

COMMON SECURITY:
IS THERE SUCH A THING?

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Common security: Is there such a thing?

Unfortunately, these matters are relatively complex. And yet it is absolutely mandatory that as many as possible try to come to grips with them, not only in the sense of seeing more clearly what goes wrong and what will always go wrong, regardless of political will among the parties, but also in the sense of training oneself in finding ways out of the impasse. The following is one approach. It can be done without the very simple formulas that are used, but then it becomes quite unwieldy. Hence, some symbols, even formulas will be used.

The point of departure is security, the probability of "system maintenance", meaning that the society will only change due to its own, endogenous, forces - not through force, or threat of force from the outside. Imagine we have two societies, P_1 and P_2 , and that the security of P_1 relative to P_2 is $S_{1,2}$. And let us start with a simple point of departure; a definition:

$$(1) \quad S_{1,2} = I_1 - D_2 > 0 \quad \text{and} \quad S_{2,1} = I_2 - D_1 > 0$$

the security level of P_1 is its invulnerability level, I_1 , minus the destruction that can be made by P_2 , here called D_2 . Clearly, there is only security insofar as this entity is positive; if it is negative there is negative security, or insecurity. Of course, it does not mean that D_2 is unleashed, it only means that I_1 offers insufficient protection should it be unleashed.

The problem with (1) is that in the age of weapons of mass destruction in general, and nuclear weapons in particular, there is no [passive] defense against the destruction. Or, put differently: necessary and sufficient invulnerability is only obtainable through total change of the society, eg by putting humans, the human-made environment and the environment underground, or on another planet. But in that case invulnerability has become a caricature, destruction of society has been brought about by threat from the outside, but carried out from the inside. And even so it might not help: missiles can be made to drill a hole down and explode when "value" is encountered just as they can be made to drill a hole up and retaliate. Obviously, some other approach is called for.

That other approach, of course, is to say that "I am insecure, my only hope lies in making you insecure too":

$$(2) \quad S_{1,2} = I_1 - D_2 < 0 \quad \text{and} \quad S_{2,1} = I_2 - D_1 < 0$$

However, this is not enough: the other party is also insecure, but

may be less insecure than oneself, suffering lower losses in an "exchange". So, what they both want, is actually more security than the other party; they want a security difference in their own favor, a positive balance, $S_{1,2}$, or $S_{2,1}$:

$$(3) \text{ Party}_1 \text{ wants: } S_{1,2} = S_{1,2} - S_{2,1} > 0$$

$$\text{Party}_2 \text{ wants: } S_{2,1} = S_{2,1} - S_{1,2} > 0$$

Clearly, this is impossible; they cannot both have a security balance in their favor. They cannot both have superiority, but they can both have parity, meaning:

$$(4) \quad S_{1,2} = S_{2,1}$$

or, multiplying by -1:

$$(5) \quad D_1 - I_2 = D_2 - I_1$$

meaning that they can cause about the same level of destruction to each other. This condition is better known as balance of power, only that is actually balance of terror given the level of destruction of today's weapons. Invulnerability (civil defense) is of little or no avail against them, but should be subtracted for the sake of completeness, and because such programs are increasingly likely.

What has been done above is not quite so trivial as it may look. There are two points:

- that security is a relational, not an absolute quality; it is how the security of P_1 relates to the security of P_2 that matters
- the only solution is (relatively) equal security, which - with the definitions used above- turns out to be identical with the condition known as balance of power. That simplifies the matter.

However, the problem with what has just been said is that it does not help much. Even if the condition for stability should be equal security [the parties are on the same iso-security curve] the problem still remains that the absolute level of security is negative, ie insecurity. A war may still be "won", but only in the sense of losing less than the other party - **yet** with terrible losses. Obviously, this is unsatisfactory, hence another approach is brought in through the distinction between destruction that is counter-value and counter-force, and invulnerability of value and force. The idea is simple enough: "I cannot make my values (humans, ^{hu}man-made environment, environment) invulnerable but I can possibly destroy the means of destruction". The

answer to this is well known: to try to make the means of destruction invulnerable. If we refer to the level of destruction of D_2 by P_1 as $D_1[D_2]$ and P_2 's level of invulnerability of his means of destruction as $I_2[D_2]$ - and similarly from the point of view of P_2 , then we get the following eight variables to take into consideration in any study of security:

Table 1: Common security: the key eight variables

	Invulnerability value		Counter- value	Counter force	Invulnerability force
$S_{1,2} =$	I_1	$-$	$[D_2 - (D_1[D_2] - I_2[D_2])]$		
$S_{2,1} =$	I_2	$-$	$[D_1 - (D_2[D_1] - I_1[D_1])]$		

We now assume that both P_1 and P_2 are trying the following:

Axiom I: To make the absolute security positive, or as high as possible

Axiom II: To make the security difference positive, and as high as possible

In other words, I do not assume that they are striving for balance of power in the sense of parity, but in the sense of superiority; still in other words that there is no cooperation. I further assume that the only way to make them cooperative is to show them that their goal is unattainable.

Since passive defense (invulnerability of value) is ineffective, P_1 tries to subtract from D_2 by destroying $D_1[D_2]$. P_2 tries to subtract from this subtraction by making D_2 more invulnerable, $I_2[D_2]$. The strategic arms race, naturally, shifts from counter-value to counter-force but with the same logic, that of equation(5) but also (1) through the efforts to make arms invulnerable. It is a Chinese boxes kind of logic and can be continued: P_1 can try to destroy the invulnerability, $D_1[I_2[D_2]]$ which will lead to an effort by P_2 to make the invulnerability invulnerable, $I_2[I_2[D_2]]$, and so on, and so forth. So, what is the conclusion?

As long as the following two axioms hold, the conclusion is clear: it does not help either.

Axiom III: For value invulnerability can never compensate completely for destruction

Axiom IV: For force destruction can never compensate completely for invulnerability

Put simply: It is easier to destroy value than to protect it; it is easier to protect force than to destroy it [completely]. But this means that the two parentheses inside parentheses will never be equal to, or even come sufficiently near to, D_2 and D_1 , respectively. Un-protected $D_1[D_2]$ may be, perhaps, like $0.9D_2$, but with protection $D_1[D_2] - I_2[D_2]$ may be like, say, $0.5D_2$ - in other words far from good enough. Already one Hiroshima bomb is one too many - and humankind does not accept the type of geno-fascist lingo engaged in by some representatives of one superpower.

Hence, the conclusion is that this does not work either. Let us therefore try something new with the hope of seeing some exits. Let us introduce the old distinction between offensive and defensive weapon systems, and simply define them in the following way: defensive weapons have so short range and limited impact area that they are essentially only useful on own territory; offensive weapons are those weapons [systems] that are not defensive. The definition hinges uniquely on objective capability; there is no element of subjective motivation in it. With offensive weapons aggression is possible; whether, in fact, they will be used for aggression is another matter.

Let us use the symbols d and o for defensive and offensive respectively. This changes the content of Table 1. More precisely, what is called D_1 and D_2 - counter-value destruction - becomes D_1^o and D_2^o ; for these are offensive capabilities, by definition. And counter-force and invulnerability-force splits into two, for offensive weapons and for defensive weapons, so that we get:

Table 2: Common security: the key twelve variables.

	Invulnerability value	Counter- value	Counter- force	Invulnerability force
$S_{1,2} =$	I_1	$-$	$\begin{bmatrix} D_2^O & - & [D_1^D(D_2^O) - I_2^O(D_2^O)] \\ & - & [D_1^O(D_2^O) - I_2^D(D_2^O)] \end{bmatrix}$	
$S_{2,1} =$	I_2	$-$	$\begin{bmatrix} D_1^O & - & [D_2^D(D_1^O) - I_1^O(D_1^O)] \\ & - & [D_2^O(D_1^O) - I_1^D(D_1^O)] \end{bmatrix}$	

The whole point is simply this: there is a branching-off process in counter-force activity, a defensive branch, and an offensive branch; on both sides. There is the effort to fight the weapons [force] of the enemy on one's own ground and on his; and naturally his efforts to make his weapons invulnerable when they operate offensively, $I^O(D)$ - $(I_2^O(D_2^O)$ and $I_1^O(D_1^O))$ -and when they are still at the home base, $I^D(D)$.

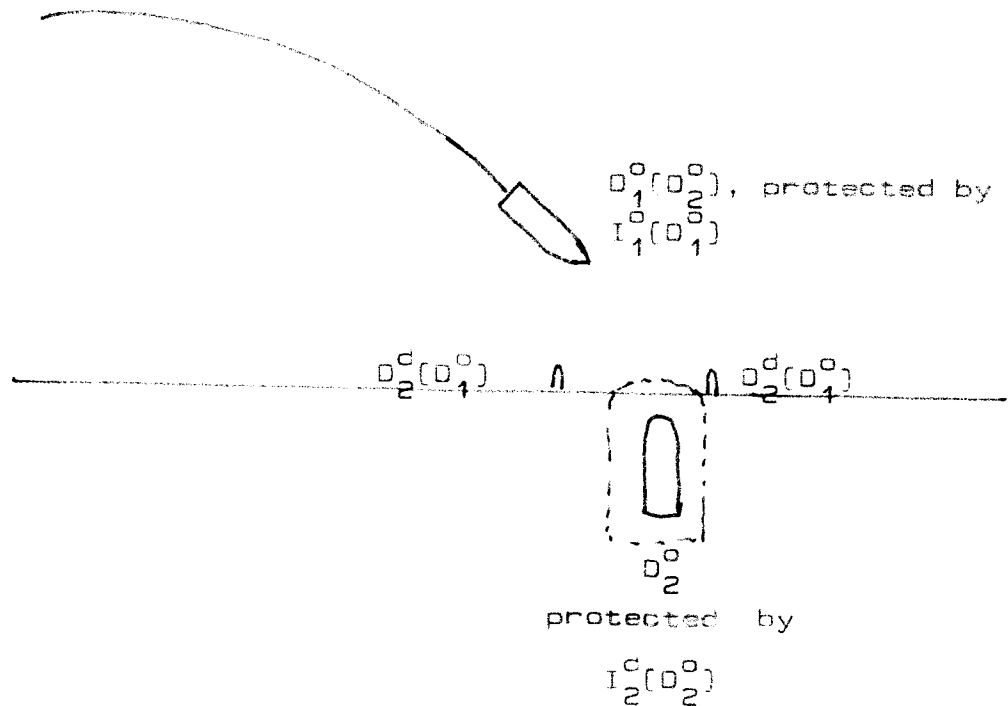
For the most important case, D being nuclear-tipped missiles that are offensive, these four symbols stand for the following:

$D^D(D)$	stationary laser shields, short range anti-ballistic missiles (ABM)
$I^O(D^O)$	MRV, MIRV, decoys, very short warning time, forward based supersonic speeds, cruise trajectories, stealth, numerous
$D^O(D^O)$	very high precision or yield, sub penetration, anti-submarine warfare (ASW)
$I^D(D^O)$	mobile, dispersing, numerous, hiding, underground and hardening, on submarines, under ice-caps

Defensive counter-force, to be worthy of the name, has to be short range [or stationary] with limited impact area, which means high level of precision. Offensive counter-force does not operate under such limitations, is long range and could also have a vast impact area in order to destroy all the offensive capability there is. High precision and penetration capability, however, is generally seen as more efficient. Offensive invulnerability means invulnerability of offensive forces over the other party's territory; defensive invulnerability begins at home and ends at home. The last decades are the history of switching from one approach to the other, and of new technologies within each of these four possible approaches.

Let us have a look at the situation of P_2 :

Figure 3. The strategic "game", as seen by Party no. 2



There is an incoming, hence offensive, missile from P_1 ; it is counter-force, and protected. It is aiming at an offensive missile which is protected in two ways: through defensive invulnerability and through defensive destructiveness, eg silos and anti-missile missiles. This can also be put into a table, using the offensive-defensive distinction, and the destruction-invulnerability distinction:

Table 4. The four approaches in a strategic "situation"

	destruction approach	invulnerability approach
offensive approach [from P_1]	$D_1^O(D_1^O)$ "active offense"	$I_1^O(D_1^O)$ "passive offense"
defensive approach [from P_2]	$D_2^O(D_2^O)$ active defense	$I_2^O(D_2^O)$ passive defense

It is the balance of these quantities that decides what ultimately happens; the net balance in the end, of D_2^O , is what is left for a second strike.

Let us now use this scheme of analysis to try to explore five questions, all of them crucial to the whole peace and security issue:

- (A) The first strike/second strike distinction
- (B) Characterization of some offensive weapons systems
- (C) The 1972 ABM Treaty
- (D) Is this approach to security and balance of power at all viable?
- (E) Is some other approach to security and balance of power viable?

(A) The first strike/second strike distinction

A typical first strike weapon would be low on $I^d(D^o)$ and high on $I^o(D^o)$ since its task is to destroy by being used first; hence it can afford to be (but does not have to be) badly protected at the point of departure, but well protected at the point of arrival. It has to be highly destructive, presumably of force since it would be dangerous to use a first strike not to try to eliminate the offensive capability on the other side - which means that it has to be high on precision, and reliable (single weapon reliability or compensation for unreliability by high numbers). The yield is less important.

A typical second strike weapon would be high on $I^d(D^o)$, can be low on $I^o(D^o)$ since its task is to survive an attack, and hence has to be well protected at the point of departure, but can afford to be (but does not have to be) less well protected at the point of arrival. It has to be highly destructive, presumably of value more than of force since this would be the promised retaliatory attack that is supposed to serve as a deterrent - which means that it has to be high on yield but does not have to be that reliable; there is enough to destroy. Precision is less important.

To summarize:

Table 5. "Idealized" first strike/second strike characteristics

	<u>First strike</u> [counter-force]	<u>Second strike</u> [counter-value]
<u>Passive defense</u> , $I^d(D^o)$	can be low	must be high
<u>Passive offense</u> , $I^o(D^o)$	must be high	can be low
<u>Active offense</u> , D^o	precision, reliable	yield, less reliable

It should be noted that if a missile is highly protected at the point of departure, in other words has a high level of "survivability", then there remains at least the option that it can be used as a second strike weapon. If it is poorly protected, then there is no choice: use it first or else lose it! For this reason poorly protected missiles, such as the MX in Minuteman silos or the SS-19, or Pershing II and Tomahawk cruise missiles, are among the most provocative, and hence destabilizing.

It should also be noted that when a missile has multiple war-heads, in other words is mirved, then one missile can destroy more than one on the other side. The exchange ratio is greater than 1, whichever side strikes first will have more missiles left because it can destroy more than are used up. Mirving, hence, is not only a mechanism for offensive invulnerability, or "penetration capability"; it is also a way of achieving a better trade-off, and hence highly provocative, and hence destabilizing.

Thus, in the construction of the system is already the main message; the system carries a genetic code, so to speak. It is quite clear today how a first strike and a second strike weapon should be made. This should not be confused with first use or second use, that is a question of who starts any kind of nuclear exchange. Nor should it be confused with whether the first strike is effective or not, effective in the sense of eliminating sufficient nuclear capability on the other side to make the losses that side can inflict tolerable. These are all questions of the broad strategy of the two parties, with mixes of threats of use and actual use, time orders, etc. - only partly derivable or guessable from the nature of the weapons systems as such. The only thing that is relatively certain is that both parties will do their best not to have their own strategy determined by the other side, trying to retain strategic options.

[B] Characterization of some offensive weapons systems

The most typical first strike weapons, not yet existing, would be highly precise and reliable missiles, highly mirrored, clustered together in large numbers and poorly protected (and hence with very low survivability) close to its target (for a surprise attack). And the most typical second strike weapons, could be less precise and reliable, with single war-heads, highly dispersed and very well protected, for instance in a submarine, under ice-caps.

Of the systems existing today, if one is to rely on the information about them, those that come closest to being first strike weapons seem to be the MX and the SS-18, because of their low survivability and high level of mirroring (up to ten?). Next would be the Pershing II; it has only a single war-head but compensates by proximity to target and hence short flight time. If it were even more forward-based than in Western Germany, eg in West Berlin, its first strike character would be even more pronounced. Numbers are also very important, and even though the Tomahawk cruise missile is slower large numbers can compensate if the goal is offensive invulnerability. But this would be more risky: some of them would be detected in time and lead to a launch-on-warning. The SS-20 and even if it is mirrored (3 war-heads) it is more likely to cause a launch-on-warning. SS-20 is also, like Pershing II and cruise, mobile but so slowly that their survivability is low.

Clearly a second strike capability, being based on defensive rather than offensive invulnerability, is much less provocative than a first strike capability. A Pershing II, and also the cruise missiles, land-based in Western Europe provoke without adding to the security since they will invite a pre-emptive first strike. In addition they represent qualitatively new approaches to the problem of making offensive invulnerability; in German terms they stand for "Vorrüstung", not for "Nachrüstung".

(C) The 1972 ABM Treaty

Let us assume that the purpose was, as usually stated, to protect a minimum second strike capability. According to Table 3.8. there are four ways of doing this:

- (a) cutting down or eliminating offensive counter-force destructive capability
- (b) cutting down or eliminating offensive counter-force invulnerability
- (c) building up or maintaining defensive destructive capability for force
- (d) building up or maintaining defensive invulnerability of force

Four additional methods are the following:

- (e) building up or maintaining offensive counter-value destructive capability
- (f) building up or maintaining offensive counter-value invulnerability
- (g) cutting down or eliminating defensive destructive capability for value
- (h) cutting down or eliminating defensive invulnerability of value

One may say that SALT I was an effort not to (a) but at least to control further armament. One may also say that (d) and (e) was going on anyhow, as well as (f) (MIRVs!). (h) is in effect, since the contrary (effective civil protection against nuclear weapons) was and is infeasible. What was left was (b), (c) and (g). Of these three possibilities, the 1972 ABM Treaty focuses on (g) and is an effort to cut down, almost to the point of elimination, anti-ballistic missile systems. At the same time it does the opposite of (c). Why focus on (g)? Probably mainly for the simple reason that such systems did not exist and looked almost impossible as an engineering project. To hit an aircraft with a missile may be difficult enough; to hit a missile almost impossible. Systems were developed but did not impress. The treaty can be read as a joint statement: "We have tried but did not succeed, so we can just as well outlaw the approach."

The loopholes in the 1972 ABM treaty are easily seen:

- (i) The concept legitimizes offensive destructive capability, by focussing attention on a second order problem, that of guaranteeing penetration for a second strike capability
- (ii) The concept does not focus on offensive invulnerability, and hence opens for a qualitative arms race in mirving, decoys, short warning times, forward basing, high speeds, cruise trajectories, stealth, etc.
- (iii) The concept does not rule out research on defensive destructive capability - and since a break-through here (eg in the form of a laser-shield) would increase security considerably, any country would put that higher than adherence to the treaty.
- (iv) The concept is both anti-psychological and anti-human in demanding of people that they shall abstain from a measure of defense rather than from a measure of offense, and that they shall accept that security rests, ultimately, on the ability of both parties to sacrifice their own populations through a pact of mutually assured destruction (MAD).

Clearly a treaty of this kind is not stable and will collapse the moment an active ABM becomes feasible. It is as anticipation of this that offensive invulnerability (Pershing II, cruise) should be seen.

[D] Is this approach to security and balance of power at all viable?

Of course not. Axioms III & IV remain valid, and as long as they are valid some destructive force will **survive**, and the passive defense (invulnerability) will be insufficient to balance it. Security will remain negative. But, in addition, efforts to compensate for this by at least making the security difference positive [see axioms I and II] will continue. There is so much work to do: Table 2 calls the attention to twelve key variables in the arms race. There will be efforts to increase invulnerability of force and value, to compensate for this with increased destructiveness; this will be done by both defensive and offensive means. Sometimes the other party will respond on the ~~same~~ variable, sometimes they will try to compensate on another variable. Had there been fewer than twelve, or eight variables to stick to the offensive ones, then may be the system could be maintained stable by some cooperative agreement or some third party control. With this number of degrees of freedom of the system it becomes like a system of communicating vessels: press down at one point and it shoots up at some other point or points. Or, like trying to catch a tiger by holding on to one leg: chances are the other legs, head, body and tail will start moving rather dynamically.

In short, neither high, nor equal security will ever be attainable. To some of this insecurity we are condemned, **we** humans, for the rest of our lives, given the nature of our innovations. Precisely because the consequences of a war are so horrible both parties will do all they can to act according to axiom II. It is highly unlikely that axioms III and IV will undergo any drastic decrease in validity in the foreseeable future. Hence I assume that as long as this logic is adhered to the strategic arms race will continue till it is interrupted by a war. The question is whether the struggle for security, and even for peace, could be steered by some other logic.

(2) Is some other approach to security and balance of power viable?

The first assumption is, of course, that both parties see a strategic war as the worst possible evil, the way it is now seen by the peace movement and probably by most of the population in Europe. In Western Europe, for instance, a nuclear war is definitely seen as worse than a Soviet occupation, by most. However much that possibility is dreaded, ~~most~~ people seem to think "better red than dead" - if I am dead I can do nothing, if there are "reds" in my country I am not for that reason red and can still do a lot. Hence they reject a policy the implication of which is "better dead than red" - the present NATO policy of rejection of no-first-use coupled with the promised Soviet answer to a Western first use

The second assumption would be some kind of agreement as to the goal of common security. Here is one attempt:

By "common security" is meant a system whereby

- both parties have as high absolute security as possible
- both parties have as equal relative security as possible
- both parties cooperate to make high and equal security possible

It should be noted, before proceeding, that these conditions are similar, but also quite the opposite of what is actually happening in the world today. Their security is very low, for both, or very high negative security, insecurity, to put it more precisely. At least one party, the US, is clearly trying to obtain superiority. And rather than cooperation there is a plethora of efforts to out-smart the other, whether out of fear or to have the best position for an attack, or both. And yet the games are not that different.

Let me now make a jump in the reasoning, spelling out very quickly a set of proposals, and then try to discuss them in the light of the three key ideas for common security just given. The proposals are:

- (i) No-first-use doctrine accepted by the West [Soviet proposal]
- (ii) Withdrawal of all foreign nuclear arms [Egon Bahr proposal]
possibly starting with 300 km border zone [Palme Comm. proposal]
- (iii) Change of military doctrine to conventional arms [UCS proposal]
- (iv) Change of conventional doctrine to defensive conventional defense combined with paramilitary and nomilitary defense
- (v) Increasing invulnerability of the societies:
 - more national self-reliance - stable eco-system
 - more local self-reliance - stable eco-system
 - more decentralization
 - overcoming of cleavages inside society
 - a better quality of life
- (vi) Fighting factors that are most provocative to the other side
 - in the East: remnants of Stalinism - human rights infractions
 - in the West: crisis in capitalism - human rights infractions
 - between East and West - new forms of active peaceful coexistence

The last three would be typical of the kind of thinking found in the peace movement; the first three are well known proposals currently floated at the political level. The six proposals should now be tested for consistency, and for consistency with the principles of common security.

As pointed out often no-first use does not imply the end to nuclear arms: they would still remain in the countries that produce them (at present five or six countries, possibly more). Hence, the terrible logic of Table 1 with its insolvable dilemma of extreme insecurity remains.

However, the value of the approach would be to build into the countries liberated from nuclear war and arms, to the extent this is possible through (i) and (ii) above, a new security system based on (iii), (iv) and (v), and then attempt to do something beyond that to come to grips with the conflict itself, or at least not to aggravate it further (vi). The hypothesis would then be that this type of new security system might be seen as preferable and hence spread to the nuclear powers; they might feel the alternative system offers more security than the system based on nuclear deterrence. It should be noted that (iii) is actually a transition between (i)-(ii) and (iv)-(v) so we only have to discuss the latter.

What it means is actually very simple. Let us use the symbol D^d for the class of defensive weapons as defined above, assuming that that class is much bigger than it is today since so much inventiveness has been put into the class D^o of offensive weapons (ICBMs, IRBMs, long-range bombers and long-range hunter-bombers, ^{tanks,} just to mention some important examples). Thus, the weapons that would be used under this formula would be the defensive weapons used to destroy the other side's offensive weapons, including in this both the other side's "hardware" and "software" - the military personnel. But offensive destruction, retaliation against the other side's civilian population, civilian society or even against military installations at his own territory would be out of question since these would be clearly offensive strategies and the distinction between weapons that can be used to hit other weapons and those that can be used to hit civilian society is more problematic than the distinction between defensive and offensive weapons as drawn here. The reason for that is simple: the defensive/offensive distinction is tied to the notion of a geographical border which in most cases in the world, in connection with international war, is relatively unambiguously drawn whereas no such unambiguous border line exists between military and civilian society anywhere in the world.

Thus, the defensive weapons would be anti-weapons, counter-force, *by and large* on the assumption that they are used on one's own territory, when the enemy is in the country, up to any level, including anti-anti-anti weapons, and so on. But, in addition to this, invulnerability would certainly remain as a part of the defense concept, including the invulnerability of one's own destructive weapons. And in addition to this again would also come non-military defense, meaning defense not directed at the destruction of the intruding adversary, but at rendering what he wants for his own enrichment or to control useless to him - in other words some type of withdrawal.

Hence, under this concept one would be left with an arsenal looking in terms of our formulas somewhat like this:

(-) $D^d(D^o), D^d(D^o(D^d(D^o)))$ etc. ; I, $I(D^d)$

What would be obtained with this type of "disarmament", or maybe rather transarmament since there would certainly be both arms and armour involved?

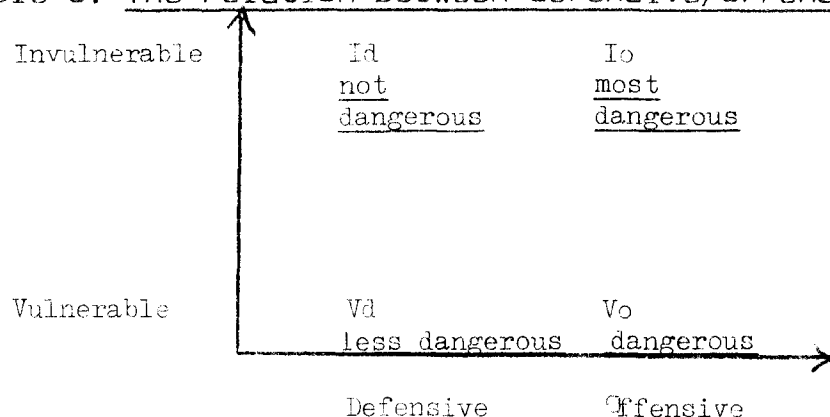
First, the threat function would have been eliminated, since nothing of what is included under (') above can be used with any efficiency abroad. It does not affect any other country's security as there is no destructive power that can be used in any other country. This is rather important since a major factor behind the arms race certainly is fear, fear that the other side's effective destructive power is higher than one's own and that the only thing to stay his finger before it pushes the button would be his fear of even more destruction in his own land. When there is no offensive power that can be directed against oneself, one's own security becomes equal to the level of invulnerability, undiminished by any destructive power. One may also put it differently, in a way more meaningful to the mathematically minded than to other people: destruction as measured by $D-I$ becomes negative when $D = 0$.

Second, there is less problem of conversion of military hardware or software. Transarmament is an easier process from this point of view than to make swords into plough-shares. Military people will still be military people but with an unambiguous defensive function. Offensive arms will have to be scrapped but defensive arms would still be made. Whether the military budget would be higher or lower is another and important question to be looked into: some data seem to indicate that it could be lower, even considerably lower. In that case some funds should be released, possibly to be used for development purposes, within or without. As will also be indicated later, there is some positive relation between invulnerability and development, at least for some range of variation, and with some definitions of these two concepts; and that may make this type of conversion a very interesting proposition indeed.

These are two rather good arguments, and might lead one to ask the question: since this looks so rational why do not all countries have defense of this type, in other words a defensive defense? One reason for that, of course, is that many countries are not only defensive, they are also "offensive", meaning aggressive. Only recently did they submit to the idea of referring to their ministries of war as ministries of defense, but they continue intervening and invading abroad. A transarmament, not only of the name of the ministry but of what it administers, would draw a much sharper demarkation line between truly non-aggressive countries and aggressive countries, and that would not be in the interest of the latter for which reason they would try to resist it. Any country that transarmed into defensive defense would unmask potential aggressors; in itself a rather important function of transarmament. However, more important in this connection is another line of reasoning.

The point is simply that most countries today, most "modern" countries that is, are so vulnerable that they cannot risk destruction on their own territory. Only highly invulnerable countries can take that risk, the invulnerability compensating for much of the destructive power. We actually get four different types of countries as indicated in the diagram below:

Table 5. The relation between defensive/offensive and invulnerability



(It should be noted that this is not the same diagram as a diagram used to define security: in that diagram own level of invulnerability is related to the destructiveness from the other party; here own level of vulnerability is related to one's own type of weapon system).

The "best" country from the point of view of a disarmament or trans-armament process would be a country of the type Id: high level of invulnerability, and mainly defensive weapons (meaning low level of offensive weapons, high level of defensive weapons). Nobody else should have anything to fear from that country since it is incapable of bringing about any destruction outside its own borders, and it should also feel quite safe at home due to its high level of invulnerability, in other words not be tempted into any preemptive action, to secure supplies, to divert attention away from internal contradictions, etc.

The vulnerable countries in the diagram would be thus tempted; the Vo-type (vulnerable, with offensive weapons) might carry it out because it has the capability of doing so. This is the type of country in whose interest it is to export the theatre of war; it simply cannot afford to have the war inside its own borders. It might export the war to the adversary's territory or, if that is too dangerous, to a third country. An adversary Vo country may do the same. One particular reason why this type of country is dangerous to its environment is that it would be tempted to strike first because of its vulnerability, making use of its offensive capacity - for instance with the hope of eliminating any second strike of retaliation from the other side.

The fourth type, however, would be the prototype of the aggressive country; making itself invulnerable at home, equipped with an offensive capability, like dashing out from a hardened redoubt, striking hard, hitting many places before returning to the safety back home (whether this is done by cavalry or nuclear missiles); waiting for a "retaliation" against which it is well protected. Which only goes to show, once more, how significant the introduction of the variable vulnerability-in-vulnerability is in any power analysis - Djingis Khan knew this.

No doubt invulnerability is tantamount to some kind of armour between oneself and the rest of the world; and a defensive weapon system means using destruction, including killing of human beings, as an acceptable option in utter distress, with the adversary already invading the country. From an ideal pacifist point of view these are not acceptable options. Much better would be to be totally open, perhaps even using vulnerability as invulnerability, and no means of destruction at all - and the present author might personally prefer this. However, there is one important problem: regardless of problems of efficacy there is the problem of credibility. Very few people believe in the pacifist option, one reason being that it has so rarely been tested (Gandhi, Martin Luther King) and when it was tested one may always argue that the cases are atypical. And that would of course be the third reason to favour this type of trans-armament option: many people might believe in a defensive defense posture combining conventional, para-military and non-military elements.

The question then to be explored is whether this constitutes a system not only of security, but of common security in the sense defined above. It is easily seen that this is the case if both parties adopt defensive defense as their military posture and add to this a high level of invulnerability. They are both secure, and in a sense the problem of how equal the security is does not arise. However, there is always the possibility of cheating, of hiding some offensive capability; and/or of having it in the open, legitimated as needed for interdiction of supply lines etc. to support an attack on one's own territory. Still, with an overwhelming overweight on defensive capability it can be argued that security is not only high but equal, or equal for all practical purposes.

More important, however, is the question of whether it is cooper-

ative. Here are examples of cooperative tasks; there are three of them, coming neatly out of the logic presented:

- helping each other getting rid of the mutually threatening offensive capability existing - seeking it and destroying it
- helping each other develop defensive capability, exchanging information, with the possible exception of concrete location
- helping each other becoming less vulnerable, e.g. by
 - promoting national self-reliance
 - local self-reliance
 - technological diversity

To the first task the logic of a World Health Organization smallpox eradication campaign would apply: seek and destroy (which may work for virus; the malaria mosquito is more tricky and the campaign may strengthen it in a more immediate way). Obviously, this will only happen if offensive weaponry is really seen as a common enemy, and the thesis of the present paper is that that in turn will only happen if alternative modes of producing security have been found.

To the second task and the third task there is also a corresponding World Health Organization logic: secondary prophylactic medicine in the sense of building strong bodies, eg through better nutrition and level of living in general, but also through inoculation (which would correspond to invulnerability). The countries of the world are cooperating in WHO with all its weaknesses; it is suggested that whether they cooperate or not depends on whether they see it in their own interest or not.

But this means that there might be more ways in which the United Nations could come into the picture than has been the case so far: not only detecting and controlling and if at all possible destroying offensive capability, but also in developing defensive capability and invulnerability. And one approach to mutual invulnerability would be through United Nations peace forces in the Palme Commission corridor.

In short: security and balance of power are possible. But the condition remains that of getting rid of offensive capability.