

Public Acceptance of Space as a battleground

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Abstract

The public perception of war always shifted with times. After the rise and fall of the possibility of nuclear war, in the public imagination, Space Wars are now growing in the mind of people as a distant, but acceptable possibility. This view is generated by a prevalence of space war in films, books and, especially, video games, which is an important 'cultural food' for the generation, which has come to be known as the "millennials" who are people reaching adulthood in the early 21st century, and is sustained by the presentation of space technology as mostly dedicated to civilian uses. Yet, the major players in space are the military forces of few Countries, and the prospect of a democratic, universal governance of space appears to be ever more difficult to achieve.

When two nuclear bombs were exploded in Hiroshima and Nagasaki at the end of the Second World War, their indiscriminate destructive power made it clear to anyone that a nuclear war would be something unimaginable: the destruction and the indiscriminate loss of lives shocked everyone.

Nevertheless, in the following decades the world witnessed a major arms race. It was during this time that the nuclear states deployed a campaign aimed at changing the public imagination about atomic force, and at making it not only acceptable, but desirable, with important positive aspects. 'Atomic' became a synonymous for 'powerful', and was applied to anything: from washing powder to rock bands. The wide acceptance of atomic anything (including water), made it implicitly acceptable, especially in the USA, a nuclear war that could be fought (and obviously won): 'nuclear shelters' were publicized and built by the thousands, with instructions being distributed on popular magazines and on the public radio. The proliferation of nuclear power plants (essential for the production of material for the bombs), besides providing the most expensive form of energy ever produced, contributed to the good name of atomic force, widely publicized as 'Atoms for Peace'.

When the total number of nuclear bombs in the hands

of a few states grew to a dangerously high number, and the number of 'nuclear states' started growing, it was finally realized that if these were to be used, the result would have been MAD: Mutually Assured Destruction.

While few powerful states were building their nuclear arsenal, and despite the Atoms for Peace propaganda, voices of dissent were to be heard from some of the most influential thinkers of the period: in 1958, following the Manifesto released by Einstein and Russel few years before, an international group of scientists met in Pugwash (Canada) to start a campaign against the proliferation of nuclear weapons, on a scientific basis.

The campaign gradually reached the general public, and helped change the politics around nuclear power. As a result, by the 1970s, atomic force started to be seen as dangerous, and the construction of new nuclear plants decreased significantly and the Non Proliferation Treaty (NPT) was signed. Nuclear war was not an option any more, at least in the public discourse. Only a few people kept reminding the world about the possible dangers, while most just forgot about it all.

Despite major efforts by the 'Hibakusha' (the survivors of Hiroshima and Nagasaki bombing), who have relentlessly campaigned to

warn about the damage, and the consequences of nuclear bombs and radiation, in general. However, the general attitude towards war and the nuclear issue started to change again with the new millennium. Wars have now become something that happens 'far away', and the menace of nuclear war seems unrelated to our everyday lives. Nobody thinks about it, except the Military, a small number of peace activists, and some scholars.

Yet, today the number of bombs, and the number of States that control them, is still at a dangerously high level, despite the reductions following the NPT, and a number of bilateral arms control treaties between the former Soviet Union (now Russia) and the US. The general attitude towards the possibility of a nuclear war is not as strongly negative as it was in the past decades.

The destruction brought about by the first use of nuclear bombs relied on earth-based instruments. The wars of present time, by contrast, make ample use of satellites based in space for data gathering, for fast communication, and for the control of weapons and vehicles that are remotely controlled.

The international treaties that govern outer space established in the '50s and '60s via the United Nations Office for Outer Space Affairs (UNOOSA.org), and now in need of major revi-

sion and updates, prohibits the deployment of nuclear weapons and/or weapons of mass destruction in space. Besides the possibility of keeping conventional weapons in space, the importance of satellites has become so paramount that major powers are implicitly or explicitly considering space as a legitimate 'battle ground', and the possibility of a (terrestrial) conflict extending to space does not seem to be unthinkable.

Last year (2019) the USA formalized the institution of a Space Force, which can be considered the most egregious defeat to the principle of 'space as a peaceful commons', as proposed by the UN Committee for the Peaceful Uses of Outer Space (COPUOS). The U.S. Space Force would certainly not be the first instance of the expansion out of the planet of military interests, and the USA is not the only power that actually deploys satellites with military function, nevertheless the institution of such Force marks the official entry of Space in the geography of war.

In our times, among the general public, especially in the Western societies, the concept of war is surrounded by an aura of science fiction, involving not just soldiers and bombs, but also missiles, defense systems, and the outer space. Space has become to be considered as new land, and if there are many who think that space

should stay as 'common territory', to be protected and shared for peaceful purposes, there are also those who consider it amenable to conquest, euphemistically called 'commercial and civilian exploitation'.

Once something has been conceived and imagined, then it becomes possible.

Indeed, we have already placed a very large number of objects in space, belonging to specific States, to groups of States and frequently privately owned. People (astronauts) regularly spend time in space, and our economies and daily life rely on the services that depend on satellites functions.

Outer space and the satellites in it are nowadays in the public imagination more directly related to civilian purposes, to important economic activities, and also as a place for the imagination. With the launch this year of privately owned spacecraft carrying astronauts to space stations, expectation of space tourism (already a reality for at least one person) enters the reality.

With this background, war purposes are nothing but a detail.

It is true that many civilian activities rely on satellite information with many of them very widespread and popular: first of all the nearly universal use of GPS and fast communication at personal level, together with

the payment and financial transactions, the e-commerce and so on; satellite based research is also very important for knowledge and for disciplines related to the ecosystem, wildlife management and biodiversity conservation, to social situations, agriculture and to the weather forecast and climate assessment at short and long term (for example of hurricanes or of glacier melting), and to disaster management. Also economical and financial activities strongly rely on satellite and tele-communication. All of these aspects could well be the premise for the development of rules, agreements and treaties aimed at protecting assets that cover the interests of a large sector of the world economy. It is uncertain, however, if such agreements will be met and universally accepted, and if they would be sufficient to protect the space from militarization. The move of making a branch of USA military forces specifically dedicated to space activities certainly works against it, and is a dangerous act, which is sure to be perceived as aggressive by most other States.

The general public is already prepared to accept it, though: for a generation that is living and breathing video games, space wars belong to the accepted (gaming) realm: titles such as 'Planetary Annihilation', or 'Ashes of Singularity -

Planetary warfare on a massive scale', are poised to set in the young minds the idea that war from and in space is on one side possible and on the other as innocuous as a video game, where one can dye and restart as long as one wishes.

The final picture that dominates in the general public (and in particular the public of the Western world) is very reassuring, but it diverts attention from important issues.

1. War in general is perceived as a distant affair, even when our Countries are directly involved. Our military operations, usually performed far away, are 'surgical' and aimed at 'specific results', for the benefit of the 'underdeveloped populations or those who are 'victims' of some tyrant. Other wars are fought between small, poor and/or little-known countries in different continents, with low-tech tools like the AK47 machine gun. Here we have an issue of both information, or a lack thereof, and interest.

2. Hi tech war is just a game, nothing to worry about. The problem we can't ignore is that the exercise of imagination opens the door to reality, and that there will always be one or more 'mentally weak' people who take it seriously, as we too frequently see in recurrent mass shooting.

3. Space is used for essential needs (communications, public health and food), and

it helps the economy. The problem here is that we risk to underestimate the huge power in the hands of the few who controls satellites and other space assets (not only States, but private companies).

4. Tools in space are serving humanitarian ('feel good') purposes and enterprises. It is rarely considered that the biggest investor in space is the military sector.

Besides the propaganda aimed at 'normalizing' the use of space, there are several real issues that are problematic and that need to be addressed for the management of space, especially as we must work for it to be considered a common good, under democratic control.

Space is vast, but not infinite: at least for the foreseeable future, the 'usable space' and its resources around our planet are limited (consider orbital trajectories and radio frequencies), and access to them should be guaranteed to any player with equal rights. The use of space for war purpose, both aggressive and defensive, strongly limits its availability for really peaceful purposes.

The problem of space debris, old satellites out of service, and remnants of other activities, should be addressed, and a responsible attitude would require that efforts are directed to solve this problem, before increasing

the number of orbiting objects.

In the meantime, structures in space are growing in number and value, and their importance for all sorts of activities is considered paramount by all actors involved. The need for their safeguard are therefore considered a priority at national level by many States; however, despite the difficulties due to the blurred distinction between military and civilian, and the problematic issue of dual use technology, if a solution is to be found, it will have to be at a super-national level, coordinated by the UN and its Agencies.

Space laws and agreements should be set, that explicitly prohibit any military activity to be placed in space. Some discussions have been taking place for decades, in particular in the mentioned UN settings, but the general public is mostly unaware of both problems and possible solutions and negotiations.