process designed to encourage projection into my future coverage. It seemed this was the "well-rounded" story Marshak had mentioned in the invitation: That the next time I reported on a police shooting, I would think about the worst-case scenario: that man at City Hall.

For now, James and his fellow researchers are still studying the effects of police simulator training. But this isn't an issue that's waiting around for academic clarification: VirTra is a publicly traded company that claims its simulators are installed in 28 countries. It reported more than \$18 million in revenue and nearly \$1 million in profit 2018. The company's tailor-made training tech has also found its way to the military, with simulations of checkpoints and attempted terrorist attacks. The platform is used by Department of Homeland Security, Secret Service, U.S. Customs, Border Protection and more. In 2018, the company inked a \$4.6 million contract through the Department of State to outfit Pakistan with simulators.

And soon, the list of VirTra customers will include the St. Louis Metropolitan Police Department, whose officers shot twelve people in 2019, seven of whom died. In an email, department spokeswoman Michelle Woodling writes that the department is replacing its outdated Laser Shot system with VirTra's top-of-the-line model, the V-300, which features five

screens and a 300-degree field of vision and whose promotional materials tout its "superior, lifelike" training.

The VirTra, Woodling writes, is "the best training simulator on the market at this time."