

# Does Technological Progress Make War More Humane?

Written by Giulia Amparo Bruni Roccia

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"It is a fallacy, due to ignorance of technical and tactical military history, to suppose that methods of warfare have not made continuous and, on the whole, fairly even progress" (C. Falls in Cohen, 1996: 38).

As Falls noted, it would be a mistake to deny that technological progress has been, and still is, a characteristic of our history. Men have gone from fighting with their *gladios* in ancient Rome to using gunpowder in cannons and rifles, and from deploying machine guns to applying the threat of nuclear war. They have also gone from conducting naval battles with ships to fighting under water with submarines, and from conquering Europe by foot (Roman Empire) to destroying two entire cities from the sky (Hiroshima and Nagasaki). The aim of this essay is to point out how these changes have affected warfare, and if they have made it more or less humane. To do this, the essay will start by defining "war" and "humane," and will conclude that if we understand "humane" as "kind, merciful and sympathetic," then war can never be defined as such. However, arguments for both sides will be analysed, and in the conclusion, the initial statement will be rephrased in order to acknowledge that technology *did* make progress, and *did* change the way war is conducted.

In order to discuss the claim that technology makes war more humane, we must define the meaning of "war" and "humane." Hedley Bull said:

"War is organized violence carried on by political units against each other. Violence is not war unless it is carried out in the name of a political unit; what distinguishes killing in war from murder is its vicarious and official character, the symbolic responsibility of the unit whose agent the killer is. Equally, violence carried out in the name of a political unit; the violence employed by the state in the execution of criminals or the oppression of pirates does not qualify because it is directed against individuals" (H. Bull, 1977).

In his explanation, Bull reminds us of the distinction that has to be made between murder and the killing that takes place during war, by explaining what else violence needs in order to be classified as war. Accordingly, in order to discuss the question, this essay will only examine conflicts that can be listed as wars, such as the World Wars and the Vietnam War, among others.

Next, what does "humane" mean? It has three descriptions: "inflicting as little pain as possible; civilizing or liberal; characterized by kindness, mercy, sympathy" (Collins English Dictionary, 2003). The definition "inflicting as little pain as possible" means that pain *is* being inflicted and violence *is* conducted, but on a smaller scale. Therefore, are wars that involve small armies humane? Or wars that only last for a few days? Or wars between two sides that do not own enough material and weaponry to inflict a high level of pain? Most importantly, who gives us the measurement of what a "little pain" is? The definition "civilizing or liberal" does not take us very far in grasping the meaning either. The Western world would understand this as something is humane as long as it respects basic universal human rights. However, different cultures may understand it in different ways, and throughout history there have been a variety of different civilizations where, of the same war, some may think of it as civilized and liberal, while others may think that it is a tragedy. While these two definitions involve relativity, the third one is more explicit and automatically excludes conflict, as it is improbable that anyone could claim that inflicting the kind of violence that is classified as war fits with the principles of "kindness, mercy and sympathy." Indeed, anything that is war-like or involves activities that are included in war cannot be described as also being kind, therefore, the two concepts deny each other.

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Consequently, it could be said that the assertion that “technology makes war more humane,” before it could even be discussed, cannot even be *thought*. However, although much of this definition seems clear and seems to put an end to the discussion, this essay will now argue for both sides of the debate, and show *why* some think that technology can or cannot make war humane.

Statistical data provides a first impression on whether or not wars have become more humane. In his article “The New American Way of War,” Boot showcases statistics about the two Gulf Wars in 1991 and 2001. The duration of the conflict dropped from 46 days in the first war, to 26 days in the second; the costs went from 80\$ billion to 20\$ billion; the number of troops employed went from 660,000 to 250,000; and casualties went from 365 to 158 (Boot, 2003: 43). This data clearly shows an improvement from one war to the other, as all aspects diminished by 50%. There are a few criticisms of this picture, however, one being that Saddam Hussein did not have a comparable force, therefore the correspondance does not hold. Furthermore, it must be noted that this article was written only three years after 9/11, and in the year that President Bush declared all military operations as concluded, therefore this article could be seen as just an apology for the Bush administration and the war in Iraq. Boot’s data, however, cannot be radically dismissed, as there is another historical example of how the duration and efficiency of warfare diminished and progressed respectively, that being the Nazi invasion of France in only 44 days and with only 27,000 deaths (Boot, 2003: 44).

Against these statistics though, there are others that prove how humanity has degenerated. In comparing the two World Wars, we see that in the second, the Allies employed 41 million people, spent 700\$ billion, and lost 20 million people, and in the same war the Axis mobilised 24 million people, spent 450\$ billion, and suffered 6 million casualties. In comparison, the costs of WW2 were 5 times those of WW1, the military casualties were twice those of the previous, and the total deaths were three times higher than those of the first (A. Roland, 1997). Furthermore, the production of war materials has grown. Hobsbawm noted that in the battle of Jena, Napoleon defeated Prussia with “only” 1500 gunshots, while during the First World War, France produced 200,000 bullets *a day* (PresentePassato, 2010). It is also significant to note that the number of conflicts in the 20th century is three times higher than that of the period that stretches from the 1st century B.C. to 1899 (PresentePassato, 2010), and this only shows how man has degenerated throughout history, has not learned from past mistakes, and on the contrary, is ready to repeat them continuously.

However one wants to view history, either through the first or second group of statistics, it has to be acknowledged that these results are due to the progress that man has made in technology. Thus, we will look at how three inventions affected warfare; submarines, aircraft, and Precision Guided Munitions. Submarines, which are also known under the German term “U-boats,” were important during World War 2. In “Wolf Packs,” the U-boats were used to cut the fundamental supplies that were sent from the US, over the Atlantic, to Britain and Europe. Consequently, the use of submarines in WW2 can be seen as worsening the conflict, as cutting off supplies meant harming both the military and civilians. The Allies, though, were able to break the “Enigma code” used by the Germans to communicate secret information regarding U-boats, which lead them to be able to track their enemy’s position, and they also used sonar, depth charges, and long-range bomber aircraft to respond to the U-boat threat as well (BBC, 2010). However, although these technological developments served to stop the Nazi advancement and to protect Allied citizens, it does not mean that they made the war more humane. In fact, this new tool to conduct war with, the submarine, was merely added to the traditional ground, air, and sea forces (there were only battleships before the advent of submarines). Yet, on the positive side of submarine use, submarines are more humane in the sense that, opposed to the big battles fought on ground which have a consequently high number of both military and civilian deaths, battles fought under water between submarines can only kill the men who are on the submarine, men who can only be in the military, and who are not civilians.

In World War 2, along with submarines, aircraft were also very relevant. They were used intensely for the first time during the Spanish Civil War, with the bombing of Guernica as the most prominent example. Aircraft were then used by the Germans over Britain (e.g. Coventry), and then by the Allies in Europe (e.g. Dresden). With the technological progress in the air-sector, a new opportunity for killing was created. The most striking part is that this killing was not only intensive, but *impartial*, as entire cities were bombed, killing both military combatants and civilians, thus extensive military errors were made. This surely is not an example of how technology made war more humane. In

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order to improve this situation, technological development continued on, and for example, devices on F-15's such as radar, navigation systems, and UHF communications systems, made it easy to distinguish enemy from ally, and consequently reduced errors and vain damage (BBC, 2010).

In defense of Precision Guided Munitions, theories argue that it is the ultimate way of minimizing damage to things that are not a target. Before this development, and as seen in the Spanish Civil War:

“Obviously the airman, riding so high above the earth that cities look like ant hills, cannot aim his deadly cargo at armed males. All below will be his impartial target” (Major General James Fechet, in R. Hallion, 1995).

Along with the advantage of being able to shoot only at specific targets, another advantage of investing in PGMs is that they bring confidence to the decision-maker; with the assurance that only the decided targets will be shot at, the general or chief knows that none of his efforts will go wasted, and this will act as a deterrent for the enemy. Indeed, before PGMs were used, the latter knew he could be safe because his opponent would be very prudent in how his materials and men were used, and therefore would often decide not to attack in order not to waste efforts (R. Hallion, 1995). The downside of using PGMs is that because it targets specific elements, they could be used to kill more people than what traditional violence would normally be able to do, such as by targeting a public building at a time of day when it is very busy, in order to kill a large number of people.

Advancement in technology can only happen if there is a parallel development of skills in the personnel that operate the machines. As new discoveries become more complicated, the Ministry of Defense and the generals need experts and technicians who know what they are dealing with. The upside of this is that well-trained staff can help to avoid important errors during conflict, and a large number of useless victims can be spared, which therefore makes warfare more efficient. However, having highly professional staff means increasing the degree of hierarchy in the organisation of the military; those who are higher up in the technological sector of the army will try to take advantage of their knowledge and use their skills to their own advantage, and to make as much profit as possible. Not only will well-trained technicians profit off of technological advancements, but so will politicians and generals. Politicians, for example, will try to use devices and systems, which they do not have the competence to understand, for their own interests. World War 1 showcases the problem of incompetence, which has caused significant damage in previous wars. World War 1 had a high number of victims, in part, because incompetent and bewildered generals and politicians found themselves having to cope with new systems they did not understand. Therefore, in order to make technological progress efficient, the army needs to dedicate significant time and effort to the continuous education of its staff in new technologies, otherwise the money spent in research will have been in vain and there will be more damage caused, rather than advantages created (E. Cohen, 1996: 54).

The peak of military technological progress is arguably the nuclear weapon. The nuclear bomb was first released by the US on Hiroshima and Nagasaki in August 1945, destroying the two cities completely, causing an unknown number of deaths, and also causing diseases in neighbouring countries and in the later generations of those who survived. It can be seen as the biggest evidence that technology actually does *not* make war more humane; not only does it kill people, not only does it do this impartially, as it simply aimed to destroy a whole city, but it completely denies the essence of human beings, that of being *alive* (this term includes all aspects of a person's life: being born, going to school, to university, having a job, a family, among others). The fact that this bomb completely destroyed the cities makes it impossible to know how many people died, who died, and those who did not get to be remembered because nothing was left of them. The other problem with the US detonation of the nuclear bomb is that it activated an arms race that pushed and pressured the USSR to acquire the weapon, in order to be on the same level as its opponent. However, as soon as this was done, it was not used, because the two powers knew what horrors this weapon could cause, and so it would not be used ever again. It became the weapon that everyone wanted in order to prove their power and status, but no one dared to use. This caused a strange balance of power, that was created by *fear* of the opponent's possession of the same weapon, indeed, “Nuclear weapons were useful only if they were not used ... Security, in the end, came not from superiority but from mutual vulnerability” (A. Roland, 1997). Therefore, it could be said, that the most lethal discovery had given more humanity to war, because it restrained the decision-makers from beginning conflict, sparing the life of many soldiers:

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“At the end of the 20th century, nuclear war seems less likely than at any time since the Soviet Union detonated its first atomic weapon in 1949. Likewise conventional war between major industrialized states appears similarly improbable, both because of the continuing salutary effect of the nuclear umbrella and the expense and destructiveness of modern conventional weapons. *The military technology itself drives this happy turn of events*” (A. Roland, 1997).

Having looked at these aspects of technological development throughout history, it seems like all positive arguments that can be given for technology making war more humane fall short. Though, an exception should be made for the case of the nuclear weapon. It is for some people horrible to think that a weapon with such a high ability to destroy can be humane, but this essay has proven that it was humane in the sense that people felt “safe” because they knew that other nations holding the nuclear bomb would not actually use it, in order to avoid total destruction. If we go back to the other elements analysed – statistics that show that the world went from 12 conflicts in 1950 to 31 in 1998 (PresentePassato, 2010), inventions such as submarines, aircraft, and PGMs being used in a non-humane way, and staff taking advantage of their skills and of new devices – and assert that it is impossible to make war more humane because war *cannot* be humane, is it also possible to say technological progress is completely useless? No, because if it cannot make war humane, it does however make it more *efficient*; and all elements that have been discussed should be seen in this perspective. For example, man has gone from the war of 1618 that lasted for 30 years, which brought destruction to several German cities, to the two World Wars – which have even been called the Great Wars – 300 years later, that lasted 4 and 6 years respectively.

Casualties and costs might have grown, and several people will say that humanity never learns from its mistakes, however, armies in contemporary wars achieved results that could not have been achieved in the same amount of time as in the previous centuries. Hannibal would have been able to cross the Alps easier if he had lived in the time of the Industrial Revolution, when the first railway was built and the telegraph was used. Though, a few questions could be raised: if technology has made war more efficient, then why are there still so many conflicts? Also, should the nations not have achieved what they wanted by now? A possible answer could be that because advancement in technology is still ongoing and because this makes conflicts more efficient, it is easier for strategists to engage in conflict and they will profit from this situation if they need to. What has also become easier and simpler is communication between the military and civilians, and thanks to the media, civilians can be “involved” in war, in the sense that they can follow up with their loved ones and can be easily informed if anything has happened to them. In summary, war can never be humane, no matter how advanced technology is, simply because the two concepts cannot co-exist. However, technology has brought many advantages to civilians and also in the way warfare is conducted, and development in the technological sector should not be stopped.

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