



Prepared Remarks

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Please compare against delivery

Almost 70 years passed after the nuclear attack on Hiroshima and Nagasaki. After Nagasaki no nuclear weapon have been used against cities or even military targets. The horror for the bombing of Hiroshima and Nagasaki contributed to the global taboo against nuclear weapons: these horrendous weapons should never be used again against people. States possessing nuclear weapons should stay clear from the risk of a nuclear war. This powerful message is essential for the survival of mankind. It is right to say that the suffering of the citizens of Hiroshima and Nagasaki who were killed in 1945, gave this important contribution to the history of mankind: it created a taboo against the use of nuclear weapons that hopefully will spare mankind from the devastation of nuclear war.

But unfortunately the numbers concerning nuclear weapons today are far from reassuring and the risk is still significant that the taboo against the use of nuclear weapons can someday be broken.

Existing nuclear weapons are far too many: the Federation of American Scientists estimates that in the world there are about 15 600-15 700 functioning nuclear warheads (7500 in Russia, 7100 in US, 300 in France, 250 in China, 215 in UK, around 100 each in India, Pakistan and Israel, less than 10 in DPRK).

Also after 1945 there has been a total of 2053/2054 nuclear tests (of which 1030 by the US, 715 by the USSR/Russia, 45 by the UK, 210 by France, 45 by China, 3 by India, 2 by Pakistan, 3 by DPRK and possibly one extra test by the Israelis in cooperation with South Africa. Of these tests there were 528/529 that were nuclear explosions on the ground or in the atmosphere or in water. The tests that have not been conducted underground had a severe impact on the environment; it is enough to mention the atoll of Bikini in the Marshall Islands that still cannot be inhabited after the 1954 Castle Bravo test of 15 Megatons, not to mention the previous tests in the same Bikini atoll. The treaty (CTBT) that forbids further nuclear tests is still awaiting its entry into force thanks to countries like the United States, China, India, Pakistan, Israel, DPRK that have not yet either signed or ratified the CTBT.

The NPT (Non Proliferation Treaty) was signed and ratified by 188 States (plus the Holy See and Palestine as observers). Still, counting the 5 nuclear States recognized

by the NPT (US, Russia, UK, France, China) and the 4 nuclear States that are not party of the NPT (India, Pakistan, Israel, DPRK) one can easily notice that more than half of mankind lives in a country that possesses nuclear weapons.

In what ways the nuclear taboo can be broken? The first possibility is a nuclear war induced by a sheer mistake. Despite the fact that the cold war ended about 24 years ago, still a significant number of nuclear missiles, both in US and in Russia, are on quick reaction alert. Namely they can be launched within minutes after the information that a nuclear missile attack from the adversary is underway. So even now a false alarm can trigger a nuclear conflict. In January 1995 a Norwegian weather rocket launched with the purpose of studying the aurora borealis was mistakenly interpreted by the Russian military as a possible US nuclear missile, and it was only after it was determined that the missile was not going to land on Russian territory that the alarm status in Russia was lifted.

The second possibility for the breaking of the nuclear taboo will occur if a terrorist group gets its hands over a nuclear weapon or over a sufficient amount of fissile material that could be used to build a rudimentary nuclear weapon. While the most significant case of nuclear smuggling of weapon-grade material has been the seizing of 2730 gr of weapon grade Uranium in Prague (1994) (a quantity still largely insufficient to build a nuclear weapon), it is not at all clear that all the existing weapon grade nuclear material is under tight and secure control.

The third event that can trigger the use of nuclear weapons is the crisis if not the collapse of the non-proliferation regime and of the Non Proliferation Treaty. If States that are party of the NPT decide to acquire nuclear weapons and to abandon the NPT, then we will run the risk of having many nuclear weapon States. This will imply having many different fingers on various nuclear buttons. The international system will then be subjected to a significant higher risk of the use of nuclear weapons. The question is then what can jeopardize the integrity of the NPT? Countries can decide to acquire nuclear weapons and, if they are party of the NPT, to abandon the NPT, essentially for one of the following 3 reasons. The first reason is the prestige that can be seen to be associated to the possession of nuclear weapons. As long as the permanent members of the UN Security Council are also the Nuclear Weapon States as defined by the NPT, the perception that the big powers are exactly those countries that possess nuclear weapons will be reinforced. The second reason has to do with the threat perception that countries can have especially when the threat comes from countries that possess nuclear weapons. The third reason has to do with the effect of undergoing some extra discrimination with respect to the already existing discriminations that are included in the NPT. For instance if a country is denied the "inalienable right" of having access to civilian nuclear energy, or, worse, if its civilian nuclear power plants are bombed for the fear that others have that that country may acquire nuclear weapons, then the said country may decide to abandon the NPT. The case above is not just a theoretical speculation, it was and to a certain extent is still the situation that may happen in Iran.

The fourth and more dangerous situation that may break the nuclear taboo has to do with countries that possess nuclear weapons and that are hostile to each other. Think about the Cuban missile crisis. That crisis saw at the same time deep hostility between the opposite camps, a poor knowledge by the conflicting parties of the situation on the ground, a series of misperceptions and miscalculation combined with a brinkmanship attitude. As McNamara recalled, in the Cuban missile crisis, the world had a tremendous amount of luck in avoiding a nuclear confrontation.

Imagine now the repetition of crises with some of the same characteristics described above for the Cuban missile crisis between say western countries and Russia or between other countries such as India and Pakistan or India and China or even crises involving only one nuclear armed country such as Israel or DPRK. In all these situations is not difficult to imagine a series of events that may lead to the use of nuclear weapons. Imagine for instance that a seriously devastating terrorist attack will happen in India. Then Pakistan will be accused by India that will try to hit some "terrorist bases" located in Pakistan. This may lead to the dispersal first of Pakistani nuclear weapons and then possibly to their use, in this way triggering a nuclear exchange between the two countries. This scenario is just a theoretical one, but it is useful for us to understand how a nuclear war can be initiated in our time.

Taking into account the last series of considerations, we can understand why Pugwash has, since some time, been devoting its [modest] capabilities, energy and efforts in dealing with the issue of conflict resolution and conflict prevention in situations where nuclear weapons are present. In order to prevent a nuclear catastrophe in our times it is of paramount importance to suggest mediations, dialogue and mutual understanding between opposite front in situations where nuclear weapons are or may be present. This is why we usually describe the activity of Pugwash as *promoting dialogue across the divides*. The areas that we mainly consider in Pugwash are the Middle East as a whole, South Asia and North East Asia. In these areas nuclear weapons and even nuclear "rhetoric" play an important and dangerous role. Thus in Pugwash we often promote regional meetings with participants from one of the above-mentioned critical areas, with the provision that all the participants speak in their own personal capacity and with the assumption that the participants' opinion will not be reported outside the meeting without previous approval of the person that expressed those opinions. In this way we promote a dialogue that is, at the same time, frank and private and that goes hopefully to the substance of the issues that are dealt with.

In promoting dialogue across the divides in regions where nuclear weapons are present, our constant worry is to promote mutual understanding that can help in preventing the development of conflicts that in turn may lead to the use of nuclear weapons. The *raison d'être* of Pugwash is to do whatever we can do in order to make sure that Nagasaki's bomb will be also in the future the last nuclear bomb that has been used against people. In this way Nagasaki's sacrifice will serve the purpose of keeping forever mankind far from nuclear annihilation. An important purpose indeed.