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Operational Readiness and Ongoing Disarmament Efforts*

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Comments presented at the seminar on “Re-framing De-Alert: Decreasing the Operational Readiness of Nuclear Weapons Systems in the U.S.-Russia Context” in Yverdon, Switzerland, 21-23 June 2009.

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Timur KADYSHEV**

The problem considered is a vast one and requires much more time for discussion. This presentation addresses only a few of its many aspects.

Nuclear arms reductions and decreasing of operational readiness

Speaking of strategic arms reductions, one should keep in mind that nuclear arsenals while being reduced have to be able to fulfill their roles of nuclear deterrent. Their structure have to be chosen in such a way as to ensure the ability to inflict certain level of damage in a retaliatory strike – taking into account both offensive and defensive capabilities of potential adversaries. Other conditions being equal, eliminated should be the most vulnerable weapons, however in real world there are no equal conditions, and besides other factors have to be taken into account – economical, those of internal policy, etc.

Any steps towards decrease of operational readiness should be started with those weapons that are to be eliminated under nuclear arms reduction treaty in force. Which weapons are to be eliminated, and as a first step in that direction, de-activated, is determined by the treaty and by each side's own understanding of the structure of their nuclear arsenals after reductions are completed.

At the same time, decreasing operational readiness of those weapons that are to be kept increases their vulnerability (to both nuclear and conventional weapons), which under certain circumstances can lead to unwillingness to agree to rather substantial reductions.

Nuclear arms reductions and decreasing probability of unauthorized, accidental and mistaken launches

Accidental launches are usually understood as those caused by technical malfunctions and «human factor», i.e. personnel's mistakes. As nuclear arsenals are reduced, the probability of accidental launches decreases in the same way as probability of malfunction of a large technical system decreases when the number of its elements is reduced.

Unauthorized launches are those intentional launches that are carried out without authorization from a higher level of command. The danger of such launches is reduced to the same degree as the number of the elements vulnerable to this danger (i.e. launchers) is decreased.

At the same time, reductions themselves by no means reduce the probability of mistaken launches – that is launches carried out because of erroneous decisions or decisions based on erroneous information. On the contrary, it's more likely that in a crisis situation the «use it or lose it» dilemma will make a much bigger impact on

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decision making if the arsenal in hand is considered to be vulnerable and insufficient for retaliation. Therefore the factor of time for decision-making is likely to be much more important after deep cuts.

Decreasing operational readiness and survivability

Decreasing operational readiness causes at least two changes to survivability of weapons – a) decrease of feasibility of successful launch under attack, and b) increase of vulnerability of the components removed from weapons (if the decreasing of operational readiness involved such changes). This means that along with ensuring survivability of a launcher, it is necessary to safeguard storage facilities of removed components.

The first factor is relatively unimportant if the nuclear arsenal is built in such a way as to not depend on launch under attack, the second one is of significant importance. Storage facilities of removed warheads (and/or other critical components) are lucrative targets for a disarming strike, and therefore have to be defended as hard if not harder as weapons (i.e. launchers) themselves. Also, it increases vulnerability of weapons systems against non-nuclear means, such as precision-guided munitions, armed groups, terrorist attacks, etc. The defense against armed and terrorist groups has to and can be cared of by unilateral means, while the factor of precision-guided munitions has to be taken into account in a strategic arms reductions treaty.

On another note, survivability of weapons systems under decreased operational readiness can be ensured much more easily economically and organizationally after deep cuts.

Decreasing operational readiness – is verifiability necessary?

The need for decrease of operational readiness emerges when relations between countries reach certain level of confidence. In fact, increase of confidence creates prerequisites for the decrease of operational readiness. In the USA-USSR/Russia context Presidential Initiatives of 1991 and 1992 were the first steps in this direction, followed later by 1994 De-targeting agreement. Notably, the Initiatives were unilateral, while de-targeting agreement is largely a symbolic one since it can't be verified – despite of that (or because of that) those steps were successful ones and contributed significantly to improvement of international climate.

On the contrary, decreasing of operational readiness in a binding and verifiable way will entail development of methods of rapid increase of operational readiness, which is very undesirable and can cause serious consequences in a crisis situation.

There is no contradiction since the problems of confidence building and decreasing of operational readiness are separate ones and should be treated as such.

Increase of time for decision-making and the role of early warning systems

As mentioned earlier, the role of the factor of time for decision-making seems to be much more important after deep cuts.

The first most obvious way to increase the amount of time for decision-making is to abandon the launch under attack policy. Of course, the authorities have to be reasonably sure that the retaliatory potential is always sufficient for its deterrent role. This can be achieved on one hand, by structural changes of nuclear arsenal (i.e. by increasing survivability of existing systems, decreasing the numbers of vulnerable systems, and increasing the numbers of survivable ones), and by changing regime of

duty under threat (by dispersing mobile weapons, sending SSBNs at sea, etc.) On the other hand, reaching verifiable agreements on non-deployment ballistic missile defenses can facilitate this task.

It is often understood that the use of early warning systems increases the decision making time. However, this does not seem to be correct for the following reasons. Unreliable early warning system (such as the Russian one) plays a positive role in that it makes decision makers to give more attention to other factors – those, which are less dependent on technical means. On the other side, a seemingly reliable system, such as the American one, can create a false confidence in its faultlessness, which under certain circumstances can lead to a mistaken launch with a probability of the same magnitude as with unreliable system.

To increase the decision making time it is often suggested to limit patrol areas of US SSBNs and attack submarines. Such a solution can't be carried out in a binding and verifiable way. Taking into account the fact the increase of decision-making time would significantly improve international security US might consider this as a unilateral step. However, since Russia cannot offer unilaterally anything comparable, such a step from the US can hardly be expected.

Possible Relevant Measures

In view of the above reasons, the following steps relevant to decreasing of operational readiness of nuclear weapons might be suggested:

- *abandon Launch under attack* – this step is a matter of policy, cannot be made in a reasonably verifiable way and should be taken unilaterally by each party. Practical changes of procedures and protocols involved would require some time, but likely much less time than any other possible step;
- *de-activate all systems scheduled for elimination under strategic arms reduction treaty* – when (and if) a treaty that calls for binding and verifiable elimination of certain weapons enters into force, each party can relatively quickly take this step. Whether this measure is part of the treaty, a separate agreement, or is implemented unilaterally is not really important, although it seems that the latter option would be more in line with improving be-lateral relations and international climate in general;
- *agreement on non-deployment of missile defenses* – although missile defense are a very long way to go before being even remotely capable of affecting the outcome of a massive nuclear strike, military planning tends to take into account worst-case scenarios. Thus even missile defenses only theoretically capable to intercept strategic warheads will certainly affect decision-making process, especially in a crisis situation.