

Unintended Nuclear War – Risk, Consequences and Problem awareness

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See also www.unintended-nuclear-war.eu

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Summary

Section 1 describes why there is a risk of accidental nuclear war and why this risk will grow in the coming years. Many will know these arguments and can skip this section. Section 2 justifies why accidental nuclear war is more likely to use many nuclear weapons and is followed by comments on the probability of occurrence in Section 3. Section 4 deals with the consequences of accidental nuclear war.

1. Introduction

The fact that no further nuclear weapons have been used so far after Hiroshima and Nagasaki is attributed in particular to the deterrence strategy. The nuclear powers could react with a nuclear counter-attack if unacceptable damage is inflicted on them. Between the major nuclear powers, the outbreak of nuclear war is prevented by the existence of a second-strike capability. Those who are attacked can wait for nuclear weapons to strike and still have enough time and potential afterwards to launch a devastating counter-attack. In the case of a threatened second-strike capability, a counter-strike could also be triggered on the basis of early detection of an enemy attack (referred to as "launch on warning") before the attacking nuclear missiles strike and make a counter-reaction difficult or impossible. For this purpose, early warning systems based on sensors and very complex computer networks have been developed.

Despite the deterrence strategy, however, nuclear war can happen by mistake, e.g. if an early warning system reports an attack with nuclear missiles due to a system error in a crisis situation, although there is no threat (false alarm). In the past, there have been some situations in which it was only through great luck that a nuclear war did not occur by mistake.

A new arms race (hypersonic weapons, space weapons, drones), increasing cyber warfare capabilities and increasing automated decision-making (artificial intelligence, AI) could increase the risk of accidental nuclear war. All these aspects may interact with or directly affect early warning systems. In addition, the warning times are becoming shorter and shorter due to new weapons technologies, so that there is no time left for humans to check and assess attack reports to the necessary extent. This is why there are already calls to use automatic AI-based systems to carry out such assessments. However, the existing data basis is uncertain and incomplete. Therefore, even AI systems cannot deliver reliable results. Neither humans nor

machines will be able to do so. Early warning systems thus become extremely complex, dynamic, uncontrollable systems.

Climate change will already have a significant impact by the middle of the century, also in regions with nuclear powers such as China, India, Pakistan, and will lead to crises, conflicts and perhaps even armed conflicts over living space and resources. In such crisis situations, errors in early warning systems can become very dangerous, especially if the overall situation cannot be assessed appropriately due to complexity and limited time.

2. Unintended Nuclear War: Number of nuclear weapons used

If there is an accidental nuclear war in the future, the effects will not be comparable to those of Hiroshima. The effects will be considerably more serious. In 1945, only the USA had nuclear weapons and did not need to fear a corresponding backlash. There was no danger that the use of one nuclear weapon would lead to an escalation spiral with the use of many nuclear weapons.

If an attack with a single or few nuclear missiles is reported in an early warning system, it hardly makes sense to launch one's own nuclear weapons before the enemy's have struck. After an attack with a single or very few nuclear weapons, there is still enough potential for a nuclear counter-attack.

The situation can change if an attack with many nuclear missiles is reported, which has also happened a few times in the past. If an attack with several or many nuclear missiles is reported, the head of state (e.g. president or prime minister) must decide whether to wait for the impact or to launch a counterattack beforehand. The decision may depend on many aspects, such as.

- How safe is the attack assessed by the systems?
- Will there be a second-strike capability?
- What is the global political situation, do people currently trust the enemy to do this?
- Are there other negative incidents (e.g. cyber attacks)?

In such situations, all persons involved must act reasonably and according to the applicable rules. It is questionable whether this can always be guaranteed.

If in such a situation, i.e. an alleged attack with several or many nuclear weapons, a decision is made for some reason to counterattack before the enemy nuclear weapons strike, then such a counterreaction only makes sense if it is also carried out with several or many nuclear weapons.

So within a few minutes, processes can take place in early warning systems that lead to the use of many nuclear weapons, which can hardly be stopped.

3. Unintended Nuclear War: Probability and timing

It is not possible to give a value for the probability of accidental nuclear war in a given period. Unless there is an incalculable crisis situation, it can be assumed that it is extremely unlikely that an accidental nuclear war will occur today. There is also a very low probability that an accidental nuclear war will occur this year, unless some event with significant escalation potential occurs.

However, if the next 30 years are taken as the time frame, this risk is not negligible and could even be very high. As described in section 1, the upcoming technical developments will lead to highly complex, hardly controllable early warning systems for the detection and evaluation of attack alarms. In crisis situations, e.g. as a result of climate change, such false alarms become particularly dangerous. In a crisis situation, some external event (example assassination in Sarajevo before World War 1) can also lead to an escalation spiral that gets out of control. Such an escalation can be considerably intensified by cyber attacks. If there is a false alarm in an early warning system in such a situation, the risk of nuclear war by mistake is high.

If nuclear war happens by accident, this (the timing) is not predictable. Accidental nuclear war can happen at any time in a crisis situation. The point in time when the danger of "accidental nuclear war" is present cannot be determined. It can be any time before this event, including today. So when it comes to measures to reduce the risk of accidental nuclear war, there is no better time than today. At any other time before such a sudden event as an accident, there is no more information available than today. So no later time is better than today to do something about this risk.

4. Unintended Nuclear War: Consequences

Those who imagine the consequences of a nuclear war may have Hiroshima in mind. Various films describe the effects that existed in Hiroshima. The actual effects will be considerably more serious. In an accidental nuclear war, there will probably be the use of many nuclear weapons. If a nuclear winter then occurs, food production may come to a standstill, threatening the survival of all humanity. Even in the event of a localised nuclear war between India and Pakistan, a nuclear winter may be the result, leading to crop failures worldwide for a decade and thus to a significant global food shortage.

If in such a case, for example, only 80 % of the previously available food is still available worldwide, the consequences can probably still be halfway managed. If the nuclear winter is more severe and, for example, only 20 % of the required food can still be produced, then there will be cruel distribution struggles for the remaining food. Such a shortage cannot be solved by priority lists as in the case of the distribution of Corona vaccines. Instead, today's social forms could collapse and result in violence over the necessary basic needs. Only the strongest and most brutal will be able to prevail, at least for a time.

An additional threat can be an electromagnetic pulse (EMP), triggered by a nuclear weapon explosion at high altitude. As a result, electronic components are largely destroyed. This could affect important infrastructure systems such as electricity and water and bring supplies to a standstill.

Even though the survival of all humanity is at risk in the event of a major nuclear weapon deployment, only a very small proportion of people will be dead immediately. The others will die in the days, weeks or months afterwards, as a result of radiation, or they will freeze to death or starve to death as a result of the nuclear winter. Those who initially survive will then ask "Why?", "Why did this have to happen?", "Why did no one fight back?", "Why did no one prevent this?", perhaps also "Why did I myself do nothing, although I had indications of the risks?", "Why did I surrender to this fate without resistance, although I knew what could happen?"

5. Difficult Problem Awareness

In the 1980s, most people had experienced the Second World War or knew a lot from stories told by their parents. Germany was on the border of the potential enemy and nuclear weapons were stationed here. This made it easy to create a corresponding awareness of the problem in Germany and to motivate the population to protest. Starting points for a protest movement were on the spot.

Today, experiences of war are far away. Germany is no longer on the border with a potential enemy, but in the middle of Europe and is not currently considered a theatre of war. Apart from the suspected nuclear weapons in Büchel, there are no points of contact for a protest movement. On the other hand, the dangers today are much greater than in the 1980s and could emanate, for example, from conflicts between the USA and China, India and Pakistan or China and India. Even if Germany would not be a direct target of a nuclear attack in such a conflict, the effects could be catastrophic, e.g. through a nuclear winter. Nuclear powers such as the USA, Russia, China, etc. would have to be chosen as points of contact for protest movements. However, if potential conflict regions are far away, it will be difficult to mobilise for protest movements in other regions to a sufficient extent.

The risks and consequences of accidental nuclear war are hardly known among the population. Findings on this only arise when one deals intensively with this topic. Simple hints and information are not enough and usually do not lead to feeling affected. Hardly anyone comes to the conclusion that they themselves or their own children could be affected. Instead, the dominant attitude is that people don't want to have anything to do with it, don't want to deal with it, or they think "it won't be so bad, everything has gone well so far." But anyone familiar with the warnings of former heads of state, defence ministers or senior military officers (e.g. <https://atomkrieg-aus-versehen.de/en/hinweise/>) should realise that this attitude is not appropriate. Some may feel they may be affected at some point, but fail to see what they can do, what impact they could make. Possibilities are shown e.g. here: <https://atomkrieg-aus-versehen.de/en/was-kann-ich-tun/> as well as <https://mit-musik-gegen-atomkrieg.de/gb/musik-erfolg/>. Talking to friends and acquaintances about the risks and motivating them to do something could also be very effective.

6. Further Information

The risk of nuclear war by mistake is dealt with at: www.unintended-nuclear-war.eu. Some warnings from senior politicians and military experts can be found here: <https://atomkrieg-aus-versehen.de/en/hinweise/>. The highly respected scientist Noam Chomsky also warns of a high risk of nuclear war in his book "Internationalism or Extinction". Based on a quote from military experts, this is explained in more detail: <https://mit-musik-gegen-atomkrieg.de/gb/atomkriegsrisiko/>.