

Forum: General Assembly 1 - Disarmament and International Security

Issue: The regulation of 3D-printed weapons

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Introduction

Ever since 1981, 3D printing has been being polished more and more. Nowadays, these printers can create almost anything that can be imaginable from different materials. This, of course, includes weapons.

Cody Wilson, founder of the open source gunsmith organization Defense Distributed, was one of, if not the first, to create a functioning 3D printed weapon in 2013. This gun was dubbed “The Liberator”, and its blueprints were downloaded over 100.000 times all around the world in 2 days.

Having the power to create a functioning firearm with the press of a button is terrifying. Even more so, there is yet to exist a clear set of guidelines in order to control these types of weapons, as well as to watch over when and where are these schematics being downloaded.

Definition of Key Terms

The First Amendment

The First Amendment is an amendment belonging to the United States Constitution which prohibits any type of law that limits freedom regarding religion, expression, peaceful assembly, or the right of any citizen to petition the government. Throughout the years, however, The First Amendment has been questioned as to what qualifies as freedom of expression, specially, in this case, computer code as a way of speech.

The Second Amendment

The Second Amendment is, as well as the First Amendment, an amendment to the United States Constitution, which creates the right of the citizens to possess and use firearms.

Guideline

A set of guidelines refer to the information needed on how to establish or practice something. Regarding the issue, guidelines are needed in order to ensure security.

Small arms and light weapons

Small arms and light weapons are a part of conventional weapons, which is what the Arms Treaty regards. Small weapons are those designed for individual use, whilst light weapons are designed for the use of a small crew of 2 or 3 people. The definition of small arms will be needed when classifying 3D printed weaponry.

Weapon

To first try to regulate these types of weapons, it is necessary to define what a weapon is. It is defined by the Oxford Dictionary as “A thing designed or used for inflicting bodily harm or physical damage.”

Undetectable Firearms Act

The United States Undetectable Firearms Act of 1988 is a legislation that makes it illegal to manufacture and sell any firearm that is not detectable by a walk-through metal detector. In regard to the issue, certain 3-D printed weapons have to work with metal objects. However, these pieces can be taken out easily, making the act meaningless.

Background Information

As it was previously mentioned, the first working 3D printed firearm was created in 2013, “The Liberator” by Cody Wilson. After its burst in popularity, the United States Department of State demanded Defense Distributed to eliminate the file from their website. Ever since then, the company and the United States government have been on an ongoing legal debate.

After 5 years of the ban of these types of files, Defense Distributed was permitted to upload them after the Court Settlement stated that the ban of these CAD files where in

violation of the First Amendment. Despite this, on the 27th of August, 2018, district judge Robert Lasnik extended the ban of the files.

The threat that these weapons pose:

Firstly, and the most important threat, are the way these weapons can be easily manufactured. Anyone with access to a 3D printer can download, print and use the gun, while remaining completely invisible to the government, making gun permits completely useless all around the world. It is practically impossible to track exactly where these files have been downloaded already, and, taking into account how quickly these files can spread through the internet, most likely millions can have copies of the blueprints.

In addition, specially member states where getting ammunition might be easier, such as the United States, the number of armed robberies and murders would be likely to increase, due to the easy access to using a 3D printer, as well as the effortless assembly of the gun itself, needing just a handful of other items that are both inexpensive and easy to buy.

Secondly, as mentioned before, these guns might be untraceable virtually by any government. Thankfully, however, every 3D printer has a sort of “fingerprint”, called fill patterns, that are left while printing any type of object, including these firearms. A programme called “PrinTracker” does exactly this, and could be use by governments worldwide to trace these weapons. However, the firearms still lack any type of serial number or code to make it easy to insert into any kind of list. This is why these types of weapons were named “ghost guns”.

Thirdly, these weapons, although easy to get, still remain cheap and made with a type of plastic. This means that the majority of these firearms can explode when used, damaging the user too, excluding those made with high-end 3D printers.

Lastly, 3D printed weapons require very few materials, other than the plastic itself for the printer. The “Liberator” could function with only the printed components, but a metal piece is added so as to make it impossible to bypass metal detectors. However, this metal piece is purely optional, and someone can opt to remove it. These weapons can single handedly render metal detectors completely obsolete.

There are no documented instances of 3D printed weapons being used as murder weapons. However, there have been cases of home-made weapons used for murder.

Application of The Arms Trade Treaty

The Arms Trade Treaty is a treaty that focuses on regulating the international trade of conventional weapons, which include battle tanks, armored vehicles, large-caliber artillery systems, combat aircraft, attack helicopters, warships, missiles and missile launchers, and small arms and light weapons. This treaty ensures that no trade is permitted if these weapons are likely to: be used in order to violate the human rights or in crimes against humanity, facilitate terrorist attacks, violate UN charter regulations, etc. (Kimball D. G., 2016.)

Some have brought up the question regarding if these 3D printed weapons can be classified as small arms, and if they, to a certain extent, can facilitate terrorist attacks, seeing as they can be uploaded publicly. (Flores, A. C., 2016)

Stated by the United Nations Office for Disarmament Affairs (UNODA), the “Illicit flows of small arms and light weapons undermine security and the rule of law. They are often a factor behind the forced displacement of civilians and massive human rights violations.”

Programme of Action on small arms

The Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects, is a Programme of Action (PoA) in which governments agreed upon improving national small arms laws, import/export control, stockpile management, as well as cooperation with other nations. This PoA was adopted by the United Nations Conference on the Illicit Trade in Small Arms and Light Weapons in All Its Aspects between the 9th and the 20th of July, 2001.

Major Countries and Organizations Involved

United States

The United States (US) is where the first 3D printed gun was created, and also where the first attempt to ban these firearms occurred. The US is, in a way, the center of this issue, considering that the US government is the one that didn't regulate the creation and publication of these files in the first place.

Defense Distributed

The company Defense Distributed was founded by Cody Wilson, the creator of the first 3D printed weapon. This company has been on an ongoing legal battle with the US government throughout the years, fighting towards making the publication of blueprints for 3D printed weapons legal.

United Kingdom

The United Kingdom has been one of several countries affected by 3D printed weapons, and the government has stated that 3D printed weapons are a threat to national security.

Australia

Similarly to the United Kingdom, Australia has been affected with the publication of these files, and the government has reported several 3D printed guns being used during robberies and being sold to the public.

Japan

Japan has also faced the consequences of the issue, but has decided to take action when a citizen designed his own 3D printed weapon, the “ZigZag”. This citizen was sentenced to 2 years in prison.

Spain

Spain was the country with the greatest number of downloads regarding “The Liberator”, and has implemented laws that prohibit the spread of files such as these, without a license.

China

China has also taken measures against 3D printed weapons. A significant one consisted of naming every company that possesses a 3D printed a “special industry”, that is required to provide additional information about their employees and security.

Timeline of Events

Date	Description of Event
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May 3 rd , 2013	The first 3D printable gun, “The Liberator”, is created by Defense Distributed.
May 8 th , 2013	The United States Department of State demanded the removal of the files for “The Liberator”, without government pre-approval.
June 3 rd , 2013	The Arms Trade Treaty (ATT) is signed, in an effort to combat illegal arms transfers and also regulate legal arms transfers between countries.
August 1 st , 2018	Defense Distributed is legally allowed to upload the files for “The Liberator” once again.
August 27 th , 2018	District judge Robert Lasnik extended the ban for the files.

Relevant UN Treaties and Events

- The Arms Trade Treaty, adopted by the United Nations General Assembly on April 2nd, 2013.
- The Programme of Action on small arms and its International Tracing Instrument, adopted by the United Nations Conference on the Illicit Trade in Small Arms and Light Weapons in All its Aspects on July 20th, 2001.
- Resolution A/RES/73/69 adopted by the General Assembly on 5 December 2018, on the issue of The illicit trade in small arms and light weapons in all its aspects
- Security Council report on the issue of The illicit trade in small arms and light weapons in all its aspects. A/73/168

Previous Attempts to solve the Issue

As it has been mentioned before, there have been some Member States that have implemented laws against 3D printed weapons, if not outright banning them from being uploaded to the internet. However, there have not been any efforts to tackle the issue from a global standpoint yet.

Possible Solutions

Firstly, as it has been outlined in this report before, there isn't any form of regulation or framework to control and regulate these weapons. This is why it is of utmost importance to establish a basic set of regulations in order to tackle the issue at hand as efficiently as possible, as well as ensuring cooperation between Member States.

Furthermore, a tracking system for both the files and the weapons being printed should be established, and all Member States should be using that same tracking system. These weapons are most dangerous if it is impossible to know their routes, and a system to know when and where those files were downloaded and used.

In order to make this tracking easier, a global organization could be established, within, or completely separate from, the United Nations and being supervised by each government. This organization could publish a report showing data gathered from the tracking, without showing private information from the users downloading the files. This would ensure transparency, as well as inform others on the dangers of these weapons.

In addition, this organization could license specific companies that create 3D printed firearms for good, enabling them to create these types of weapons for hunting or even police training. This license, however, needs to be prefaced with a thorough investigation on the company, as well as a set of guidelines and standards being checked.

Moreover, it would be important to link these types of weapons to The Arms Trade Treaty, as well as the aforementioned Programme of Action on Small Arms.

Lastly, encouraging member states to develop and establish laws against 3D printed weapons is crucial, seeing the threat that these firearms can pose for innocent citizens, as well as the person firing it.

Bibliography

Wikipedia Organization (2018, September 25). *3D printed firearms*.
https://en.wikipedia.org/wiki/3D_printed_firearms

Kopel, D. (2018, July 10). *US government drops prohibition on files for 3D printed arms.*
<https://reason.com/volokh/2018/07/10/us-government-drops-prohibition-on-files>

Steckelberg, A. (2018, August 20). *The challenges of regulating 3-D-printed guns.*
https://www.washingtonpost.com/graphics/2018/national/3-d-printed-guns/?noredirect=on&utm_term=.9c907e6d07bd

Bufano, V. A. (2018, October 03). *3D-Printed Guns: Regulations and Legal Implications.*
<https://inpublicsafety.com/2018/09/3d-printed-guns-regulations-and-legal-implications/b>

Hafner, J. (2018, August 02). *What is a 3D printed gun, and how is it legal? Your questions, answered.*
<https://www.usatoday.com/story/tech/nation-now/2018/08/01/3-d-guns-how-3-d-printed-gun-parts-made-and-how-theyre-legal/879349002/>

All 3DP (2018, September 23). *2018 3D Printed Gun Report – All You Need to Know.*
<https://all3dp.com/3d-printed-gun-firearm-weapon-parts/>

Cable News Network (CNN) (2018, August 01). *Trump embraces NRA position on 3D-printed guns - CNN Video.*
<https://edition.cnn.com/videos/politics/2018/08/01/john-avlon-reality-check-trump-plastic-3d-printed-guns-vpx.cnn>

Lopez, G (2018, August 29). *The battle to stop 3D-printed guns, explained.*
<https://www.vox.com/2018/7/31/17634558/3d-printed-guns-trump-cody-wilson-defcad>

Kantchev, G. (2018, October 19). *Authorities Worry 3-D Printers May Undermine Europe's Gun Laws.*
<https://www.nytimes.com/2013/10/18/business/international/european-authorities-wary-of-3-d-guns-made-on-printers.html>

Harvard Law Review (2017, April 7). *Defense Distributed v. United States Department of State, Fifth Circuit Declines to Enjoin Regulation of Online Publication of 3D-Printing Files.*
<https://harvardlawreview.org/2017/04/defense-distributed-v-united-states-department-of-state/>

Krassenstein, B. (2015, July 22). *United Nations' Second Meeting of Governmental Experts Discusses Dangers of 3D Printable Firearms*. <https://3dprint.com/83422/united-nations-mge2/>

United Nations Office for Disarmament Affairs UNODA (2015, June 1). *Second Meeting of Governmental Experts (MGE2) – UNODA*. <https://www.un.org/disarmament/convarms/salw/mge2/>

Flores, A. C. (2016, July 14) *Click, Print, Fire: 3D Weapons and the Arms Trade Treaty*. <https://openresearch-repository.anu.edu.au/handle/1885/109088>

Kasprak, A. (2018, July 31). *Did the U.S. State Department Legalize the Publication of Instructions for 3D-Printed Guns?* <https://www.snopes.com/news/2018/07/26/3d-printed-guns-legal/>

Wikipedia Organization. (2018, November 12). *Undetectable Firearms Act*. https://en.wikipedia.org/wiki/Undetectable_Firearms_Act#Application_to_3D_printing

Grunewald, S. J. (2016, July 22). *UK Government Report Says 3D Printing is a Threat to National Security, and That Should Scare You*. <https://3dprint.com/123746/uk-govt-3d-printing-threat/>

Gibson, M (2018, August 7). *3D Guns in Australia*. <http://www.sportingshooter.com.au/latest/3d-guns-in-australia>

Cardinal, D. (2018, July 30). *3D-Printed Guns Are Only the Tip of the DIY Iceberg*. <https://www.extremetech.com/extreme/274499-3d-printed-guns-are-only-the-tip-of-the-diy-iceberg>

Nott, G (2018, July 30). *Download. Print. Kill? The rise of 3D printed guns in Australia*. <https://www.computerworld.com.au/article/644453/download-print-kill-rise-3d-printed-guns-australia/?pp=2>

Walther, G. (2014, December 18). *Printing Insecurity? The Security Implications of 3D-Printing of Weapons*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4656707/>

Kimball D. G. (2016, January). *The Arms Trade Treaty At a Glance*.
https://www.armscontrol.org/factsheets/arms_trade_treaty