24

ON THE SOCIAL AND CULTURAL IMPLICATIONS OF NUCLEAR WAR

By Johan Galtung

Department of Politics
Princeton University,
PRINCETON, New Jersey 08544

April 1986

SCENARIO POINTS

In discussing the consequences of nuclear war the independent variable is the scenario. What kind of nuclear war are we dealing with? Two basic dimensions are (a) the total yield unleashed and (b) whether the targets are mainly "force" (the military capability on the other side, including centers of decision-making - decapitation) or "value" (population and economic production factors in general)- or both. For counter-force scenarios high levels of precision would be needed, and presumably lower levels of yield, for counter-value scenarios the profile might be relatively low precision with high yield. The lethality level, defined as proportionate to yield (raised to the power of 2/3) and inversely proportionate to imprecision (raised to the power of 2) might be about the same. With three levels of yield, referred to as "low", "medium" and "high" respectively (the ranges being, for instance,) and "counter-force", "counter-value" and "both" we would get nine different scenarios that could be further refined (eg, how much territory is involved, what is the density of the sttack?). These conditions would be very different and the consequences might differ in several orders of magnitude.

Without taking any position on whether a nuclear war is more likely to be limited (in the lower range, eg low yield and counter-force) or unlimited (in the higher range, eg high yield and both counter-force and counter-value) it should be noted that even lower range nuclear wars are catastrophic in their consequences, and, by implication, medium and higher range scenarios even more so. One reason for this is a characteristic particular to nuclear explosions, not shared by other types of warfare known to humankind: the synergy between the effects of the explosion.

SYNERGY

A nuclear explosion can be analyzed in terms of five major effects: blast, thermal radiation, ionizing radiation, electro-magnetic pulse and dust (in the atmosphere). A synergy is the joint working of two or more of these effects, usually seen as exacerbating ech other, bearing in mind that they might also cancel each other. Examples: the blast will trap people insi de buildings and other structures so that they more easily become victims of thermal and ionizing radiation; radiation will kill humans, animals and plants and make them more inflammable; the electro-magnetic pulse will greatly reduce the magnitude of long distance communication thereby increasing uncertainty and impeding coordinated rescue operations; dust in the atmosphere will modify the ecology if not to the point of a full "nuclear winter" then to the point of creating an abnormal ecology that will exacerbate further the impact of blasts, fires and radiation (thus, plants weakened by radiation will more easily be destroyed by the lowering of temperature).

One additional point about the synergies of the effects of a nuclear explosion is the complex working of after-effects, in other words how the effects spread through time, space and the whole environment. Currents in atmosphere and hydrosphere spread the effects world wide, meaning that no place is safe; knowledge that no place is (completely) safe reinforces any panic. Secondary radiation from radioactive elements with long half-lives spread the effects over time, eg in the form of cancer after short and long gestation periods or as damage to the genetic stock with transmission to the offspring; knowledge that this may happen would reinforce a sense of hopelessness and encourage if not suicide at least low levels of rationality. The way damage to the inanimate environment is transmitted to the biosphere, and then via the food-chain to human beings will give a feeling of being deprived of sustenance; knowing this will make long term planning look irrational, and increase the level of violence in the scramble for unpolluted food and water. The synergies between the immediate effects and the long term effects will not only induce a sense of hopelessness but also a feeling that the worst may be still to come, a factor that may make a nuclear war very different from other disasters in human history that usually have a well-defined worst, initial period.

IMPACT ON NATIONAL SOCIETY

The cohesion of a national society under usual conditions, whether vertical between government and citizens or horizontally between groups of citizens may already be problematic, and even more so under ordinary crisis conditions. Under nuclear warfare conditions some additional factors come into play that may destroy the cohesiveness further, to the point of something close to general and complete disintegration.

First, the asymmetry between leaders, including the government, having survived physically under the sheltered conditions of the bunkers, and the general population that cannot possibly have been sheltered adequately against blast and thermal radiation, may become a major factor in post-impact life. The legitimacy of orders, even perfectly reasonable advice from those less to those more exposed to post-impact hardship will be disputed, possibly to the point of conflict with sheltered elites spending more time on (violent?) crowd control measures than on relief.

Second, the impact will probably have a numbing effect that may wash out efforts to understand what happened and then distribute blame because of the concern with sheer survival for oneself and family/peer groups. But soon after that the need to come to cognitive and emotional grips with the disaster will be there. The government may be able to convince the population that the other side was responsible. But even if the bomb came from the other side, which will not necessarily be the case, a sizable portion of the population may feel that the cause of the diasaster was participation in the arms race and inability to obtain nuclear disarmament or at least arms control, not one side or the other. This will reduce the legitimacy of the government's attempt to govern even further.

Third, the population will probably become fragmented, if not into lonely individuals at least into small groups, trying to cope with the circumstance together. However, given the scarcity of resources for repair, reconstruction, sustenance of material structures, material needs of people and their mental needs because of the enormity of the destruction, large-scale cooperation will not only subjectively, but possibly also objectively, be irrational. It is everybody for himself; those who say something else will be suspected of using organization as a strategy for self help. A model of small groups, possibly also breaking down into mutually hostile individuals, scavenging the environment and suspi cious of everybody is probably more realistic as image of post-impact society. Real aid will have to come from the outside, possibly from other countries - if the outside has survived sufficiently to engage in rescue operations.

CULTURAL IMPACT

The nuclear bomb has been compared to the proverbial genie in the bottle with the double meaning contained in that image: the genius of the genie, snd the danger of letting it out of the bottle. The bomb is a product of a Western culture that itself carries this ambiguity, capable of tremendous scientific/technical achievements to the point of the scientific-technical revolution we are now livi ng through , but also of very destructive action. The bomb is live evidence of the capacity to comprehend the inner workings of the physical universe; the threat of nuclear wars equally convincing evidence of our incapacity to control the nuclear arms race and provide us with higher levels of security instead of ever increasing insecurity. A nuclear war of any magnitude would be telling evidence of the strength of the dark side of our Western culture, our built-in capacity to self-destruct, like other civilizations have done before us. Deep, sincere, agonizing doubts about the entire occidental exercise would be widespread and cause severe identity crises, perhaps in the strong believers in that civilization more than in those who already have their doubts. The result might be a reduced incentive to rebuild what might not look like wort rebuilding lest it might again self-destruct- a pont which would then set the stage for a very deep, and possibly highly violent, conflict between believers and disbelievers in Western civilization post bellum.

IMPACT ON WORLD SOCIETY

The cohesion of world society, under present conditions, is already problematic as witnessed by the nuclear arms race and the many conflict expressions accompanying the gap between poor and rich countries. A nuclear war, even on the lower end of the scale of magnitude, will exacerbate these conflicts further, possibly also open for new ones, for a number of reasons of which four can be stated as follows.

First, the breakdown of communication and transportation and the deterioration of the environment will greatly impede economic relations in a situation when catastrophe aid and trade under more normal exchange conditions would be more necessary than ever. The current world trade structure has been criticized, and some might see in the demolition of the present structure an opportunity for the introduction of a new and better structure. Such ideas would seem not only immoral but also unrealistic: post nuclear attack conditions would impede any trade structure, just as well as unjust, and reduce economic production to conditions of extreme autarky, at very local levels.

Second, another type of wishful thinking that some people might entertain would be the idea that after a nuclear war humanity will somehow pull itself together and reassemble, possibly with a world government, under the slogan "nevermore". It is doubtful that post nuclear attack conditions will produce the psychological atmosphere for such major restructuring of world society. Rather, the deterioration of the environment will lead to an increase in the scramble for scarce and unpolluted resources, and the breakdown of infrastructure would lead to competitive, even violent, rather than cooperative interaction. Added to this, then, are the newxt two factors.

Third, a post nuclear attack world would in all likelihood have a different power structure. Pre-attack nuclear powers are likely to be destroyed more, pre-attack non-nuclear powers less for the simple reason that the priority target in a nuclear war are the nuclear weapons of the other side. The third type of wishful thinking enters at this point: that a restructuring of world power relations in general is long overdue and that this may represent an opportunity. Pre-attack major powers may try to counteract this by stationing nuclear capabilities outside their own borders, extraterritorially or on the territory of others, among other reasons to deflect and disperse a nuclear onslaught. They might also include in their war plans pre-emptive reduction of the power potential of future competitors. Anticipating that such things may happen would already lead to deterioration in

international relations under "normal" conditions. Added to this comes the new relations brought about by post-attack suffering and emergency in general. Power is related to emergency/catastrophe aid with the powerful helping and the powerless being helped, possibly at the expense of developing a dependency syndrome. Resentment accompanying rapid changes in the who-helps-whom relations of the post-attack world may lead to resentment rather than gratitude, and be disintegrative.

Fourth, in addition to the severe individual traumas suffered by the victims of a nuclear attack there will be collectively shared, conscious or subconscious, traumas suffered by the victimized populations, possibly also by populations seen as belonging to the country launching the first attack for having caused such suffering. Such traumas can lead to a number of consequences, all of them harmful to world society cohesion. The trauma can be acted out against the perceived attacker as revenge, thereby starting or renewing a trauma cycle. The trauma can be acted out against a third party, as scape-goating. The trauma can lead to self-directed aggression, with internal divisiveness and/or severe doubts in the country of own national identity and status. Or, the trauma can remain unprocessed as a collective psychological time bomb that can be released, eg through skilful use by particular types of politicians, in the three directions indicated, singly or combined.

We live already, to a large extent, in a world of wounded nations, wounded by insults suffered in the past or at least perceived as such. A nuclear attack would add greatly to these insults, deepening old traumas, imprinting nations with new ones. With the inadequacy of world society for national, emotional support, and with the widespread, even fashionable belief that "you cannot generalize from individual to collective psychology" (which, of course, will always have to be done with care) world society is simply not psychologically strong enough to suffer such traumas - leaving alone the economic, institutional and political capacity to absorb such impacts without too much collateral and long lasting damage.

IMPACT ON DEVELOPMENT

Almost regardless of how one chooses to define development a nuclear war would be counter-productive, and in a major way. Development seen as economic growth, as increase in national or world product would be counteracted by the synergistic operation of the destruction of production factors (raw materials, human manpower skilled as well as unskilled, capital equipment, research facilities, administrative capacities). It may be objected that GNP/capita may not decrease if the population is reduced as much or more than the gross national product through the nuclear onslaught. But apart from the inhuman character of such argumentation it also misses the point that the human factor in production has qualitative as well as quantiative aspects: there are psychological conditions such as belief in the significance of production and sociological conditions such as networks, capacity of the system to reward materially and nonmaterially, etc. - all of them impaired by a nuclear insult to society.

It may also be objected that countries suffering considerable devastation during the second world war not only were rebuilt but entered the world economy with new production machinery. But conventional war did not pollute raw materials or increase the objective and/or subjective cancer risk of the population; nor did it question the whole culture in a way a nuclear might do -- what was questioned and even rejected were particular subcultures and ideologies.

Development seen as social and economic distribution will probably also suffer a considerable set-back from its present level which already is the subject of considerable criticism. Studies of the damage caused by natural catastrophes such as earthquakes, floods and hurricanes seem consistently to show that the poor suffer most, eg because of the lower quality of their housing and the more exposed location. Similar factors may be operating under the conditions of a nuclear attack; some people having nuclear shelters, others not. Between countries the consequences may be less clear with the targets being more in the richer North than in the poorer South. Against both arguments it may then be argued that well distributed radioactivity and environmental degradation to the point of nuclear winter may serve as the great equalizer, which may or may not be correct even if it is hard to believe that power and privilege will not make some survive considerably better than others.

Finally, development seen as capacity to develop further on a self-sustained basis will be greatly impaired by all the damage suffered to nature, individuals and to the society in general, creating new patterns of pauperism and dependency, in short the very opposite of development.

PSYCHOSOCIAL FACTORS INFLUENCING THE ARMAMENTS RACE AND DECISIONMAKING

The most obvious factor lies in the actio-reactio system set up by the arms race itself, as a part of a general syndrome of conflicts of values, conflicts of interests and military positioning. The stimulus-response chains are self-reinforcing, leading to quantitative arms races punctuated by qualitative jumps, or transitions to new weapons systems. A peculiar psychological aspect of this process is the apparent lack of insight in the interactive nature of the relationship. Party X assumes, rightly or wrongly, honestly or dishonestly, Party Y to be ahead, there is a "gap". Plans are made to close the gap as if Party Y in the meantime is standing still or proceeding quantitatively at the same pace, not reacting to the "new" policy of Party X. As Party Y probably perceives the total situation differently Party Y may also see itself as out to "close the gap"; which then seems to take Party X by surprise. Part of this stems from the inability to see oneself as a part of a system, as party to an implicit agreement to keep the race going, and inability - engendered by ideology - to accept the question "if I were in his position, would I not actually have done the same?" One might even go so far as to say that the step from autistic to interactive mode of behavior, so important in individual psychodevelopment, is not easily taken by participants in an arms race - partly because it would bestow legitimacy on the other side by assuming symmetry.

In the search for psychosocial factors one would probably find more by looking inside the parties to an arms race than at the relation between them. Thus, one of the characteristics constituting a superpower in the present world system is to have superweapons. The superweapon of today, no doubt, is the nuclear capability, the magnitude being a measure not only of capacity to inflict damage but of degree of superpower status (one factor explaining the overkill capacity -- the weaons being only partly intended for "killing", and for surviving enemy attacks, they are also intended for status, and not only relative to the other superpower, but also relative to allies and the non-aligned). Tomorrow's superweapon: laser beams

But superweapons are also there to deter, and deterrence is only credible under the assumption that there is willingness to use them. As superweapons cause superdamage, a fact known not only to the antagonists of such weapons but also to the protagonists, no empathy with potential victims can be permitted. Superweapons demand superenemies. Consequently, the worse weapons in terms of lethality a party to the arms race is developing, the worse the image that party has to construct of the other side to justify the possible use of the weapon to one's own side and to make it more credible to the other side -- objective characteristics of that other party are much less important. Portrayal of the other party as Evil will then lead to portrayal of oneself as Good through the logic of dualism, thereby closing the vicious circle of Superpower-Superweapon-Superenemy.

ON THE RATIONALITY OF DECISIONMAKERS

There is a widespread assumption among decision-makers as well as among people in general that before, during and after a nuclear attack decision-makers will behave rationally, doing everything that is possible to defend the national interest and the interests of the citizens, whereas the population may engage in irrational behavior during and after the attack. Consequently, one aspect of the relation between decision-makers and the population after an attack will be that of the crowd-controller relative to an irrational, panicky, potentially dangerous crowd.

Several points militate against the idea of decision-makers being inherently more rational than the population at large, beyond the obvious that under extreme stress all human beings will behave irrationally.

First, the poor record in coping with the arms race is already an indication of limited rationality among decision-makers, relative to the population at large. Public opinion polls in Western Europe seem to indicate that the majority is in favor of membership in the Western alliance, but not in favor of the stationing of weapons that can be seen as provocative because they can also be used for attack. By no known criterion can decision-maker attitudes in this field be seen as more rational than public opinion.

Second, superpower military doctrines ("a limited conventional attack may be met with a nuclear response" and "a nuclear response will be met with an all-out nuclear attack", tying one superpower to a doctrine of the possibility of a limited nuclear war and the other superpower to a doctrine of its impossibility) can be seen as posturing, but also as limited rationality and incapability of achieving compatible military doctrines (eg strictly defensive doctrines). Reasons for this are probably deep and complex and military reasoning should perhaps best be seen as rationalizations of positions taken for other reasons (see below). People in general seem to prefer calling off the arms race, establishing more friendly people-to-people relations. By no known criterion can this attitude be seen as an expression of lower level of rationality.

Third, willingness to really use weapons of mass destruction killing millions of people presuppose a level of empathy so low with other human beings on this earth that one may not only dispute the rationality, but also wonder by what criteria of mental health this is compatible with our image of what constitutes "normality".

Fourth, to legitimize even thinking of such action higher powers such as God and History are sometimes invoked in a way that makes one wonder whether some people do not confuse themselves with these higher powers, seeing it as not not only their due but their right to inflict mass destruction on earth. Most commo people do not think like that, again leading to doubts about decision-maker rational

Looking back at this review of possible, even probable consequences of the nuclear arms race and a nuclear war, some of them even visible today, most of them - fortunately - only part of our nightmares for tomorrow, some reflections might be in order. More particularly, one is tempted to ask: how will a future civilization, say, five hundred years from now, even one hundred, reflect on our times, ~~one~~ the second half of the twentieth century (provided there is anybody capable of such reflections)? Even if a nuclear war did not take place which, of course, is what we all hope? Will they say: there were among them people who seriously contemplated, eve n to the point of planning in minute detail, committing ~~xxixxxx~~ genocide, inflicting the most agonizing pain on millions except for the other millions who were the victims of instant death, and how are we to understand this? Will they divide into two schools of thought, those who maintain that the planners were crazy and those who would say, no, the disorder was not individual, it was systemic, it was the whole civilization committing some kind of suicide because of built-in self-destructive tendencies that they even managed to conceal to themselves under a cloak of tighly reasoned, highly intellectualized rationality?

Or, will they be able to say: at some point, finally, they saw that they were collectively heading for disaster and were able to introduce some self-correcting measures, gradually overcoming the threat of nuclear war, eventually also nuclear weapons, without introducing something equally or more lethal in its place. They could, of course, not undo the knowledge of making nuclear arms, but they managed to make that knowledge look irrelevant, atavistic, not only immoral.

We hope the latter will be their conclusion, even if by the time this is written it looks more like the former will be the final judgment. Needless to say, the present report is written with the hope of becoming one of the many self-correcting measures needed for the outcome to be what humanity is yearning for.