

# DISRUPTION

## Dear Linux Magazine Reader,

The long anticipated phenomenon of 3D printing, which the futurists have long identified as a potential “disruptive technology,” truly arrived this month with the appearance of the first 3D-printing controversy: 3D printing of cheap hand guns. Pop science prognosticators who have been bleary-eyed over the “promise” of 3D printing seemed caught off guard by the appearance of the first 3D guns. (You mean this wasn’t just for printing heart valves and Ironman exoskeletons?) At last, 3D printing was not just a quirky popular science oddity, but something that could serve as the fodder for moral arguments – by both sides, and a blogosphere seemingly thrilled to have some new material for speech making and hand wringing.

The weapon itself, which is called the “Liberator” by the people who created the blueprint, does not appear to be anywhere even close to worthy of all the controversy. I have seen the same snapshot of the gun getting test fired in 50 online articles by now. What I haven’t seen is any pictures of a bullet fired from the gun actually hitting anything like a target. I haven’t seen any statistics on how fast the bullet is moving, its momentum, or the damage it is capable of doing. Is it like a real gun they use in the crime shows? Or is it more like one of the inventive but hardly war-ready cannons they make in my part of the world with a shaft of PVC pipe and a can of aerosol that will launch a potato into the neighbor’s yard?

None of these questions matter, of course, to the many people with opinions, except that some have correctly pointed out that there are, indeed, many easier ways of getting a gun than printing one on an US\$ 8000 printer. From a technical viewpoint, the 3D-printed gun has much to prove. There is a reason why guns are made out of metal: Metal is really strong. If plastic guns were a viable alternative, somebody would already be making them. Still, the technology will improve with time, and it is possible that someday someone could make one of these printed guns that could actually do some damage, plus it could pass through a metal detector – an ominous development for supporters of gun control.

What troubles me about the printed gun debate is that everyone (on both sides) assumes there is some kind of *solution*, that if we find just the right combination of policies that perfectly balance free speech rights, privacy rights, gun ownership rights, and the right for freedom from gun violence, we will build a world where people can print their own guns without anyone giving up any of the freedoms they already have.

I’m not so sure. And, I’m especially worried about the tendency to frame the debate in terms of Internet freedom. Many in the FOSS community believe that free speech on the Internet should be protected, including the right to distribute blueprints for print-

ing guns. That viewpoint is perfectly fine, but don’t kid yourself: if people could make real guns this way, the only way your speech would be protected would be through even greater erosion of your privacy. If the governments of the world couldn’t stop anyone from posting gun blueprints, they would spy on whoever posted a gun blueprint and whoever downloaded it. I’m not being paranoid: It is really easy to monitor someone’s Internet activities. If Amazon and Facebook can figure out what you do, where you go, what you buy, and with whom you associate, imagine what the government could do.

The irony is that the traditional gun rights debate, at least in the United States, hinges around the need to avoid letting the government keep a list of who has a gun and who doesn’t. The Internet makes it really easy to keep such a list, so if you favored anonymous gun ownership, the Internet would not be the place to find a gun. One could easily imagine some kind of anonymous Tor network where the gun printers hang out, but the government would spare no expense to infiltrate that network, regardless of the legions of congressmen pleading for privacy rights or gun rights.

I’m not advocating a solution because I don’t think there is one. My sense is that, if 3D gun printing were to actually work someday, it would drive a wedge between free speech advocates and privacy advocates, so that it would be much more difficult for an organization like the Electronic Freedom Foundation to claim to represent both. But of course, the pro-gun faction would also have its own wedges. Although rank and file gun advocates are idealists who base their position around concepts of freedom and personal liberty, the deep pockets of the gun lobby, and much of the leadership energy, comes from gun manufacturers, who have nothing to gain and everything to lose by letting people print their own guns.

Wedges all around – that’s what I call disruptive.



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