

Reasons Why Nuclear War Is Inevitable

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The risk (likelihood, probability, chance) of nuclear war, of whatever size, is increasing, for a number of reasons. Factors that affect this risk are listed below, each followed by brief commentary or list of items relevant to the factor. Many of the listed factors are interrelated, and they may interact, e.g., have a synergistic effect on risk. The risk factors are grouped into several categories, and within each category the factors are listed generally in order of significance. The factors listed below may increase or reduce the risk of nuclear war, depending on their direction of change. They are generally defined so that they are positively correlated with the risk (that is, increases in the factor are associated with increases in risk).

Factors generally increasing the risk of nuclear war

Socio-economic

1. Large human numbers and industrial activity. This factor affects many of the other factors, such as global warming, species loss, massive pollution, and fossil-fuel exhaustion;
2. Global warming. Desertification, loss of habitat, species loss;
3. Overpopulation. The continuing and increasing unhappiness and stress in the world as human population and industrial

- activity remain at high levels, continuing to degrade the environment, increase crowding, and support the continuation of low quality of life and misery for a very large number of people; declining freedom; increasing inequality; increasing stress; increasing desperation and hopelessness; increase in hate; increase in aggression; increase in intolerance; see, e.g., Garrett Hardin's *Living within Limits*;
4. Civilization. Division of labor; social structure (classes); increased inequality; loss of freedom; increased control; increased destruction of nature (loss of habitat, loss of diversity, species loss, pollution); isolation; increased work; decreased leisure; poverty; alienation; decreased meaningfulness of activities relative to life satisfaction;
 5. Globalization. Mass immigration; open borders; open technology; large-scale, distributed industry; explosion in magnitude and distribution of knowledge, information and communication; large-scale, open information and communication;
 6. Disaffection with globalization. The growing perception that the current world economic system is not good, either for mankind or for the rest of the biosphere, and should be replaced;
 7. Economic incentives. More economic activity; more production; more destruction of nature. War as a solution to overproduction and overpopulation (see George Orwell's *1984*);
 8. Growth in population, industrial activity, economic activity, and energy use;
 9. Depletion of natural resources (especially depletion of fossil fuels), leading to conflict (resource wars); see, e.g., *Resource Wars* by Michael T. Klare;
 10. Biospheric change. Habitat loss, pollution, species loss; for discussion of the ongoing human-caused mass

species extinction, see Richard Leakey's and Roger Lewin's *The Sixth Extinction*;

Political

11. Increasing interest in anarchy. Promotion of destruction of civilization;
12. Increasing growth of the Green Movement. Promotion of destruction of civilization;
13. Democratization and decentralization. Increased access to nuclear weapons, leading to increased risk of accident;
14. Authoritarianism. Vesting of control of nuclear weapons in a small number of individuals, leading to increased risk in certain situations;
15. Multinationalism. Nationalism; competition among nations (leading to war); incentive for growth (in population, political, economic and military power);
16. Politics. Politics of envy ("If I can't have what I want, then no one will."); politics of greed; factors tending to chaos and instability, such as extreme political correctness, inclusiveness, tolerance, permissiveness and diversity;
17. Population control (for political ends). Factors restricting freedom and generating resentment and resistance: regimentation; manipulation; indoctrination; mass education; brainwashing; propaganda; incarceration;
18. Increasing polarization of political groups;
19. Increase in mass violence (of which nuclear war is an extreme example);
20. Increasing dissatisfaction with current system of planetary management;
21. Increase in hate (speech; action; crimes; terrorism);
22. Increase in tolerance;
23. Human nature. The will to survive; discounting in time and space; venality; corruption; aggressiveness; acquisitiveness; greed; envy; inquisitiveness; curiosity;

reproductive urge; dissatisfaction with status quo;
restlessness; wanderlust;

Military

24. The proliferation of nuclear weapons to more countries;
25. The proliferation of tactical nuclear weapons;
26. The increasing complexity of modern weapon systems. High system complexity makes it difficult to control reliability / risk;
27. The increasing threat of cyber warfare. May cause system failure or malfunction;
28. The increasing availability of nuclear defense systems. These systems work in small attacks, but would be overwhelmed in large attacks. Their performance in small attacks may be contributing to a false sense of security;
29. The miniaturization of nuclear weapons. Easier to deliver nuclear weapons to targets; easier to transport “suitcase bombs.”
30. The advancement of nuclear-weapon delivery systems. Cruise missiles; nuclear-powered nuclear-armed cruise missiles (under development by Russia – able to reach any place on Earth from Russia);
31. The militarization of space. Example: the recent US decision to create a “Space Force. Development of anti-satellite weaponry;
32. The vulnerability of electronic systems (to EMP, jamming, cyber-attacks);
33. Diminution of effectiveness of Mutual Assured Destruction (MAD). MAD works best when there are two nuclear powers of similar weapon capability, assets and values; does not work well now that nuclear weapons have proliferated to many smaller entities;
34. The growing nuclear-warfare abilities of rogue-state and non-state actors;

35. Increasing capabilities of guerilla warfare. Empowered by Internet (access to information, mass communication), mass immigration, and chaotic social systems;
36. Escalation. A small war may evolve to a large one;
37. Preemption. Nuclear weapons may afford the most effective means of neutralizing an imminent hardened threat;
38. Desperation. A nation in danger of losing a conventional war may resort to using nuclear weapons;
39. Automation. Because of the fast pace of nuclear war, many decisions and actions are automated, promoting the chance of mistake;

Pathology

40. Mental illness; megalomania; lust for power/control/status; the quest for relevance (Andy Warhol's 15 minutes of fame);
41. Ideology (political, social, economic, religious, moral);
42. Drugs;

Religious

43. Increasing growth of Islam (which accepts violence as a legitimate means of proselytization and defense of the faith, and embraces an apocalyptic eschatology (e.g., defeat of Christendom in global holocaust));
44. The increasing religious and secular belief that modern civilization is headed for an apocalyptic collapse (eschatology / end times);
45. The promotion of the use of nuclear warfare as an instrument of religion;

Perceptions, Awareness, Knowledge, Information, Ignorance, Sensitivity, Culture

46. The explosion in knowledge and information, and access to it by the masses (listed earlier). Mass communication; distribution of technology; empowerment of disaffected groups;

47. The increasing scientific evidence that modern civilization is headed for collapse. See, e.g., Jared Diamond's *Collapse* or Joseph A. Tainter's *The Collapse of Complex Societies*.
48. Increasing hubris that mankind can control nature, and is in control of its destiny;
49. Increasing belief that science can solve mankind's social problems;
50. Increased discussion (particularly on Internet) of nuclear war (leading to acceptance and desensitization);
51. Increasing propaganda that that nuclear war may be survivable, even winnable, and that civilization may rebuild after its occurrence. For discussion of the effects of nuclear weapons (direct effects, radioactive fallout, nuclear winter), see Samuel Glasstone's *Effects of Nuclear Weapons*, Office of Technology Assessment's *The Effects of Nuclear War*, and Cresson H. Kearny's *Nuclear War Survival Skills*;
52. The growing perception that nuclear war may be survivable, even winnable, and that civilization may rebuild after its occurrence;
53. The growing acceptance that the likelihood of nuclear war is increasing, may in fact be high, and, barring a substantial change in human affairs, may be inevitable;
54. Willingness to entertain low-level nuclear warfare. Tactical nuclear weapons are now an accepted part of "conventional" forces;
55. Desensitization of people to nuclear war, from assorted media (films, video games, Internet, books). Desensitization to human misery in general, from relentless exposure to mass violence and human-caused disasters; sensationalization; news as entertainment;
56. Gaming and gamification. Increased use of gaming (video games, microcomputer-based simulators, war games) and gamification (work performance enhancement through

the introduction of gaming techniques) renders the occurrence of nuclear war more conceivable, familiar, and survivable, and hence more likely;

57. Denial. The civilized world is almost certainly headed for imminent catastrophic collapse, from global warming, fossil-fuel exhaustion, or nuclear war, yet all levels of society are in denial with respect to this. Political discourse, social discourse, and news reporting focuses on activities and events that are totally irrelevant relative to this impending catastrophe;

58. Political obfuscation / dissimulation. World governments are aware that nuclear war is likely, and some are preparing for it (e.g., Russia, Switzerland, Finland), but in general they do not want wish to subject the topic to public discussion. Example: The economic collapse of 2007-2008 was foreseen and alarmed by persons in power (Brooksley Born; see PBS documentary *The Warning*), yet all levels of government and industry moved to suppress this information, resulting in the loss of homes and wealth for millions;

Technical

59. The fragility (brittleness) of complex systems;

60. The collapse of complex systems (interdependence; correlated failure modes; inexorable growth of complexity; self-organizing feature of existence). Example: A major factor underlying the economic collapse of 2007-2008 was the selling of massive quantities of financial derivatives having correlated risk factors. This phenomenon was well understood by the banks and insurance companies selling the derivatives. They knew the system was destined to collapse, but they suppressed this information, knowing that the government would cover their massive losses (“too big to fail”) with taxpayer money, leaving all of the “little people” to lose their houses and fortunes.

61. Increased use of, reliance on, and faith in technology;
62. Accident; error; miscalculation; uncertainty. The likelihood of a large-scale nuclear war has increased because of the possibility that a small attack could be mistaken for a large one, and thereby lead to a large counterattack. The psychologists Kahneman and Tversky observed that human beings cannot assess probabilities well, and the statistician Nicholas Taleb observed that we cannot assess the risk of rare events well;
63. The laws of probability (large numbers, statistics of extremes, and the passage of long time). If the probability (risk, chance, likelihood) of an event (such as nuclear war) in any given year is nonzero, the chance that it will occur over a longer time period increases with the length of the period. For a sufficiently long period, the likelihood of occurrence eventually approaches one, that is, it is highly likely to happen.

The preceding factors increase the likelihood of intentional war and of accidental war. They also affect the size and scope of the war. They introduce substantial uncertainty into the chance that war will occur, into the expected damage caused by nuclear warfare, and into the expected outcome.

Some of the factors listed above are general, broad in scope. Particular aspects of a factor may work either to increase or decrease the likelihood of nuclear war. For example, "Civilization" may work to increase the likelihood of nuclear war through the massive levels of poverty and misery that it generates. On the other hand, the increased regimentation of society, government's ability to monitor and control individuals, and governments' abilities to effect arms-control treaties, can lower the likelihood.

Seemingly apposite factors, such as “Democratization and decentralization” vs. “Authoritarianism,” may both have similar-sign effects, via different mechanisms.

Factors generally mitigating the risk of nuclear war

As mentioned, the factors listed above may be associated with increases or decreases in the risk of nuclear war, depending on the direction of change. The factors listed above were generally defined (as an increase, decrease, presence or absence) so that they were positively correlated with the risk. A number of factors that are generally negatively correlated with the risk of nuclear war are the following:

Political

1. Nuclear arms reductions. If nuclear-weapon inventories were substantially reduced, the only nuclear wars that could occur would be small ones (reducing damage from direct effects, radioactive fallout, and nuclear winter);
2. Espionage (covert operations). Better information improves decision making.
3. Assassination. Threats that cannot be resolved by diplomacy may be reduced by assassination, avoiding war.
4. Drones. Effective weapons for special operations.
5. Counterterrorism. Guerilla warfare is difficult to defeat (either militarily or politically), but it can be managed to reduce the likelihood that small war could mistakenly lead to a large one, or escalate to a large one;
6. Human die-off (e.g., from fossil-fuel depletion or global warming). Large human numbers are a major factor contributing to nuclear war. If the human population were to reduce substantially (e.g., by a factor of 100 to 1000), and nuclear war were not to occur during the transition, then the

subsequent likelihood of nuclear war would be greatly reduced;

7. Increased discussion of planetary management. Establishment of a long-term-sustainable system of planetary management will, by definition, reduce the likelihood of global nuclear war to zero. If sufficient interest is aroused in the topic of planetary management, effective steps might be taken to establish an effective system of planetary management. Should global nuclear war occur, the opportunity to establish such a system might arise;
8. Synarchy. Synarchy (term due to Alexandre Saint-Yves d'Alvedre) is government by enlightened masters, such as Plato's Guardians. An alternative to multinational planetary government, which encourages growth, industrialization, warfare, and biospheric destruction;
9. Redefinition of "nuclear war." When, in recent years, world poverty levels did not decline (but, in fact, in absolute numbers, increased), international organizations simply redefined the poverty criterion, to make it appear that progress was being made. A similar phenomenon may occur with respect to nuclear war. A factor that raises the risk of nuclear war substantially is the proliferation of nuclear weapons, and chances are good that some small group will eventually use a nuclear weapon before the major powers do so. (This is similar to the fact that as the number of nuclear reactors increases, the chance of a reactor disaster increases. The continuing occurrence of such incidents (Three Mile Island, Chernobyl, Fukushima Daiichi) bears witness to this situation.) Rather than admit to failure in preventing nuclear war, as the use of nuclear weapons begins world governments may move to redefine "nuclear war" to refer to nuclear war by major powers, not to small-scale events by minor groups (which might be referred to as "terrorist attacks" rather than war);

Technical

10. Reliability mathematics. May be use to raise the reliability of complex systems to high levels, and hence, the risk of accidental nuclear war to low levels. This buys us time;
11. Systems analysis. May be used to manage nuclear war;
12. Game theory and statistical decision theory. May be used to reduce the probability of nuclear war, and improve outcomes should it happen. For example, the Nash bargaining solution to a general-sum game may avoid war altogether;
13. Technological advances. May be used to lessen the likelihood of nuclear war, and manage it better should it occur;

Other

14. Spirituality. Historical efforts to reduce the likelihood of nuclear war (or, more significantly, of biospheric destruction) have failed. Those efforts were based on non-spiritual methodologies, such as politics, economics, and technology. Perhaps a spiritual approach will work where non-spiritual ones have not. Refer to enlightenment aspect of synarchy.

Although there is substantial correlation among many of the nuclear-war events associated with the risk factors identified above (“correlated risk factors”), some are essentially independent and their risk probabilities are approximately additive. The overall risk of nuclear war, although small, is not negligibly so, and appears to be increasing. Barring substantial change in the risk factors, it is anticipated that nuclear war will occur soon.

This piece was originally conceived as an essay, rather than a list. In that format, some commentary would have been presented on

how each of the factors works to affect the likelihood of nuclear war, and how each of the items associated with a factor comes into play. This may be done at a later date.

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